U.S. Nuclear Regulatory Commmsion Regulations: Title 10, *Code of Federal Regulations*

- PART 1--STATEMENT OF ORGANIZATION AND GENERAL INFORMATION
- PART 2--RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS AND ISSUANCE OF ORDERS
- PART 4--NONDISCRIMINATION IN FEDERALLY ASSISTED PROGRAMS OR ACTIVITIES RECEIVING FEDERAL FINANCIAL ASSISTANCE FROM THE COMMISSION
- PART 5--NONDISCRIMINATION ON THE BASIS OF SEX IN EDUCATION PROGRAMS OR ACTIVITIES RECEIVING FEDERAL FINANCIAL ASSISTANCE
- PART 7--ADVISORY COMMITTEES
- PART 8--INTERPRETATIONS
- PART 9--PUBLIC RECORDS
- PART 10--CRITERIA AND PROCEDURES FOR DETERMINING ELIGIBILITY FOR ACCESS TO RESTRICTED DATA OR NATIONAL SECURITY INFORMATION OR AN EMPLOYMENT CLEARANCE
- PART 11--CRITERIA AND PROCEDURES FOR DETERMINING ELIGIBILITY FOR ACCESS TO OR CONTROL OVER SPECIAL NUCLEAR MATERIAL
- PART 12--IMPLEMENTATION OF THE EQUAL ACCESS TO JUSTICE ACT IN AGENCY PROCEEDINGS
- PART 13--PROGRAM FRAUD CIVIL REMEDIES
- PART 14--ADMINISTRATIVE CLAIMS UNDER FEDERAL TORT CLAIMS ACT
- PART 15--DEBT COLLECTION PROCEDURES
- PART 16--SALARY OFFSET PROCEDURES FOR COLLECTING DEBTS OWED BY FEDERAL EMPLOYEES TO THE FEDERAL GOVERNMENT
- PART 19--NOTICES, INSTRUCTIONS AND REPORTS TO WORKERS: INSPECTION AND INVESTIGATIONS
- PART 20--STANDARDS FOR PROTECTION AGAINST RADIATION
- PART 21--REPORTING OF DEFECTS AND NONCOMPLIANCE
- PART 25—ACCESS AUTHORIZATION
- PART 26--FITNESS FOR DUTY PROGRAMS
- PART 30--RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL
- PART 31—GENERAL DOMESTIC LICENSES FOR BYPRODUCT MATERIAL
- PART 32--SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL
- PART 33--SPECIFIC DOMESTIC LICENSES OF BROAD SCOPE FOR BYPRODUCT MATERIAL
- PART 34--LICENSES FOR INDUSTRIAL RADIOGRAPHY AND RADIATION SAFETY REQUIREMENTS FOR INDUSTRIAL RADIOGRAPHIC OPERATIONS
- PART 35--MEDICAL USE OF BYPRODUCT MATERIAL
- PART 36--LICENSES AND RADIATION SAFETY REQUIREMENTS FOR IRRADIATORS
- PART 39--LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING
- PART 40--DOMESTIC LICENSING OF SOURCE MATERIAL
- PART 50--DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES
- PART 51--ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED REGULATORY FUNCTIONS
- PART 52—LICENSES, CERTIFICATIONS, AND APPROVALS FOR NUCLEAR POWER PLANTS
- PART 53 [RESERVED]
- PART 54--REQUIREMENTS FOR RENEWAL OF OPERATING LICENSES FOR NUCLEAR POWER PLANTS
- PART 55--OPERATORS' LICENSES
- PART 60--DISPOSAL OF HIGH-LEVEL RADIOACTIVE WASTES IN GEOLOGIC REPOSITORIES
- PART 61--LICENSING REQUIREMENTS FOR LAND DISPOSAL OF RADIOACTIVE WASTE
- PART 62--CRITERIA AND PROCEDURES FOR EMERGENCY ACCESS TO NON-FEDERAL AND REGIONAL LOW-LEVEL WASTE DISPOSAL FACILITIES
- PART 63--DISPOSAL OF HIGH-LEVEL RADIOACTIVE WASTES IN A GEOLOGIC REPOSITORY AT YUCCA MOUNTAIN, NEVADA
- PART 70--DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL
- PART 71--PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL
- PART 72—LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE, AND REACTOR-RELATED GREATER THAN CLASS C WASTE
- PART 73--PHYSICAL PROTECTION OF PLANTS AND MATERIALS
- PART 74--MATERIAL CONTROL AND ACCOUNTING OF SPECIAL NUCLEAR MATERIAL
- PART 75—SAFEGUARDS ON NUCLEAR MATERIAL—IMPLEMENTATION OF US/IAEA AGREEMENT
- PART 76—CERTIFICATION OF GASEOUS DIFFUSION PLANTS
- PART 81--STANDARD SPECIFICATIONS FOR THE GRANTING OF PATENT LICENSES
- PART 95--FACILITY SECURITY CLEARANCE AND SAFEGUARDING OF NATIONAL SECURITY INFORMATION AND RESTRICTED DATA
- PART 100--REACTOR SITE CRITERIA
- PART 110--EXPORT AND IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL
- PART 140--FINANCIAL PROTECTION REQUIREMENTS AND INDEMNITY AGREEMENTS
- PART 150--EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER SECTION 274
- PART 160--TRESPASSING ON COMMISSION PROPERTY

- PART 170--FEES FOR FACILITIES, MATERIALS, IMPORT AND EXPORT LICENSES, AND OTHER REGULATORY SERVICES UNDER THE ATOMIC ENERGY ACT OF 1954, AS AMENDED
- PART 171—ANNUAL FEES FOR REACTOR LICENSES AND FUEL CYCLE LICENSES AND MATERIALS LICENSES, INCLUDING HOLDERS OF CERTIFICATES OF COMPLIANCE, REGISTRATIONS, AND QUALITY ASSURANCE PROGRAM APPROVALS AND GOVERNMENT AGENCIES LICENSED BY THE NRC
- PARTS 172 - 199 [RESERVED]

PART 1--STATEMENT OF ORGANIZATION AND GENERAL INFORMATION

[Top of File]

Subpart A--Introduction

[Top of File]

§ 1.1 Creation and authority.

(a) The Nuclear Regulatory Commission was established by the Energy Reorganization Act of 1974, as amended, Pub. L. 93-438, 88 Stat. 1233 (42 U.S.C. 5801 et seq.). This Act abolished the Atomic Energy Commission and, by section 201, transferred to the Nuclear Regulatory Commission all the licensing and related regulatory functions assigned to the Atomic Energy Commission by the Atomic Energy Act of 1954, as amended, Pub. L. 83-703, 68 Stat. 919 (42 U.S.C. 2011 et seq.). These functions included those of the Atomic Safety and Licensing Board Panel. The Energy Reorganization Act became effective January 19, 1975 (E.O. 11834).

(b) As used in this part:

Commission means the five members of the Nuclear Regulatory Commission or a quorum thereof sitting as a body, as provided by section 201 of the Energy Reorganization Act of 1974, as amended.

NRC means the Nuclear Regulatory Commission, the agency established by title II of the Energy Reorganization Act of 1974, as amended, comprising the members of the Commission and all offices, employees, and representatives authorized to act in any case or matter.

[52 FR 31602, Aug. 21, 1987, as amended at 56 FR 29407, June 27, 1991]

§ 1.3 Sources of additional information.

[Top of File]

(a) A statement of the NRC's organization, policies, procedures, assignments of responsibility, and delegations of authority is in the Nuclear Regulatory Commission Management Directives System and other NRC issuances, including local directives issued by Regional Offices. Letters and memoranda containing directives, delegations of authority and the like are also issued from time to time and may not yet be incorporated into the Management Directives System, parts of which are revised as necessary. Copies of the Management Directives System and other delegations of authority are available for public inspection and copying for a fee at the NRC Public Document Room, One White Flint, 11555 Rockville Pike (first floor), Rockville, Maryland 20852-2738, and at each of NRC's Regional Offices. Information may also be obtained from the Office of Public Affairs or from Public Affairs Officers at the Regional Offices. In addition, NRC Functional Organization Charts, NUREG-0325, contains detailed descriptions of the functional responsibilities of NRC's offices. It is revised annually and is available for public inspection at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room, or for purchase from the Superintendent of Documents, US Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082; and from the National Technical Information Service, Springfield, VA 22161.

(b) Commission meetings are open to the public, as provided by the Government in the Sunshine Act, unless they fall within an exemption to the Act's openness requirement and the Commission also has determined that the public interest requires that those particular meetings be closed. Information concerning Commission meetings may be obtained from the Office of the Secretary.

(c) Information regarding the availability of NRC records under the Freedom of Information Act and Privacy Act of 1974 may be obtained from the Information and Records Services Division, Office of Information Services. NRC's regulations are published in the Federal Register and codified in Title 10, Chapter 1, of the Code of Federal Regulations. They may be viewed electronically at the NRC Web site, *http://www.nrc.gov/reading-rm/doc-collections/cfr/*. Final opinions made in the adjudication of cases are published in "Nuclear Regulatory Commission Issuances," and are available on a
subscription basis from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161.

[52 FR 31602, Aug. 21, 1987, as amended at 53 FR 43419, Oct. 27, 1988; 53 FR 52993, Dec. 30, 1988; 54 FR 53313, Dec. 28, 1989; 57 FR 1639, Jan. 15, 1992; 63 FR 15740, Apr. 1, 1998; 64 FR 48947, Sept. 9, 1999; 67 FR 67097, Nov. 4, 2002; 70 FR 69421, Nov. 16, 2005]

§ 1.5 Location of principal offices and Regional Offices.

[Top of File]

(a) The principal NRC offices are located in the Washington, DC, area. Facilities for the service of process and documents are maintained in the State of Maryland at 11555 Rockville Pike, Rockville, Maryland 20852–2738. The
agency's official mailing address is U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The locations of NRC offices in the Washington, DC, area are as follows:

(1) One White Flint North Building, 11555 Rockville Pike, Rockville, Maryland 20852-2738.

(2) Two White Flint North Building, 11545 Rockville Pike, Rockville, Maryland 20852-2738.

(3) Executive Boulevard Building, 6003 Executive Boulevard, Rockville, MD 20852–3823.

(4) Gateway Building, 7201 Wisconsin Ave., Suite 425, Bethesda, MD 20814–4810.

(b) The addresses of the NRC Regional Offices are as follows:

(1) Region I, USNRC, 475 Allendale Road, King of Prussia, PA 19406-1415.

(2) Region II, USNRC, Sam Nunn Atlanta Federal Center, 61 Forsyth Street, SW., Suite 23 T85, Atlanta, GA 30303–8931.

(3) Region III, USNRC, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352..

(4) Region IV, USNRC, 611 Ryan Plaza Drive, Suite 400, Arlington, TX 76011-4005.

[67 FR 67097, Nov. 4, 2002; 67 FR 70835, Nov. 27, 2002, as amended at 67 FR 77652, Dec. 19, 2002; 68 FR 75389, Dec. 31, 2003; 70 FR 69421, Nov. 16, 2005; 71 FR 15007, Mar. 27, 2006; 72 FR 49148, Aug. 28, 2007; 73 FR 5711, Jan. 31, 2008]

Subpart B--Headquarters

[Top of File]

§ 1.11 The Commission.

(a) The Nuclear Regulatory Commission, composed of five members, one of whom is designated by the President as Chairman, is established pursuant to section 201 of the Energy Reorganization Act of 1974, as amended. The Chairman is the principal executive officer of the Commission, and is responsible for the executive and administrative functions with respect to appointment and supervision of personnel, except as otherwise provided by the Energy Reorganization Act of 1974, as amended, and Reorganizaton Plan No. 1 of 1980 (45 FR 40561); distribution of business; use and expenditures of funds (except that the function of revising budget estimates and purposes is reserved to the Commission); and appointment, subject to approval of the Commission, of heads of major administrative units under the Commission. The Chairman is the official spokesman, as mandated by the Reorganization Plan No. 1 of 1980. The Chairman has ultimate authority for all NRC functions pertaining to an emergency involving an NRC Licensee. The Chairman's actions are governed by the general policies of the Commission.

(b) The Commission is responsible for licensing and regulating nuclear facilities and materials and for conducting research in support of the licensing and regulatory process, as mandated by the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and the Nuclear Nonproliferation Act of 1978; and in accordance with the National Environmental Policy Act of 1969, as amended, and other applicable statutes. These responsibilities include protecting public health and safety, protecting the environment, protecting and safeguarding nuclear materials and nuclear power plants in the interest of national security, and assuring conformity with antitrust laws. Agency functions are performed through standards setting and rulemaking; technical reviews and studies; conduct of public hearings; issuance of authorizations, permits, and licenses; inspection, investigation, and enforcement; evaluation of operating experience; and confirmatory research. The Commission is composed of five members, appointed by the President and confirmed by the Senate.

(c) The following staff units and officials report directly to the Commission: Atomic Safety and Licensing Board Panel, Office of the General Counsel, Office of the Secretary, Office of Commission Appellate Adjudication, Office of International Programs, and other committees and boards that are authorized or established specifically by the Act. The Advisory Committee on Reactor Safeguards and the Advisory Committee on Nuclear Waste also report directly to the Commission.

(d) The Offices of Congressional Affairs and Public Affairs report directly to the Chairman.

[52 FR 31602, Aug. 21, 1987, as amended at 57 FR 1639, Jan. 15, 1992; 59 FR 63882, Dec. 12, 1994]

Inspector General

[Top of File]

§ 1.12 Office of the Inspector General.

The Office of the Inspector General--

(a) Develops policies and standards that govern NRC's financial and management audit program;

(b) Plans, directs, and executes the long-range, comprehensive audit program;

(c) Conducts and reports on investigations and inquiries, as necessary, to ascertain and verify the facts with regard to the integrity of all NRC programs and operations;

(d) Investigates possible irregularities or alleged misconduct of NRC employees and contractors;

(e) Refers suspected or alleged criminal violations concerning NRC employees or contractors to the Department of Justice;

(f) Reviews existing and proposed legislation and regulations for their impact on economy and efficiency in the administration of NRC's programs and operations;

(g) Keeps the Commission and the Congress fully and currently informed, by means of semiannual and other reports, about fraud, abuse, and other serious deficiencies in NRC's programs and operations; and

(h) Maintains liaison with audit and inspector general organizations and other law enforcement agencies in regard to all matters relating to the promotion of economy and efficiency and the detection of fraud and abuse in programs and operations.

[54 FR 53313, Dec. 28, 1989]

Panels, Boards, and Committees

[Top of File]

§ 1.13 Advisory Committee on Reactor Safeguards.

The Advisory Committee on Reactor Safeguards (ACRS) was established by section 29 of the Atomic Energy Act of 1954, as amended. Consisting of a maximum of 15 members, it reviews and reports on safety studies and applications for construction permits and facility operating licenses; advises the Commission with regard to hazards of proposed or existing reactor facilities and the adequacy of proposed reactor safety standards; upon request of the Department of Energy (DOE), reviews and advises with regard to the hazards of DOE nuclear activities and facilities; reviews any generic issues or other matters referred to it by the Commission for advice. The Committee, on its own initiative, may conduct reviews of specific generic matters or nuclear facility safety-related items. The ACRS conducts studies of reactor safety research and submits reports thereon to the U.S. Congress and the NRC as appropriate.

§ 1.15 Atomic Safety and Licensing Board Panel.

[Top of File]

The Atomic Safety and Licensing Board Panel, established pursuant to section 191 of the Atomic Energy Act of 1954, as amended, conducts hearings for the Commission and such other regulatory functions as the Commission authorizes. The Panel is comprised of any number of Administrative Judges (full-time and part-time), who may be lawyers, physicists, engineers, and environmental scientists; and Administrative Law Judges, who hear antitrust, civil penalty, and other cases and serve as Atomic Safety and Licensing Board Chairmen. The Chief Administrative Judge develops and applies procedures governing the activities of Boards, Administrative Judges, and Administrative Law Judges and makes appropriate recommendations to the Commission concerning the rules governing the conduct of hearings. The Panel conducts all licensing and other hearings as directed by the Commission primarily through individual Atomic Safety and Licensing Boards composed of one or three Administrative Judges. Those boards are appointed by either the Commission or the Chief Administrative Judge.

§ 1.18 Advisory Committee on Nuclear Waste.

[Top of File]

The Advisory Committee on Nuclear Waste (ACNW) provides advice to the Commission on all aspects of nuclear waste management, as appropriate, within the purview of NRC's regulatory responsibilities. The primary emphasis of the ACNW is disposal but will also include other aspects of nuclear waste management such as handling, processing, transportation, storage, and safeguarding of nuclear wastes including spent fuel, nuclear wastes mixed with other hazardous substances, and uranium mill tailings. In performing its work, the committee examines and reports on specific areas of concern referred to it by the Commission or designated representatives of the Commission, and undertakes studies and activities on its own initiative as appropriate to carry out its responsibilities. The committee interacts with representatives of NRC, other Federal agencies, state and local governments, Indian Tribes, and private organizations, as appropriate, to fulfill its responsibilities.

[54 FR 53314, Dec. 28, 1989]

§ 1.19 Other committees, boards, and panels.

[Top of File]

Under section 161a. of the Atomic Energy Act of 1954, as amended, the Commission may establish advisory bodies to make recommendations to it. Currently, four committees are in existence.

(a) The Advisory Committee on Medical Uses of Isotopes (ACMUI) was established by the Atomic Energy Commission in July 1958. The

ACMUI, composed of physicians and scientists, considers medical questions referred to it by the NRC staff and renders expert opinions regarding medical uses of radioisotopes. The ACMUI also advises the NRC staff, as requested, on matters of policy regarding licensing of medical uses of radioisotopes.

(b) The Advisory Committee for the Decontamination of Three Mile Island, Unit 2, was established by the NRC in October 1980. Its purpose is to obtain input and views from the residents of the Three Mile Island area and afford Pennsylvania government officials an opportunity to participate in the Commission's decisional process regarding cleanup for Three Mile Island, Unit 2.

(c) The Nuclear Safety Research Review Committee (NSRRC) was established by the NRC in February 1988 for the purpose of reporting to the Commission through the Director of the Office of Nuclear Regulatory Research on important management matters in the direction of the Commission's nuclear safety research program. The committee activities cover all aspects of nuclear safety research including, but not limited to, accident management, plant aging, human factors and system reliability, earth science, waste disposal and seismic and structural engineering. In performing its activities, the committee evaluates and reports on the conformance of the nuclear safety research program to the NRC philosophy of nuclear regulatory research. The committee conducts specialized studies when requested by the Commission or Director of the Office of Nuclear Regulatory Research. The committee interacts with the Office of Research management staff and selected contractors in private industry, at national laboratories and universities.

(d) The Licensing Support Network Advisory Review Panel (LSNARP) was established by the Commission on October 3, 1989, pursuant to 10 CFR 2.1011(e) of the Commission's regulations. The LSNARP provides advice to the Commission on the design, development, and operation of the Licensing Support Network (LSN) an electronic information management system for use in the Commission's high-level radioactive waste (HLW) licensing proceeding. Membership consists of those interests that will be affected by the use of the LSN, and selected Federal agencies with expertise in large-scale electronic information systems. The individual representatives of these interests and agencies possess expertise in management information science and in managing records of the Commission's licensing process for the HLW repository.

[52 FR 31602, Aug. 21, 1987, as amended at 54 FR 53314, Dec. 28, 1989; 68 FR 75389, Dec. 31, 2003]

Commission Staff

[Top of File]

§ 1.23 Office of the General Counsel.

The Office of the General Counsel, established pursuant to section 25 of the Atomic Energy Act of 1954, as amended--

(a) Directs matters of law and legal policy, providing opinions, advice, and assistance to the agency with respect to all of its activities;

(b) Reviews and prepares appropriate draft Commission decisions on public petitions seeking direct Commission action and rulemaking proceedings involving hearings, monitors cases pending before presiding officers and reviews draft Commission decisions on Atomic Safety and Licensing Board decisions and rulings;

(c) Provides interpretation of laws, regulations, and other sources of authority;

(d) Reviews the legal form and content of proposed official actions;

(e) As requested, provides the agency with legal advice and opinions on acquisition matters, including agency procurement contracts; placement of work at Department of Energy national laboratories; interagency agreements to acquire supplies and services; and grants and cooperative agreements. Prepares or concurs in all other interagency agreements, delegations of authority, regulations; orders; licenses; and other legal documents and prepares legal interpretations thereof;

(f) Reviews and directs intellectual property (patent) work;

(g) Represents and protects the interests of the NRC in legal matters and in court proceedings, and in relation to other government agencies, administrative bodies, committees of Congress, foreign governments, and members of the public; and

(h) Represents the NRC staff as a party in NRC administrative hearings.

[52 FR 31602, Aug. 21, 1987, as amended at 56 FR 29407, June 27, 1991; 65 FR 59272, Oct. 4, 2000]

§ 1.24 Office of Commission Appellate Adjudication.

[Top of File]

The Office of Commission Appellate Adjudication--

(a) Monitors cases pending before presiding officers;

(b) Provides the Commission with an analysis of any adjudicatory matter requiring a Commission decision (e.g., petitions for review,

certified questions, stay requests) including available options;

(c) Drafts any necessary decisions pursuant to the Commission's guidance after presentation of options; and

(d) Consults with the Office of the General Counsel in identifying the options to be presented to the Commission and in drafting the final decision to be presented to the Commission.

[56 FR 29407, June 27, 1991]

§ 1.25 Office of the Secretary of the Commission.

[Top of File]

The Office of the Secretary of the Commission--

(a) Provides general management services to support the Commission and to implement Commission decisions; and advises and assists the Commission and staff on the planning, scheduling, and conduct of Commission business including preparation of internal procedures;

(b) Prepares the Commission's meeting agenda;

(c) Manages the Commission Staff Paper and COMSECY systems;

(d) Receives, processes, and controls Commission mail, communications, and correspondence;

(e) Maintains the Commission's official records and acts as Freedom of Information administrative coordinator for Commission records;

(f) Codifies Commission decisions in memoranda directing staff action and monitors compliance;

(g) Receives, processes, and controls motions and pleadings filed with the Commission; issues and serves adjudicatory orders on behalf of the Commission; receives and distributes public comments in rulemaking proceedings; issues proposed and final rules on behalf of the Commission; maintains the official adjudicatory and rulemaking dockets of the Commission; and exercises responsibilities delegated to the Secretary in 10 CFR 2.303 and 2.346;

(h) Administers the NRC Historical Program;

(i) Integrates office automation initiatives into the Commission's administrative system;

(j) Functions as the NRC Federal Advisory Committee Management Officer; and

(k) Provides guidance and direction on the use of the NRC seal and flag.

[52 FR 31602, Aug. 21, 1987, as amended at 63 FR 15741, Apr. 1, 1998; 69 FR 2233, Jan. 14, 2004]

§ 1.26 [Reserved]

[Top of File]

§ 1.27 Office of Congressional Affairs.

[Top of File]

The Office of Congressional Affairs--

(a) Advises the Chairman, the Commission, and NRC staff on all NRC relations with Congress and the views of Congress toward NRC policies, plans and activities;

(b) Maintains liaison with Congressional committees and members of Congress on matters of interest to NRC;

(c) Serves as primary contact point for all NRC communications with Congress;

(d) Coordinates NRC internal activities with Congress;

(e) Plans, develops, and manages NRC's legislative programs; and

(f) Monitors legislative proposals, bills, and hearings.

[57 FR 1639, Jan. 15, 1992]

§ 1.28 Office of Public Affairs.

[Top of File]

The Office of Public Affairs--

(a) Develops policies, programs, and procedures for the Chairman's approval for informing the public of NRC activities;

(b) Prepares, clears, and disseminates information to the public and the news media concerning NRC policies, programs, and activities;

(c) Keeps NRC management informed on media coverage of activities of interest to the agency;

(d) Plans, directs, and coordinates the activities of public information staffs located at Regional Offices;

(e) Conducts a cooperative program with schools; and

(f) Carries out assigned activities in the area of consumer affairs.

[57 FR 1639, Jan. 15, 1992]

§ 1.29 Office of International Programs.

[Top of File]

The Office of International Programs--

(a) Advises the Chairman, the Commission, and NRC staff on international issues;

(b) Recommends policies concerning nuclear exports and imports, international safeguards, international physical security, nonproliferation matters, and international cooperation and assistance in nuclear safety and radiation protection;

(c) Plans, develops, and manages international nuclear safety information exchange programs and coordinates international research agreements;

(d) Obtains, evaluates, and uses pertinent information from other NRC and U.S. Government offices in processing nuclear export and import license applications;

(e) Establishes and maintains working relationships with individual countries and international nuclear organizations, as well as other involved U.S. Government agencies; and

(f) Assures that all international activities carried out by the Commission and staff are well coordinated internally and Government-wide and are consistent with NRC and U.S. policies.

[57 FR 1639, Jan. 15, 1992]

Chief Financial Officer

[Top of File]

§ 1.31 Office of the Chief Financial Officer.

The Office of the Chief Financial Officer--

(a) Oversees all financial management activities relating to NRC's programs and operations and provides advice to the Chairman on financial management matters;

(b) Develops and transmits the NRC's budget estimates to the Office of Management and Budget (OMB) and Congress;

(c) Establishes financial management policy including accounting principles and standards for the agency and provides policy guidance to senior managers on the budget and all other financial management activities;

(d) Provides an agencywide management control program for financial and program managers that establishes internal control processes

and provides for timely corrective actions regarding material weaknesses that are disclosed to comply with the Federal Manager's Financial Integrity Act of 1982;

(e) Develops and manages an agencywide planning, budgeting, and performance management process;

(f) Develops and maintains an integrated agency accounting and financial management system, including an accounting system, and financial reporting and internal controls;

(g) Directs, manages, and provides policy guidance and oversight of agency financial management personnel activities and operations;

(h) Prepares and transmits an annual financial management report to the Chairman and the Director, Office of Management and Budget, including an audited financial statement;

(i) Monitors the financial execution of NRC's budget in relation to actual expenditures, controls the use of NRC funds to ensure that they are expended in accordance with applicable laws and financial management principles, and prepares and submits to the Chairman timely cost and performance reports;

(j) Establishes, maintains, and oversees the implementation of license fee polices and regulations; and

(k) Reviews, on a periodic basis, fees and other charges imposed by NRC for services provided and makes recommendations for revising those charges, as appropriate.

[63 FR 15741, Apr. 1, 1998]

Executive Director for Operations

[Top of File]

§ 1.32 Office of the Executive Director for Operations.

(a) The Executive Director for Operations (EDO) reports for all matters to the Chairman, and is subject to the supervision and direction of the Chairman as provided in Reorganization Plan No. 1 of 1980.

(b) The EDO supervises and coordinates policy development and operational activities in the following offices: The Office of Nuclear Reactor Regulation, the Office of New Reactors, the Office of Nuclear Material Safety and Safeguards, the Office of Federal and State Materials and Environmental Management Systems, the Office of Nuclear Regulatory Research, the Office of Nuclear Security and Incident Response, and the NRC Regional Offices; and the following staff offices: The Office of Enforcement, the Office of Administration, the Office of Information Services, the Office of
Investigations, the Office of Small Business and Civil Rights, the Office of Human Resources, and other organizational units as shall be assigned by the Commission. The EDO is also responsible for implementing the Commission's policy directives pertaining to these offices.

(c) The EDO exercises powers and functions delegated to the EDO under the Reorganization Plan No. 1 of 1980, this chapter, or otherwise by the Commission or Chairman, as appropriate. The EDO has the authority to perform any function that may be performed by an office director reporting to the EDO.

[54 FR 53314, Dec. 28, 1989, as amended at 59 FR 63882, Dec. 12, 1994. Redesignated and amended at 63 FR 15741, Apr. 1, 1998; 67 FR 3585, Jan. 25, 2002; 70 FR 69421, Nov. 16, 2005; 73 FR 5711, Jan. 31, 2008]

Staff Offices

[Top of File]

§ 1.33 Office of Enforcement.

The Office of Enforcement—

(a) Develops policies and programs for enforcement of NRC requirements;

(b) Manages major enforcement action;

(c) Assesses the effectiveness and uniformity of Regional enforcement actions; and

(d) Manages the NRC allegation program.

[63 FR 15741, Apr. 1, 1998 as amended at 70 FR 69422, Nov. 16, 2005]

§ 1.34 Office of Administration.

[Top of File]

The Office of Administration--

(a) Develops and implements agencywide contracting policies and procedures;

(b) Develops policies and procedures and manages the operation and maintenance of NRC offices, facilities, and equipment;

(c) Plans, develops, establishes, and administers policies, standards, and procedures for the overall NRC security program; and

(d) Develops and implements policies and procedures for the review and publication of NRC rulemakings, and ensures compliance with the Regulatory Flexibility Act and the Congressional Review Act, manages the NRC Management Directives Program, and provides translation services.

[63 FR 15741, Apr. 1, 1998 as amended at 70 FR 69422, Nov. 16, 2005]

§ 1.35 Office of Information Services.

[Top of File]

The Office of Information Services—

(a) Plans, directs, and oversees the NRC's information resources, including technology infrastructure and delivery of information management services, to meet the mission and goals of the agency;

(b) Provides principal advice to the Chairman to ensure that information technology (IT) is acquired and information resources across the agency are managed in a manner consistent with Federal information resources management (IRM) laws and regulations;

(c) Assists senior management in recognizing where information technology can add value while improving NRC operations and service delivery;

(d) Directs the implementation of a sound and integrated IT architecture to achieve NRC's strategic and IRM goals;

(e) Monitors and evaluates the performance of information technology and information management programs based on applicable performance measures and assesses the adequacy of IRM skills of the agency;

(f) Provides guidance and oversight for the selection, control and evaluation of information technology investments; and

(g) Provides oversight and quality assurance for the design and operation of the Licensing Support Network (LSN) services and for the completeness and integrity of the LSN database, ensures that the LSN meets the requirements of 10 CFR part 2, subpart J, concerning the use of the LSN in the Commission's high-level waste licensing proceedings, and provides technical oversight of DOE in the design, development, and operation of the LSN.

[63 FR 15741, Apr. 1, 1998. Redesignated at 67 FR 67097, Nov. 4, 2002; 70 FR 69422, Nov. 16, 2005]

§ 1.36 Office of Investigations.

[Top of File]

The Office of Investigations (OI)--

(a) Conducts investigations of licensees, applicants, their contractors or vendors, including the investigation of all allegations of wrongdoing by other than NRC employees and contractors;

(b) Maintains current awareness of inquiries and inspections by other NRC offices to identify the need for formal investigations;

(c) Makes appropriate referrals to the Department of Justice;

(d) Maintains liaison with other agencies and organizations to ensure the timely exchange of information of mutual interest; and

(e) Issues subpoenas where necessary or appropriate for the conduct of investigations.

[54 FR 53315, Dec. 28, 1989]

§ 1.37 Office of Small Business and Civil Rights.

[Top of File]

The Office of Small Business and Civil Rights--

(a) Develops and implements an effective small and disadvantaged business program in accordance with the Small Business Act, as amended, and plans and implements NRC policies and programs relating to equal employment oppportunity and civil rights matters as required by the Equal Employment Opportunity Commission (EEOC) and the Office of Personnel Management (OPM);

(b) Ensures that appropriate consideration is given to Labor Surplus Area firms and Women Business Enterprises, and conducts an outreach program aimed at contractors desiring to do business with NRC;

(c) Maintains liaison with other Government agencies and trade associations;

(d) Coordinates efforts with the Director, Division of Contracts, and Directors of other affected offices;

(e) Develops and recommends for approval by the Executive Director for Operations, NRC policy providing for equal employment opportunity in all aspects of Federal personnel practice;

(f) Develops, monitors, and evaluates the agency's equal employment opportunity efforts and affirmative action programs to ensure compliance with NRC policy;

(g) Serves as the principal contact with local and national public and private organizations to facilitate the NRC equal opportunity program; and

(h) Coordinates all efforts pertaining to small and disadvantaged business utilization and equal employment opportunity with Office Directors and Regional Administrators.

[52 FR 31602, Aug. 21, 1987, as amended at 59 FR 63882, Dec. 12, 1994]

§ 1.38 [Reserved]

[Top of File]

§ 1.39 Office of Human Resources.

[Top of File]

The Office of Human Resources--

(a) Plans and implements NRC policies, programs, and services to provide for the effective organization, utilization, and development of the agency's human resources;

(b) Provides labor relations and personnel policy guidance and supporting services to NRC managers and employees;

(c) Provides training, benefits administration, and counseling services for NRC employees;

(d) Collects, analyzes, and provides data on the characteristics, allocation, utilization, and retention of NRC's workforce;

(e) Provides staffing advice and services to NRC managers and employees; and

(f) Provides executive resources management and organizational and managerial development services to the NRC.

[52 FR 31602, Aug. 21, 1987, as amended at 63 FR 15742, Apr. 1, 1998]

§ 1.40 [Reserved]

[Top of File]

§ 1.41 Office of Federal and State Materials and Environmental Management Programs.

[Top of File]

(a) The Office of Federal and State Materials and Environmental Management Programs (FSME) is responsible for protecting the public health and safety, the common defense and security, and the environment by licensing, inspecting, and assessing environmental impacts for all nuclear material facilities and activities which are not the responsibility of the Office of Nuclear Material Safety and Safeguards (NMSS). FSME is also responsible for developing all new regulations and amending existing regulations for all nuclear material facilities and activities regulated by both
FSME and NMSS.

(b) The Office of Federal and State Materials and Environmental Management Programs—

(1) Plans and directs NRC's program of cooperation and liaison with States, local governments, interstate and Indian Tribe organizations; and coordinates liaison with other Federal Agencies;

(2) Participates in formulation of policies involving NRC/State cooperation and liaison;

(3) Develops and directs administrative and contractual programs for coordinating and integrating Federal and State regulatory activities;

(4) Maintains liaison between NRC and State, interstate, regional, Indian Tribal, and quasi-governmental organizations on regulatory matters;

(5) Promotes NRC visibility and performs general liaison with other Federal Agencies, and keeps NRC management informed of significant developments at other Federal Agencies which affect the NRC;

(6) Monitors nuclear-related State legislative activities;

(7) Directs regulatory activities of State Liaison and State Agreement Officers located in Regional Offices;

(8) Participates in policy matters on State Public Utility Commissions (PUCs);

(9) Administers the State Agreements program in a partnership arrangement with the States;

(10) Develops staff policy and procedures and implements State Agreements program under the provisions of section 274b of the Atomic Energy Act (the Act), as amended;

(11) Provides oversight of program of periodic routine reviews of Agreement State programs to determine their adequacy and compatibility as required by section 274j of the Act and other periodic reviews that may be performed to maintain a current level of knowledge of the status of the Agreement State programs;

(12) Provides training to the States as provided by section 274i of the Act and also to NRC staff and staff of the U.S. Navy and U.S. Air Force;

(13) Provides technical assistance to Agreement States;

(14) Maintains an exchange of information with the States;

(15) Conducts negotiations with States expressing an interest in seeking a section 274b Agreement;

(16) Supports, consistent with Commission directives, State efforts to improve regulatory control for radiation safety over radioactive materials not covered by the Act;

(17) Serves as the NRC liaison to the Conference of Radiation Control Program Directors, Inc. (CRCPD) and coordinates NRC technical support of CRCPD committees;

(18) Develops, promulgates, and amends regulations generally associated with the materials regulated by both FSME and NMSS and for all security-related regulations which will be applied to licensees and holders of certificates of compliance issued by FSME and NMSS;

(19) Develops and implements NRC policy for the regulation of activities involving safety, quality, approval, and inspection of the use and handling of nuclear and other radioactive materials, such as uranium activities;

(20) Regulates medical, industrial, academic, and commercial uses of radioactive isotopes;

(21) Oversees safe management and disposal of low-level radioactive wastes;

(22) Plans and directs program for financial assurance of FSME licensees;

(23) Manages the decommissioning of facilities and sites when their licensed functions are over;

(24) Supports safeguards activities including—

(i) Developing overall agency policy;

(ii) Monitoring and assessing the threat environment, including liaison with intelligence agencies, as appropriate; and

(iii) Conducting licensing and review activities appropriate to deter and protect against threats of radiological sabotage and threats of theft or diversion of nuclear material at regulated facilities and during transport; and

(25) Identifies and takes action for activities under its responsibility, including consulting and coordinating with international, Federal, State, Indian Tribal and local agencies, as appropriate.

[57 FR 1639, Jan. 15, 1992, as amended at 59 FR 5519, Feb. 7, 1994; 70 FR 69422, Nov. 16, 2005; 73 FR 5711, Jan. 31, 2008]

Program Offices

[Top of File]

§ 1.42 Office of Nuclear Material Safety and Safeguards.

(a) The Office of Nuclear Material Safety and Safeguards (NMSS) is responsible for regulating activities which provide for the safe and secure production of nuclear fuel used in commercial nuclear reactors; the safe storage, transportation, and disposal of high-level radioactive waste and spent nuclear fuel; and the transportation of radioactive materials regulated under the Atomic Energy Act. NMSS ensures safety and security by implementing a regulatory program involving activities including licensing, inspection, assessment of licensee performance, events analysis, enforcement, and identification and resolution of generic issues.

(b) The Office of Nuclear Material Safety and Safeguards—

(1) Develops and implements NRC policy for the regulation of: uranium recovery, conversion, and enrichment; fuel fabrication and development; transportation of nuclear materials, including certification of transport containers and reactor spent fuel storage; and safe management and disposal of spent fuel and high-level radioactive waste;

(2) Has lead responsibility within NRC for domestic and international safeguards policy and regulation for fuel cycle facilities, including material control and accountability;

(3) Conducts high-level waste pre-licensing activities, consistent with direction in the Nuclear Waste Policy Act and the Energy Policy Act, to ensure appropriate standards and regulatory guidance are in place, and interacts with the applicant;

(4) Is responsible for regulation and licensing of recycling technologies intended to reduce the amount of waste to be disposed through geologic disposal and to reduce proliferation concerns since the technologies do not produce separated plutonium;

(5) Interacts with DOE and international experts, in order to develop an appropriate regulatory framework, in recycling during development, demonstration, and deployment of new advanced recycling technologies that recycle nuclear fuel in a manner which does not produce separated plutonium;

(6) Creates and maintains the regulatory infrastructure to support the agency's role in licensing a reprocessing facility and a related fuel fabrication facility and vitrification and/or waste storage facility; and

(7) Prepares NRC to perform its regulatory role for new, expanded, and modified commercial fuel cycle facilities which may include recycling, transmutation, and actinide burning. This includes regulatory processes such as licensing, inspection, assessment of license performance assessment, events analysis, and enforcement that will ensure that this technology can be safely and securely implemented commercially in the United States.

[52 FR 31602, Aug. 21, 1987. Redesignated at 57 FR 1639, Jan. 15, 1992, as amended at 63 FR 69544, Dec. 17, 1998; 73 FR 5712, Jan. 31, 2008]

§ 1.43 Office of Nuclear Reactor Regulation.

[Top of File]

The Office of Nuclear Reactor Regulation--

(a) Develops, promulgates and implements regulations and develops and implements policies, programs, and procedures for all aspects of licensing, inspection, and safeguarding of--

(1) Manufacturing, production, and utilization facilities, except for those concerning fuel reprocessing plants and isotopic enrichment plants;

(2) Receipt, possession, and ownership of source, byproduct, and special nuclear material used or produced at facilities licensed under 10

CFR parts 50, 52, and 54;

(3) Operators of such facilities;

(4) Emergency preparedness at such facilities; and

(5) Contractors and suppliers of such facilities.

(b) Identifies and takes action regarding conditions and licensee performance that may adversely affect public health and safety, the environment, or the safeguarding of nuclear reactor facilities;

(c) Assesses and recommends or takes action regarding incidents or accidents;

(d) Provides special assistance as required in matters involving reactor facilities exempt from licensing;

(e) Provides guidance and implementation direction to Regional Offices on reactor licensing, inspection, and safeguards programs assigned to the Region, and appraises Regional program performance in terms of effectiveness and uniformity;

(f) Performs other functions required for implementation of the reactor licensing, inspection, and safeguard programs; and

(g) Performs review and evaluation related to regulated facilities insurance, indemnity, and antitrust matters.

[52 FR 31602, Aug. 21, 1987, as amended at 63 FR 69544, Dec. 17, 1998; 70 FR 69422, Nov. 16, 2005; 72 FR 49470, Aug. 28, 2007]

§ 1.44 Office of New Reactors.

[Top of File]

The Office of New Reactors—

(a) Develops, promulgates and implements regulations and develops and implements policies, programs, and procedures for all aspects of licensing, inspection, and safeguarding of—

(1) Manufacturing, production, and utilization facilities licensed under part 52 of this chapter prior to initial commencement of operation;

(2) Receipt, possession, and ownership of source, byproduct, and special nuclear material used or produced at facilities licensed under part 52 of this chapter prior to initial commencement of operation;

(3) Operators of such facilities licensed under part 52 of this chapter prior to initial commencement of operation;

(4) Emergency preparedness at such facilities licensed under part 52 of this chapter prior to initial commencement of operation; and

(5) Contractors and suppliers of such facilities licensed under part 52 of this chapter prior to initial commencement of operation;

(b) Identifies and takes action regarding conditions and licensee performance that may adversely affect public health and safety, the environment, or the safeguarding of nuclear reactor facilities licensed under part 52 of this chapter prior to initial commencement of operation;

(c) Assesses and recommends or takes action regarding incidents or accidents related to facilities licensed under part 52 of this chapter prior to initial commencement of operation;

(d) Provides guidance and implementation direction to Regional Offices on reactor licensing, inspection, and safeguards programs assigned to the Region, and appraises Regional program performance in terms of effectiveness and uniformity, for facilities licensed under 10 CFR part 52 prior to initial commencement of operation;

(e) Performs other functions required for implementation of the reactor licensing, inspection, and safeguard programs for facilities licensed under part 52 of this chapter prior to initial commencement of operation; and

(f) Performs review and evaluation related to regulated facilities insurance and indemnity for facilities licensed under part 52 of this chapter prior to initial commencement of operation.

[73 FR 5712, Jan. 31, 2008]

§ 1.45 Office of Nuclear Regulatory Research.

[Top of File]

The Office of Nuclear Regulatory Research--

(a) Plans, recommends, and implements programs of nuclear regulatory research, standards development, and resolution of generic safety issues for nuclear power plants and other facilities regulated by the NRC;

(b) Coordinates research activities within and outside the agency including appointment of staff to committees and conferences; and

(c) Coordinates NRC participation in international standards-related activities and national volunteer standards efforts, including appointment of staff to committees.

[52 FR 31602, Aug. 21, 1987, as amended at 63 FR 69544, Dec. 17, 1998]

§ 1.46 Office of Nuclear Security and Incident Response.

[Top of File]

The Office of Nuclear Security and Incident Response--

(a) Develops overall agency policy and provides management direction for evaluation and assessment of technical issues involving security at nuclear facilities, and is the agency safeguards and security interface with the Department of Homeland Security (DHS), the Department of Energy (DOE), other agencies; and the international activities related to the security of radioactive material and nuclear facilities;

(b) Develops, in participation with domestic and international agencies, foreign policy guidance and provides international assistance in nuclear security and safeguards;

(c)Develops emergency preparedness policies, regulations, programs, and guidelines for nuclear facilities;

(d) Provides technical expertise regarding emergency preparedness issues and interpretations; and

(e) Develops and directs the NRC program for response to incidents, and is the agency emergency preparedness and incident response interface with the DHS, the Federal Emergency Management Agency (FEMA) and other Federal agencies.

[70 FR 69522, Nov. 16, 2005; 72 FR 28449, May 21, 2007]

§ 1.47 NRC Regional Offices.

[Top of File]

Each Regional Administrator executes established NRC policies and assigned programs relating to inspection, enforcement, licensing, State agreements, State liaison, and emergency response within Regional boundaries set out in § 1.5(b) of this part.

§ 1.51 Description and custody of NRC seal.

[Top of File]

(a) Pursuant to section 201(a) of the Energy Reorganization Act of 1974, the Nuclear Regulatory Commission, has adopted an official seal. Its description is as follows: An American bald eagle (similar to that on the Great Seal of the United States of America) of brown and tan with claws and beak of yellow, behind a shield of red, white, and blue, clutching a cluster of thirteen arrows in its left claw and a green olive branch in its right claw, positioned on a field of white, with the words "United States Nuclear Regulatory Commission" in dark blue encircling the eagle. The eagle represents the United States of America and its interests.

(b) The Official Seal of the Nuclear Regulatory Commission is illustrated as follows:

(c) The Secretary of the Commission is responsible for custody of the impression seals and of replica (plaque) seals.

§ 1.53 Use of NRC seal or replicas.

[Top of File]

(a) The use of the seal or replicas is restricted to the following:

(1) NRC letterhead stationery;

(2) NRC award certificates and medals;

(3) Security credentials and employee identification cards;

(4) NRC documents, including agreements with States, interagency or governmental agreements, foreign patent applications, certifications, special reports to the President and Congress and, at the discretion of the Secretary of the Commission, such other documents as the Secretary finds appropriate;

(5) Plaques--the design of the seal may be incorporated in plaques for display at NRC facilities in locations such as auditoriums, presentation rooms, lobbies, offices of senior officials, on the fronts of buildings, and other places designated by the Secretary;

(6) The NRC flag (which incorporates the design of the seal);

(7) Official films prepared by or for the NRC, if deemed appropriate by the Director of Governmental and Public Affairs;

(8) Official NRC publications that represent an achievement or mission of NRC as a whole, or that are cosponsored by NRC and other Government departments or agencies; and

(9) Any other uses as the Secretary of the Commission finds appropriate.

(b) Any person who uses the official seal in a manner other than as permitted by this section shall be subject to the provisions of 18 U.S.C. 1017, which provides penalties for the fraudulent or wrongful use of an official seal, and to other provisions of law as applicable.

§ 1.55 Establishment of official NRC flag.

[Top of File]

The official flag is based on the design of the NRC seal. It is 50 inches by 66 inches in size with a 38-inch diameter seal incorporated in the center of a dark blue field with a gold fringe.

§ 1.57 Use of NRC flag.

[Top of File]

(a) The use of the flag is restricted to the following:

(1) On or in front of NRC installations;

(2) At NRC ceremonies;

(3) At conferences involving official NRC participation (including permanent display in NRC conference rooms);

(4) At Governmental or public appearances of NRC executives;

(5) In private offices of senior officials; or

(6) As the Secretary of the Commission otherwise authorizes.

(b) The NRC flag must only be displayed together with the U.S. flag.

When they are both displayed on a speaker's platform, the U.S. flag must occupy the position of honor and be placed at the speaker's right as he or she faces the audience, and the NRC flag must be placed at the speaker's left.

§ 1.59 Report of violations.

[Top of File]

In order to ensure adherence to the authorized uses of the NRC seal and flag as provided in this subpart, a report of each suspected violation of this subpart, or any questionable use of the NRC seal or flag, should be submitted to the Secretary of the Commission.

PART 2--RULES OF PRACTICE FOR DOMESTIC LICENSING PROCEEDINGS AND ISSUANCE OF ORDERS

[Top of File]

§ 2.1 Scope.

[Top of File]

This part governs the conduct of all proceedings, other than export and import licensing proceedings described in part 110, under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, for --

(a) Granting, suspending, revoking, amending, or taking other action with respect to any license, construction permit, or application to transfer a license;

(b) Issuing orders and demands for information to persons subject to the Commission's jurisdiction, including licensees and persons not licensed by the Commission;

(c) Imposing civil penalties under Section 234 of the Act;

(d) Rulemaking under the Act and the Administrative Procedure Act; and

(e) Standard design approvals under part 52 of this chapter.

[56 FR 40684, Aug. 15, 1991; 72 FR 49470, Aug. 28, 2007]

§ 2.1 Scope.

[Top of File]

This part governs the conduct of all proceedings, other than export and import licensing proceedings described in part 110, under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, for --

(a) Granting, suspending, revoking, amending, or taking other action with respect to any license, construction permit, or application to transfer a license;

(b) Issuing orders and demands for information to persons subject to the Commission's jurisdiction, including licensees and persons not licensed by the Commission;

(c) Imposing civil penalties under Section 234 of the Act;

(d) Rulemaking under the Act and the Administrative Procedure Act; and

(e) Standard design approvals under part 52 of this chapter.

[56 FR 40684, Aug. 15, 1991; 72 FR 49470, Aug. 28, 2007]

§ 2.2 Subparts.

[Top of File]

Each subpart other than subpart C of this part sets forth special rules applicable to the type of proceeding described in the first section of that subpart. Subpart C sets forth general rules applicable to all types of proceedings except rulemaking, and should be read in conjunction with the subpart governing a particular proceeding. Subpart I of this part sets forth special procedures to be followed in proceedings in order to safeguard and prevent disclosure of Restricted Data.

[69 FR 2233, Jan. 14, 2004]

§ 2.3 Resolution of conflict.

[Top of File]

(a) In any conflict between a general rule in subpart C of this part and a special rule in another subpart or other part of this chapter

applicable to a particular type of proceeding, the special rule governs.

(b) Unless otherwise specifically referenced, the procedures in this part do not apply to hearings in 10 CFR parts 4, 9, 10, 11, 12, 13, 15, 16, and subparts H and I of 10 CFR part 110.

[27 FR 377, Jan. 13, 1962, as amended at 28 FR 10152, Sept. 17, 1963; 69 FR 2233, Jan. 14, 2004]

§ 2.4 Definitions.

[Top of File]

As used in this part,

ACRS means the Advisory Committee on Reactor Safeguards established by the Act.

Act means the Atomic Energy Act of 1954, as amended (68 Stat. 919).

Adjudication means the process for the formulation of an order for the final disposition of the whole or any part of any proceeding subject to this part, other than rule making.

Administrative Law Judge means an individual appointed pursuant to section 11 of the Administrative Procedure Act to conduct proceedings subject to this part.

Commission means the Commission of five members or a quorum thereof sitting as a body, as provided by section 201 of the Energy Reorganization Act of 1974 (88 Stat. 1242), or any officer to whom has been delegated authority pursuant to section 161n of the Act.

Commission adjudicatory employee means --

(1) The Commissioners and members of their personal staffs;

(2) The employees of the Office of Commission Appellate Adjudication;

(3) The members of the Atomic Safety and Licensing Board Panel and staff assistants to the Panel;

(4) A presiding officer appointed under § 2.313, and staff assistants to a presiding officer;

(5) Special assistants (as defined in § 2.322);

(6) The General Counsel, the Solicitor, the Associate General Counsel for Licensing and Regulation, and employees of the Office of the General Counsel under the supervision of the Solicitor;

(7) The Secretary and employees of the Office of the Secretary; and

(8) Any other Commission officer or employee who is appointed by the Commission, the Secretary, or the General Counsel to participate or advise in the Commission's consideration of an initial or final decision in a proceeding. Any other Commission officer or employee who, as permitted by § 2.348, participates or advises in the Commission's consideration of an initial or final decision in a proceeding must be appointed as a Commission adjudicatory employee under this paragraph and the parties to the proceeding must be given written notice of the appointment.

Contested proceeding means—

(1) A proceeding in which there is a controversy between the NRC staff and the applicant for a license or permit concerning the issuance of the license or permit or any of the terms or conditions thereof;

(2) A proceeding in which the NRC is imposing a civil penalty or other enforcement action, and the subject of the civil penalty or enforcement action is an applicant for or holder of a license or permit, or is or was an applicant for a standard design certification under part 52 of this chapter; and

(3) A proceeding in which a petition for leave to intervene in opposition to an application for a license or permit has been granted or is pending before the Commission.

Department means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95 - 91, 91 Stat. 565 42 U.S.C. 7101 et seq.) to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U. S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104 (b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93 - 438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95 - 91, 91 Stat. 565 at 577 - 578, 42 U.S.C. 7151).

Digital ID certificate means a file stored on a participant's computer that contains the participant's name, e-mail address, and participant's digital signature, proves the participant's identity when filing documents and serving participants electronically through the E-Filing system, and contains public keys, which allow for the encryption and decryption of documents so that the documents can be securely transferred over the Internet.

Electric utility means any entity that generates or distributes electricity and which recovers the costs of this electricity, either directly or indirectly through rates established by the entity itself or by a separate regulatory authority. Investor-owned utilities including generation or distribution subsidiaries, public utility districts, municipalities, rural electric cooperatives, and State and Federal agencies, including associations of any of the foregoing, are included within the meaning of "electric utility."

Electronic acknowledgment means a communication transmitted electronically from the E-Filing system to the submitter confirming receipt of electronic filing and service.

Electronic Hearing Docket means the publicly available Web site which houses a visual presentation of the docket and a link to its files.

E-Filing System means an electronic system that receives, stores, and distributes documents filed in proceedings for which an electronic hearing docket has been established.

Ex parte communication means an oral or written communication not on the public record with respect to which reasonable prior notice to all parties is not given.

Facility means a production facility or a utilization facility as defined in § 50.2 of this chapter.

Guidance for Electronic Submissions to the NRC means the document issued by the Commission that sets forth the transmission methods and formatting standards for filing and service under E-Filing. The document can be obtained by visiting the NRC's Web site at *http://www.nrc.gov*.

Investigative or litigating function means --

(1) Personal participation in planning, conducting, or supervising an investigation; or

(2) Personal participation in planning, developing, or presenting, or in supervising the planning, development or presentation of testimony, argument, or strategy in a proceeding.

License means a license, including an early site permit, construction permit, operating license, combined license, manufacturing license, or renewed license issued by the Commission.

Licensee means a person who is authorized to conduct activities under a license.

NRC personnel means:

(1) NRC employees;

(2) For the purpose of §§ 2.336, 2.702, 2.709 and 2.1018 only, persons acting in the capacity of consultants to the Commission, regardless of the form of the contractual arrangements under which such persons act as consultants to the Commission; and

(3) Members of advisory boards, committees, and panels of the NRC; members of boards designated by the Commission to preside at adjudicatory proceedings; and officers or employees of Government agencies, including military personnel, assigned to duty at the NRC.

NRC Public Document Room means the facility at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland, where certain public records of the NRC that were made available for public inspection in paper or microfiche prior to the implementation of the NRC Agencywide Documents Access and Management System, commonly referred to as ADAMS, will remain available for public inspection. It is also the place where NRC makes computer terminals available to access Publicly Available Records System (PARS) component of ADAMS on the NRC Web site, http://www.nrc.gov, and where copies of publicly available documents can be viewed or ordered for a fee as set forth in § 9.35 of this chapter. The facility is staffed with reference librarians to assist the public in identifying and locating documents and in using the NRC Web site and ADAMS. The NRC Public Document Room is open from 7:45 am to 4:15 pm, Monday through Friday, except on Federal holidays. Reference service and access to documents may also be requested by telephone (301-415-4737 or 800-397-4209) between 8:30 am and 4:15 pm, or by e-mail (PDR@nrc.gov), facsimile (301-415-3548), or letter (NRC Public Document Room, One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852-2738). .

NRC records and documents means any book, paper, map, photograph, brochure, punch card, magnetic tape, paper tape, sound recording, pamphlet, slide, motion picture, or other documentary material regardless of form or characteristics, made by, in the possession of, or under the control of the NRC pursuant to Federal law or in connection with the transaction of public business as evidence of NRC organization, functions, policies, decisions, procedures, operations, programs or other activities. "NRC records and documents" do not include objects or articles such as structures, furniture, tangible exhibits or models, or vehicles and equipment.

NRC Web site, http://www.nrc.gov, is the Internet uniform resource locator name for the Internet address of the Web site where NRC will ordinarily make available its public records for inspection.

Optical Storage Media means any physical computer component that meets E-Filing Guidance standards for storing, saving, and accessing electronic documents.

Participant means an individual or organization that has petitioned to intervene in a proceeding or requested a hearing but that has not yet been granted party status by an Atomic Safety and Licensing Board or other presiding officer. Participant also means a party to a proceeding and any interested State, local governmental body, or affected Federally-recognized Indian Tribe that seeks to participate in a proceeding under § 2.315(c). For the purpose of
service of documents, the NRC staff is considered a participant even if not participating as a party.

Person means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the Department, except that the Department shall be considered a person with respect to those facilities of the Department specified in section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

Potential party means any person who has requested, or who may intend to request, a hearing or petition to intervene in a hearing under 10 CFR part 2, other than hearings conducted under Subparts J and M of 10 CFR part 2.

Presiding officer means the Commission, an administrative law judge, an administrative judge, an Atomic Safety and Licensing Board, or other person designated in accordance with the provisions of this part, presiding over the conduct of a hearing conducted under the provisions of this part.

Public Document Room means the place at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852-2738, at which public records of the Commission will ordinarily be made available for inspection.

Safeguards Information means information not classified as National Security Information or Restricted Data which specifically identifies a licensee's or applicant's detailed control and accounting procedures for the physical protection of special nuclear material in quantities determined by the Commission through order or regulation to be significant to the public health and safety or the common defense and security; detailed security measures (including security plans, procedures, and equipment) for the physical protection of source, byproduct, or special nuclear material in quantities determined by the Commission through order or regulation to be significant to the public health and safety or the common defense and security; security measures for the physical protection and location of certain plant equipment vital to the safety of production or utilization facilities; and any other information within the scope of Section 147 of the Atomic Energy Act of 1954, as amended, the unauthorized disclosure of which, as determined by the Commission through order or regulation, could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of sabotage or theft or diversion of source, byproduct, or special nuclear material.

Secretary means the Secretary to the Commission.

Except as redefined in this section, words and phrases which are defined in the Act and in this chapter have the same meaning when used in this part.

[27 FR 377, Jan. 13, 1962; 72 FR 49470, Aug. 28, 2007; 72 FR 49149, Aug. 28, 2007; 72 FR 64529, Nov. 16, 2007; 73 FR 12631, Mar. 10, 2008; 73 FR 63566, Oct. 24, 2008]

Editorial Note: For *Federal Register* citations affecting § 2.4, see the List of Sections Affected in the Finding Aids section of this volume.

§ 2.8 Information collection requirements: OMB approval.

[Top of File]

This part contains no information collection requirements and therefore is not subject to requirements of the Paperwork Reduction Act (44 U. S.C. 3501 et seq.).

[61 FR 43408, Aug. 22, 1996]

Subpart A—Procedure for Issuance, Amendment, Transfer, or Renewal of a License, and Standard Design Approval

[Top of File]

§ 2.100 Scope of subpart.

This subpart prescribes the procedure for issuance of a license; amendment of a license at the request of the licensee; transfer and renewal of a license; and issuance of a standard design approval under subpart E of part 52 of this chapter.

[69 FR 2234, Jan. 14, 2004; 72 FR 49470, Aug. 28, 2007]

§ 2.101 Filing of application.

[Top of File]

(a)(1) An application for a permit, a license, a license transfer, a license amendment, a license renewal, or a standard design approval, shall be filed with the Director, Office of New Reactors, the Director, Office of Nuclear Reactor Regulation, the Director, Office of Nuclear Material Safety and Safeguards, or the Director, Office of Federal and State Materials and Environmental Management Programs, as prescribed by the applicable provisions of this chapter. A prospective applicant may confer informally with the NRC staff before filing an application.

(2) Each application for a license for a facility or for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee will be assigned a docket number. However, to allow a determination as to whether an application for a limited work authorization, construction permit, operating license, early site permit, standard design approval, combined license, or manufacturing license for a production or utilization facility is complete and acceptable for docketing, it will be initially treated as a tendered application. A copy of the tendered application will be available for public inspection at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC
PDR. Generally, the determination on acceptability for docketing will be made within a period of 30 days. However, in selected applications, the Commission may decide to determine acceptability based on the technical adequacy of the application as well as its completeness. In these cases, the Commission, under § 2.104(a), will direct that the notice of hearing be issued as soon as practicable after the application has been tendered, and the determination of acceptability will be made generally within a period of 60 days. For docketing and other requirements for applications under part 61 of this chapter, see paragraph (g) of this section.

(3) If the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Program, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, determines that a tendered application for a construction permit or operating license for a production or utilization facility, and/or any environmental report required pursuant to subpart A of part 51 of this chapter, or part thereof as provided in paragraphs (a)(5) or (a–1) of this section are complete and acceptable for docketing, a docket
number will be assigned to the application or part thereof, and the applicant will be notified of the determination. With respect to the tendered application and/or environmental report or part thereof that is acceptable for docketing, the applicant will be requested to:

(i) Submit to the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, such additional copies as the regulations in part 50 and subpart A of part 51 of this chapter require;

(ii) Serve a copy on the chief executive of the municipality in which the facility or site which is the subject of an early site permit is to be located or, if the facility or site which is the subject of an early site permit is not to be located within a municipality, on the chief executive of the county, and serve a notice of availability of the application or environmental report on the chief executives of the municipalities or counties which have been identified in the application or environmental report as the location of all or part of the alternative sites, containing as applicable, the docket number of the application; a brief description of the proposed site and facility; the location of the site and facility as primarily proposed and alternatively listed; the name, address, telephone number, and e-mail address (if available) of the applicant's representative who may be contacted for further information; notification that a draft environmental impact statement will be issued by the Commission and will be made available upon request to the Commission; and notification that if a request is received from the appropriate chief executive, the applicant will transmit a copy of the application and environmental report, and any changes to these documents which affect the alternative site location, to the executive who makes the request. In complying with the requirements of this paragraph, the applicant should not make public distribution of those parts of the application subject to § 2.390(d). The applicant shall submit to the Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as
appropriate, an affidavit that service of the notice of availability of the application or environmental report has been completed along with a list of names and addresses of those executives upon whom the notice was served; and

(iii) Make direct distribution of additional copies to Federal, State, and local officials in accordance with the requirements of this chapter and written instructions furnished to the applicant by the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate. Such written instructions will be furnished as soon as practicable after all or any part of the application, or environmental report, is tendered. The copies submitted to the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, and distributed by the applicant shall be completely assembled documents, identified by docket number. Subsequently distributed amendments to applications, however, may include revised pages to previous submittals and, in such cases, the recipients will be responsible for
inserting the revised pages.

(4) The tendered application for a construction permit, operating license, early site permit, standard design approval, combined license, or manufacturing license will be formally docketed upon receipt by the Director, Office of New Reactors, Director, Office of Nuclear Reactor Regulation, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, of the required additional copies. Distribution of the additional copies shall be deemed to be complete as of the time the copies are deposited in the mail or with a carrier prepaid for delivery to the designated addresses. The date of docketing shall be the date when the required copies are received by the Director, Office of New Reactors, Director, Office of Nuclear Reactor Regulation, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate. Within 10 days after docketing, the applicant shall submit to the Director, Office of New Reactors, Director, Office of Nuclear Reactor Regulation, Director, Office of Federal and State Materials and Environmental Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, an affidavit that distribution of the additional copies to Federal, State, and local officials has been completed in accordance with requirements of this chapter and written instructions furnished to the applicant by the Director, Office of New Reactors, Director, Office of Nuclear Reactor Regulation, Director, Office of Federal and State

Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate. Amendments to the application and environmental report shall be filed and distributed and an affidavit shall be furnished to the Director, Office of New Reactors, Director, Office of Nuclear Reactor Regulation, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, in the same manner as for the initial application and environmental report. If it is determined that all or any part of the tendered application and/or environmental report is incomplete and therefore not acceptable for processing, the applicant will be informed of this determination, and the respects in which the document is deficient.

(5) An applicant for a construction permit under part 50 of this chapter or a combined license under part 52 of this chapter for a production or utilization facility which is subject to § 51.20(b) of this chapter, and is of the type specified in § 50.21(b)(2) or (b)(3) or § 50.22 of this chapter or is a testing facility may submit the information required of applicants by part 50 or part 52 of this chapter in two parts. One part shall be accompanied by the information required by § 50.30(f) of this chapter, or § 52.80(b) of this chapter, as applicable. The other part shall include any information required by § 50.34(a) and, if applicable, § 50.34a of this chapter, or §§ 52.79 and 52.80(a), as applicable. One part may precede or follow other parts by no longer than 6 months. If it is determined that either of the parts as described above is incomplete and not acceptable for processing, the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, will inform the applicant of this determination and the respects in which the document is deficient. Such a determination of completeness will generally be made within a period of 30 days. Whichever part is filed first shall also include the fee required by §§ 50.30(e) and 170.21 of this chapter and the information required by §§ 50.33, 50.34(a)(1), or 52.79(a)(1), as applicable, and § 50.37 of this chapter. The Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, will accept for docketing an application for a construction permit under part 52 of this chapter for a production or utilization facility which is subject to § 51.20(b) of this chapter, and is of the type specified in § 50.21(b)(2) or (b)(3) or § 50.22 of this chapter or is a testing facility where one part of the application as described above is complete and conforms to the requirements of part 50 of this chapter. The additional parts will be docketed upon a determination by the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, that it is complete.

(6) [Reserved]

(7) [Reserved]

(8) [Reserved]

(9) An applicant for a construction permit for a utilization facility which is subject to § 51.20(b) of this chapter and is of the type specified in § 50.21(b)(2) or (b)(3) or § 50.22 of this chapter, an applicant for or holder of an early site permit under part 52 of this chapter, or an applicant for a combined license under part 52 of this chapter, who seeks to conduct the activities authorized under § 50.10(d) of this chapter may submit a complete application under paragraphs (a)(1) through (a)(4) of this section which includes the information required by § 50.10(d) of this chapter. Alternatively, the applicant (other than an applicant for or holder of an early site permit) may submit its application in two parts:

(i) Part one must include the information required by § 50.33(a) through (f) of this chapter, and the information required by § 50.10(d)(2) and (d)(3) of this chapter.

(ii) Part two must include the remaining information required by the Commission's regulations in this chapter which was not submitted in part one, *provided, however*, that this information may be submitted in accordance with the applicable provisions of paragraph (a)(5) of this section, or, for a construction permit applicant, paragraph (a)(1) of this section. Part two of the application must be submitted no later than 18 months after submission of part one.

(a–1) *Early consideration of site suitability issues*. An applicant for a construction permit under part 50 of this chapter or a combined license under part 52 of this chapter for a utilization facility which is subject to § 51.20(b) of this chapter and is of the type specified in § 50.21(b)(2) or (3) or § 50.22 of this chapter or is a testing facility, may request that the Commission conduct an early review and hearing and render an early partial decision in accordance with subpart F of this part on issues of site suitability within the purview of the applicable provisions of parts 50, 51, 52, and 100 of this chapter.

(1) *Construction permit*. The applicant for the construction permit may submit the information required of applicants by the provisions of this chapter in three parts:

(i) Part one shall include or be accompanied by any information required by §§ 50.34(a)(1) and 50.30(f) of this chapter which relates to the issue(s) of site suitability for which an early review, hearing, and partial decision are sought, except that information with respect to operation of the facility at the projected initial power level need not be supplied, and shall include the information required by §§ 50.33(a) through (e) and 50.37 of this chapter. The information submitted shall also include:

(A) Proposed findings on the issues of site suitability on which the applicant has requested review and a statement of the bases or the reasons for those findings,

(B) A range of postulated facility design and operation parameters that is sufficient to enable the Commission to perform the requested review of site suitability issues under the applicable provisions of parts 50, 51, and 100, and

(C) Information concerning the applicant's site selection process and long-range plans for ultimate development of the site required by § 2.603(b)(1).

(ii) Part two shall include or be accompanied by the remaining information required by §§ 50.30(f), 50.33, and 50.34(a)(1) of this chapter.

(iii) Part three shall include the remaining information required by §§ 50.34a and (in the case of a nuclear power reactor) 50.34(a) of this chapter.

(iv) The information required for part two or part three shall be submitted during the period the partial decision on part one is effective. Submittal of the information required for part three may precede by no more than 6 months or follow by no more than 6 months the submittal of the information required for part two.

(2) *Combined license under part 52.* An applicant for a combined license under part 52 of this chapter may submit the information required of applicants by the provisions of this chapter in three parts:

(i) Part one shall include or be accompanied by any information required by §§ 52.79(a)(1) and 50.30(f) of this chapter which relates to the issue(s) of site suitability for which an early review, hearing, and partial decision are sought, except that information with respect to operation of the facility at the projected initial power level need not be supplied, and shall include the information required by §§ 50.33(a) through (e) and 50.37 of this chapter. The information submitted shall also include:

(A) Proposed findings on the issues of site suitability on which the applicant has requested review and a statement of the bases or the reasons for those findings;

(B) A range of postulated facility design and operation parameters that is sufficient to enable the Commission to perform the requested review of site suitability issues under the applicable provisions of parts 50, 51, 52, and 100; and

(C) Information concerning the applicant's site selection process and long-range plans for ultimate development of the site required by § 2.621(b)(1).

(ii) Part two shall include or be accompanied by the remaining information required by §§ 50.30(f), 50.33, and 52.79(a)(1) of this chapter.

(iii) Part three shall include the remaining information required by §§ 52.79 and 52.80 of this chapter.

(iv) The information required for part two or part three shall be submitted during the period the partial decision on part one is effective. Submittal of the information required for part three may precede by no more than 6 months or follow by no more than 6 months the submittal of the information required for part two.

(b) After the application has been docketed each applicant for a license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee except applicants under part 61 of this chapter, who must comply with paragraph (g) of this section, shall serve a copy of the application and environmental report, as appropriate, on the chief executive of the municipality, in which the activity is to be conducted or, if the activity is not to be conducted within a municipality on the chief executive of the county, and serve a notice of availability of the application or environmental report on the chief executives of the municipalities or counties which have been identified in the application or environmental report as the location of all or part of the alternative sites, containing the docket number of the application; a brief description of the proposed site and facility; the location of the site and facility as primarily proposed and alternatively listed; the name, address, telephone number, and e-mail address (if available) of the applicant's representative who may be contacted for further information; notification that a draft environmental impact statement will be issued by the Commission and will be made available upon request to the Commission; and notification that if a request is received from the appropriate chief executive, the applicant will transmit a copy of the application and environmental report, and any changes to such documents which affect the alternative site location, to the executive who makes the request. In complying with the requirements of this paragraph the applicant should not make public distribution of those parts of the application subject to § 2.390(d). The applicant shall submit to the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, an affidavit that service of the notice of availability of the application or environmental report has been completed along with a list of names and addresses of those executives upon whom the notice was served.

(c) Upon receipt and acceptance for docketing of the required portions of the application dealing with radiological health and safety and environmental matters, notice of receipt will be published in the Federal Register including an appropriate notice of hearing.

(1) The portion of the application filed contains the information requested by the Attorney General for the purpose of an antitrust review of the application as set forth in appendix L to part 50 of this chapter;

(2) Upon receipt and acceptance for docketing of the remaining portions of the application dealing with radiological health and safety and environmental matters, notice of receipt will be published in the Federal Register including an appropriate notice of hearing; and

(3) Any person who wishes to have his views on the antitrust matters of the application considered by the NRC and presented to the Attorney General for consideration should submit such views within sixty (60) days after publication of the notice announcing receipt and

docketing of the antitrust information to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Chief, Policy Development and Technical Support Branch.

(d) The Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, will give notice of the docketing of the public health and safety, common defense and security, and environmental parts of an application for a license for a facility or for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, except that for applications pursuant to part 61 of this chapter, paragraph (g) of this section applies to the Governor or other appropriate official of the State in which the facility is to be located or the activity is to be conducted and will publish in the **Federal Register** a notice of docketing of the application which states the purpose of the application and specifies the location at which the proposed activity would be conducted.

(e)(1) Each application for construction authorization for a HLW repository at a geologic repository operations area pursuant to parts 60 or 63 of this chapter, and each application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to parts 60 or 63 of this chapter, and any environmental impact statement required in connection therewith pursuant to subpart A of part 51 of this chapter shall be processed in accordance with the provisions of this paragraph.

(2) To allow a determination as to whether the application is complete and acceptable for docketing, it will be initially treated as a tendered document, and a copy will be available for public inspection in the Commission's Public Document Room. Twenty copies shall be filed to enable this determination to be made.

(3) If the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, determines that the tendered document is complete and acceptable for docketing, a docket number will be assigned and the applicant will be notified of the determination. If it is determined that all or any part of the tendered document is incomplete and therefore not acceptable for processing,
the applicant will be informed of this determination and the respects in which the document is deficient.

(4) [Reserved]

(5) If a tendered document is acceptable for docketing, the applicant will be requested to submit to the Director of Nuclear Material Safety and Safeguards such additional copies of the application and environmental impact statement as the regulations in part 60 or 63 and subpart A of part 51 of this chapter require; serve a copy of such application and environmental impact statement on the chief executive of the municipality in which the geologic repository operations area is to be located, or if the geologic repository operations area is not to be located within a municipality, on the chief executive of the county (or to the Tribal organization, if it is to be located within an Indian reservation); and make direct distribution of additional copies to Federal, State, Indian Tribe, and local officials in accordance with the requirements of this chapter, and written instructions from the Director of Nuclear Material Safety and Safeguards. All such copies shall be completely assembled documents, identified by docket number. Subsequently distributed amendments to the application, however, may include revised pages to previous submittals and, in such cases, the recipients are responsible for inserting the revised pages.

(6) The tendered document will be formally docketed upon receipt by the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, of the required additional copies. The date of docketing shall be the date when the required copies are received by the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate. Within ten (10) days after docketing, the
applicant shall submit to the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal
and State Materials and Environmental Management Programs, as appropriate, a written statement that distribution of the additional copies to Federal, State, Indian Tribe, and local officials has been completed in accordance with
requirements of this chapter and written instructions furnished to the applicant by the Director, Office of Nuclear
Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate. Distribution of the additional copies shall be deemed to be complete as of the time the copies are deposited in the mail or with a carrier prepaid for delivery to the designated addressees.

(7) Amendments to the application and supplements to the environmental impact statement shall be filed and
distributed and a written statement shall be furnished to the Director, Office of Nuclear Material Safety and Safeguards
or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, in the same manner as for the initial application and environmental impact statement.

(8) The Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, will cause to be published in the **Federal Register** a notice of docketing which identifies the State and location at which the proposed geologic repository operations area would be
located and will give notice of docketing to the governor of that State. The notice of docketing will state that the
Commission finds that a hearing is required in the public interest, prior to issuance of a construction authorization,
and will recite the matters specified in § 2.104(a) of this part.

(f) Each application for a license to receive radioactive waste from other persons for disposal under part 61 of this chapter and the accompanying environmental report shall be processed in accordance with the provisions of this paragraph.

(1) To allow a determination as to whether the application or environmental report is complete and acceptable for docketing, it will be initially treated as a tendered document, and a copy will be available for public inspection in the Commission's Public Document Room, One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852-2738.

(i) Upon receipt of a tendered application, the Commission will publish in the Federal Register notice of the filed application and will notify the governors, legislatures and other appropriate State, county, and municipal officials and tribal governing bodies of the States and areas

containing or potentially affected by the activities at the proposed site and the alternative sites. The Commission will inform these officials that the Commission staff will be available for consultation pursuant to § 61.71 of this chapter. The Federal Register notice will note the opportunity for interested persons to submit views and comments on the tendered application for consideration by the Commission and applicant. The Commission will also notify the U.S. Bureau of Indian Affairs when tribal governing bodies are notified.

(ii) The Commission will also post a public notice in a newspaper or newspapers of general circulation in the affected States and areas summarizing information contained in the applicant's tendered application and noting the opportunity to submit views and comments.

(iii) When the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, determines that the tendered document is complete and acceptable for docketing, a docket number will be assigned and the applicant will be notified of the determination. If it is determined that all or any part of the tendered document is incomplete and therefore not acceptable for processing, the applicant will be informed of this determination and the aspects in which the document is deficient.

(2)(i) With respect to any tendered document that is acceptable for docketing, the applicant will be requested to:

(A) Submit to the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, such additional copies as required by the regulations in part 61 and subpart A of part 51 of this chapter;

(B) Serve a copy on the chief executive of the municipality in which the waste is to be disposed of or, if the waste is not to be disposed of within a municipality, serve a copy on the chief executive of the county in which the waste is to be disposed of;

(C) Make direct distribution of additional copies to Federal, State, Indian Tribal, and local officials in accordance with the requirements of this chapter and written instructions from the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate; and

(D) Serve a notice of availability of the application and environmental report on the chief executives or governing bodies of the municipalities or counties which have been identified in the application and environmental report as the location of all or part of the alternative sites if copies are not distributed under paragraph (g)(2)(i)(C) of this section to the executives or bodies.

(ii) All distributed copies shall be completely assembled documents identified by docket number. However, subsequently distributed amendments may include revised pages to previous submittals and, in such cases, the recipients will be responsible for inserting the revised pages. In complying with the requirements of paragraph (g) of this section the applicant may not make public distribution of those parts of the application subject to § 2.390(d).

(3) The tendered document will be formally docketed upon receipt by the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, of the required additional copies. Distribution of the additional copies shall be deemed to be complete as of the time the copies are deposited in the mail or with a carrier prepaid for delivery to the designated addressees. The date of docketing shall be the date when the required copies are received by the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate. Within ten (10) days after docketing, the applicant shall submit to the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, a written statement that distribution of the additional copies to Federal, State, Indian Tribal, and local officials has been completed in accordance with requirements of this section and written instructions furnished to the applicant by the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate.

(4) Amendments to the application and environmental report shall be filed and distributed and a written statement shall be furnished to the Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, in the same manner as for the initial application and environmental report.

(5) The Director, Office of Nuclear Material Safety and Safeguards or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, will cause to be published in the **Federal Register** a notice of docketing which identifies the State and location of the proposed waste disposal facility and will give notice of docketing to the governor of that State and other officials listed in paragraph (g)(3) of this section and, in a reasonable period thereafter, publish in the **Federal Register** a notice pursuant to § 2.105 offering opportunity to request a hearing to the applicant and other affected persons.

[41 FR 15833, Apr. 15, 1976; 41 FR 16793, Apr. 22, 1976, as amended at 42 FR 22885, May 5, 1977; 43 FR 46293, Oct. 6, 1978; 44 FR 60716, Oct. 22, 1979; 46 FR 13976, Feb. 25, 1981; 47 FR 9985, Mar. 9, 1982; 47 FR 57477, Dec. 27, 1982; 49 FR 9399, Mar. 12, 1984; 52 FR 31608, Aug. 21, 1987; 53 FR 43419, Oct. 27, 1988; 54 FR 27869, July 3, 1989 63 FR 66730, Dec 3, 1998; 64 FR 48947, Sept. 9, 1999; 65 FR 44659, July 19, 2000; 66 FR 55787, Nov. 2. 2001; 67 FR 67098, Nov. 4, 2002; 69 FR 2234, Jan. 14, 2004; 70 FR 61887, Oct. 27, 2005; 72 FR 49470, Aug. 28, 2007; 72 FR 57438, Oct. 9, 2007; 73 FR 5713, Jan. 31, 2008]

§ 2.102 Administrative review of application.

[Top of File]

(a) During review of an application by the NRC staff, an applicant may be required to supply additional information. The staff may request any one party to the proceeding to confer with the NRC staff informally. In the case of docketed application for a limited work authorization,

construction permit, operating license, early site permit, standard design approval, combined license, or manufacturing license under this chapter, the NRC staff shall establish a schedule for its review of the application, specifying the key intermediate steps from the time of docketing until the completion of its review.

(b) The Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, will refer the docketed application to the ACRS as required by law and in such additional cases as he or the Commission may determine to be appropriate. The ACRS will render to the Commission one or more reports as required by law or as requested by the Commission.

(c) The Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, will make each report of the ACRS a part of the record of the docketed application, and transmit copies to the appropriate State and local officials.

[27 FR 377, Jan. 13, 1962, as amended at 36 FR 13270, July 17, 1971; 37 FR 15130, July 28, 1972; 47 FR 9986, Mar. 9, 1982; 69 FR 2234, Jan. 14, 2004; 70 FR 61887, Oct. 27, 2005; 72 FR 49472, Aug. 28, 2007; 72 FR 57439, Oct. 9, 2007; 73 FR 5715, Jan. 31, 2008]

§ 2.103 Action on applications for byproduct, source, special nuclear material, facility and operator licenses.

[Top of File]

(a) If the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, finds that an application for a byproduct, source, special nuclear material, facility, or operator license complies with the requirements of the Act, the Energy Reorganization Act, and this chapter, he will issue a license. If the license is for a facility, or for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, or for a construction authorization for a HLW repository at a geologic repository operations area under parts 60 or 63 of this chapter, or if it is to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 of this chapter, the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Nuclear Material Safety and Safeguards, or Director, Office of Federal and State Materials and Environmental Management Programs, as appropriate, will inform the State, Tribal and local officials specified in § 2.104 (e) of the issuance of the license. For notice of issuance requirements for licenses issued under part 61 of this chapter, see § 2.106(d).

(b) If the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, finds that an application does not comply with the requirements of the Act and this chapter he may issue a notice of proposed denial or a notice of denial of the application and inform the applicant in writing of:

(1) The nature of any deficiencies or the reason for the proposed denial or the denial, and

(2) The right of the applicant to demand a hearing within twenty (20) days from the date of the notice or such longer period as may be specified in the notice.

[28 FR 10152, Sept. 17, 1963, as amended at 47 FR 57478, Dec. 27, 1982; 66 FR 55787, Nov. 2, 2001 as amended at 69 FR 2235, Jan. 14, 2004; 73 FR 5715, Jan. 31, 2008]

Hearing on Application--How Initiated

[Top of File]

§ 2.104 Notice of hearing.

(a) In the case of an application on which a hearing is required by the Act or this chapter, or in which the Commission finds that a hearing is required in the public interest, the Secretary will issue a notice of hearing to be published in the **Federal Register**. The notice must be published at least 15 days, and in the case of an application concerning a limited work authorization, construction permit, early site permit, or combined license for a facility of the type described in §§ 50.21(b) or 50.22 of this chapter or a testing facility, at least 30 days, before the date set for hearing in the notice.[1] In addition, in the case of an application for a limited work authorization, construction permit, early site permit, or combined license for a facility of the type described in § 50.22 of this chapter, or a testing facility, the notice must be issued as soon as practicable after the NRC has docketed the application. If the Commission decides, under § 2.101(a)(2), to determine the acceptability of the application based on its technical adequacy as well as completeness, the notice must be issued as soon as practicable after the application has been tendered.

(b) The notice of hearing must state:

(1) The nature of the hearing;

(2) The authority under which the hearing is to be held;

(3) The matters of fact and law to be considered;

(4) The date by which requests for hearing or petitions to intervene must be filed;

(5) The presiding officer designated for the hearing, or the procedure that the Commission will use to designate a presiding officer for the hearing.

(c)(1) The Secretary will transmit a notice of hearing on an application for a license for a production or utilization facility, including a limited work authorization, early site permit, combined license, but not for a manufacturing license, for a license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee, for a license under part 61 of this chapter, for a construction authorization for a high-level
waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, for a license to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 of this chapter, and for a license under part 72 of this chapter to acquire, receive or possess spent fuel for the purpose of storage in an independent spent fuel storage installation (ISFSI) to the governor or other appropriate official of the State and to the chief executive of the municipality in which the facility is to be located or the activity is to be conducted or, if the facility is not to be located or the activity conducted within a municipality, to the chief executive of the county (or to the Tribal organization, if it is to be located or conducted within an Indian reservation).

(2) The Secretary will transmit a notice of hearing on an application for a license under part 72 of this chapter to acquire, receive or possess spent fuel, high-level radioactive waste or radioactive material associated with high-level radioactive waste for the purpose of storage in a monitored retrievable storage installation (MRS) to the same persons who received the notice of docketing under § 72.16(e) of this chapter.

[27 FR 377, Jan. 13, 1962; 72 FR 49472, Aug. 28, 2007; 72 FR 57439, Oct. 9, 2007]

1. If the notice of hearing concerning an application for a limited work authorization, construction permit, early site permit, or combined license for a facility of the type described in §§ 50.21(b) or 50.22 of this chapter or a testing facility does not specify the time and place of initial hearing, a subsequent notice will be published in the **Federal Register** which will provide at least 30 days notice of the time and place of that hearing. After this notice is given, the presiding officer may reschedule the commencement of the initial hearing for a later date or reconvene a recessed hearing
without again providing at least 30 days notice.

§ 2.105 Notice of proposed action.

[Top of File]

(a) If a hearing is not required by the Act or this chapter, and if the Commission has not found that a hearing is in the public interest, it will, before acting thereon, publish in the **Federal Register**, as applicable, either a notice of intended operation under § 52.103(a) of this chapter and a proposed finding that inspections, tests, analysis, and acceptance criteria for a combined license under subpart C of part 52 have been or will be met, or a notice of proposed action with respect to an application for:

(1) A license for a facility;

(2) A license for receipt of waste radioactive material from other persons for the purpose of commercial disposal by the waste disposal licensee. All licenses issued under part 61 of this chapter shall be so noticed;

(3) An amendment of a license specified in paragraph (a) (1) or (2) of this section and which involves a significant hazards consideration;

(4) An amendment to an operating license, combined license, or manufacturing license for a facility licensed under §§ 50.21(b) or 50.22 of this chapter, or for a testing facility, as follows:

(i) If the Commission determines under § 50.58 of this chapter that the amendment involves no significant hazards consideration, though it will provide notice of opportunity for a hearing pursuant to this section, it may make the amendment immediately effective and grant a hearing thereafter; or

(ii) If the Commission determines under §§ 50.58 and 50.91 of this chapter that an emergency situation exists or that exigent circumstances exist and that the amendment involves no significant hazards consideration, it will provide notice of opportunity for a hearing pursuant to § 2.106 (if a hearing is requested, it will be held after issuance of the amendment);

(5) A license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to parts 60 or 63 of this chapter, or an amendment thereto, when the license or amendment would authorize actions which may significantly affect the health and safety of the public;

(6) An amendment to a construction authorization for a high-level radioactive waste at a geologic repository operations area pursuant to parts 60 or 63 of this chapter, when such an amendment would authorize actions which may significantly affect the health and safety of the public;

(7) A license under part 72 of this chapter to acquire, receive or possess spent fuel for the purpose of storage in an independent spent fuel storage installation (ISFSI) or to acquire, receive or possess spent fuel, high-level radioactive waste or radioactive material associated with high-level radioactive waste for the purpose of storage in a monitored retrievable storage installation (MRS);

(8) An amendment to a license specified in paragraph (a)(7) of this section when such an amendment presents a genuine issue as to whether the health and safety of the public will be significantly affected; or

(9) Any other license or amendment as to which the Commission determines that an opportunity for a public hearing should be afforded;

(10) In the case of an application for an operating license for a facility of a type described in § 50.21(b) or § 50.22 of this chapter or a testing facility, a notice of opportunity for hearing shall be issued as soon as practicable after the application has been docketed; or

(11) In the case of an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area, a notice of opportunity for hearing, as required by this paragraph, shall be published prior to Commission action authorizing receipt of such wastes; this requirement is in addition to the procedures set out in §§ 2.101(f)(8) and 2.104 of this part, which provide for a hearing on the application prior to issuance of a construction authorization.

(12) An amendment to an early site permit issued under subpart A of part 52 of this chapter, as follows:

(i) If the early site permit does not provide authority to conduct the activities allowed under § 50.10(e)(1) of this chapter, the amendment will involve no significant hazards consideration, and though the NRC will provide notice of opportunity for a hearing under this section, it may make the amendment immediately effective and grant a hearing thereafter; and

(ii) If the early site permit provides authority to conduct the activities allowed under § 50.10(e)(1) and the Commission determines under §§ 50.58 and 50.91 of this chapter that an emergency situation exists or that exigent circumstances exist and that the amendment involves no significant hazards consideration, it will provide notice of opportunity for a hearing under § 2.106 of this chapter (if a hearing is requested, which will be held after issuance of the amendment).

(13) A manufacturing license under subpart F of part 52 of this chapter.

(b) The notice of proposed action will set forth:

(1) The nature of the action proposed;

(2) The manner in which a copy of the safety analysis and of the ACRS report, if any, may be obtained or examined.

(3) For a notice of intended operation under § 52.103(a) of this chapter, the following information:

(i) The identification of the NRC action as making the finding required under § 52.103(g) of this chapter;

(ii) The manner in which the licensee notifications under 10 CFR 52.99(c) which are required to be made available by 10 CFR 52.99(e)(2) may be obtained and examined;

(iii) The manner in which copies of the safety analysis may be obtained and examined; and

(iv) Any conditions, limitations, or restrictions to be placed on the license in connection with the finding under § 52.103(g) of this chapter, and the expiration date or circumstances (if any) under which the conditions, limitations or restrictions will no longer apply.

(c) If an application for a license is complete enough to permit all evaluations, other than completion inspection, necessary for the issuance of a construction permit and operating license, the notice of proposed issuance of a construction permit may provide that on completion of construction and inspection the operating license will be issued without further prior notice.

(d) The notice of proposed action will provide that, within thirty (30) days from the date of publication of the notice in the Federal Register, or such lesser period authorized by law as the Commission may specify:

(1) The applicant may file a request for a hearing; and

(2) Any person whose interest may be affected by the proceeding may file a request for a hearing or a petition for leave to intervene if a hearing has already been requested.

(e)(1) If no request for a hearing or petition for leave to intervene is filed within the time prescribed in the notice, the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, may take the proposed action, inform the appropriate State and local officials, and publish in the **Federal Register** a notice of issuance of the license or other action.

(2) If a request for a hearing or a petition for leave to intervene is filed within the time prescribed in the notice, the presiding officer who shall be an Atomic Safety and Licensing Board established by the Commission or by the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition, and the Secretary or the presiding officer will issue a notice of hearing or an appropriate order.

[27 FR 377, Jan. 13, 1962; 72 FR 49473, Aug. 28, 2007; 73 FR 5715, Jan. 31, 2008]

Editorial Note: For additional Federal Register citations affecting § 2.105, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 2.106 Notice of issuance.

[Top of File]

(a) The Director, Office of New Reactors, Director, Office of Nuclear Reactor Regulation, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, will inform the State and local officials specified in § 2.104(e) and publish a document in the **Federal Register** announcing the issuance of:

(1) A license or an amendment of a license for which a notice of proposed action has been previously published;

(2) An amendment of a license for a facility of the type described in § 50.21(b) or § 50.22 of this chapter, or a testing facility, whether or not a notice of proposed action has been previously published; and

(3) The finding under § 52.103(g) of this chapter.

(b) The notice of issuance will set forth:

(1) In the case of a license or amendment:

(i) The nature of the license or amendment;

(ii) The manner in which copies of the safety analysis, if any, may be obtained and examined; and

(iii) A finding that the application for the license or amendment complies with the requirements of the Act and this chapter.

(2) In the case of a finding under § 52.103(g) of this chapter:

(i) The manner in which copies of the safety analysis, if any, may be obtained and examined; and

(ii) A finding that the prescribed inspections, tests, and analyses have been performed, the prescribed acceptance criteria have been met, and that the license complies with the requirements of the Act and this chapter.

(3) A finding that the application for the license or amendment complies with the requirements of the Act and this chapter.

(c) The Director of Nuclear Material Safety and Safeguards will also cause to be published in the Federal Register notice of, and will inform the State, local, and Tribal officials specified in § 2.104(e) of any action with respect to an application for construction authorization for a high-level radioactive waste repository at a geologic repository operations area, a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to parts 60 or 63 of this chapter, or an amendment to such license for which a notice of proposed action has been previously published.

(d) The Director of Nuclear Material Safety and Safeguards will also cause to be published in the Federal Register notice of, and will inform the State and local officials or tribal governing body specified in § 2.104(e) of any licensing action with respect to a license to receive radioactive waste from other persons for disposal under part 61 of this chapter or the amendment of such a license for which a notice of proposed action has been previously published.

[37 FR 15131, July 28, 1972, as amended at 38 FR 9586, Apr. 18, 1973; 46 FR 13978, Feb. 25, 1981; 47 FR 57478, Dec. 27, 1982; 66 FR 55787, Nov. 2, 2001; 69 FR 2235, Jan. 14, 2004; 72 FR 49473, Aug. 28, 2007; 73 FR 5716, Jan. 31, 2008]

§ 2.107 Withdrawal of application.

[Top of File]

(a) The Commission may permit an applicant to withdraw an application prior to the issuance of a notice of hearing on such terms and conditions as it may prescribe, or may, on receiving a request for withdrawal of an application, deny the application or dismiss it with prejudice. If the application is withdrawn prior to issuance of a notice of hearing, the Commission shall dismiss the proceeding. Withdrawal of an application after the issuance of a notice of hearing shall be on such terms as the presiding officer may prescribe.

(b) The withdrawal of an application does not authorize the removal of any document from the files of the Commission.

(c) The Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, will cause to be published in the **Federal Register** a notice of the withdrawal of an application if notice of receipt of the application has been previously published.

[27 FR 377, Jan. 13, 1962, as amended at 28 FR 10152, Sept. 17, 1963; 69 FR 2236, Jan. 14, 2004; 73 FR 5716, Jan. 31, 2008]

§ 2.108 Denial of application for failure to supply information.

[Top of File]

(a) The Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, may deny an application if an applicant fails to respond to a request for additional information within thirty (30) days from the date of the request, or within such other time as may be specified.

(b) The Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, will cause to be published in the **Federal Register** a notice of denial when notice of receipt of the application has previously been published, but notice of hearing has not yet been published. The notice of denial will provide that, within thirty (30) days after the date of publication in the
Federal Register.

(1) The applicant may demand a hearing, and

(2) Any person whose interest may be affected by the proceeding may file a petition for leave to intervene.

(c) When both a notice of receipt of the application and a notice of hearing have been published, the presiding officer, upon a motion made by the staff under § 2.323, will rule whether an application should be denied by the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, under paragraph (a) of this section.

[27 FR 377, Jan. 13, 1962, as amended at 39 FR 43195, Dec. 11, 1974; 69 FR 2236, Jan. 14, 2004; 73 FR 5716, Jan. 31, 2008]

§ 2.109 Effect of timely renewal application.

[Top of File]

(a) Except for the renewal of an operating license for a nuclear power plant under 10 CFR 50.21(b) or 50.22, an early site permit under subpart A of part 52 of this chapter, a manufacturing license under subpart F of part 52 of this chapter, or a combined license under subpart C of part 52 of this chapter, if at least 30 days before the expiration of an existing license authorizing any activity of a continuing nature, the licensee files an application for a renewal or for a new license for the activity so authorized, the existing license will not be deemed to have expired until the application has been finally determined.

(b) If the licensee of a nuclear power plant licensed under 10 CFR 50.21(b) or 50.22 files a sufficient application for renewal of either an operating license or a combined license at least 5 years before the expiration of the existing license, the existing license will not be deemed to have expired until the application has been finally determined.

(c) If the holder of an early site permit licensed under subpart A of part 52 of this chapter files a sufficient application for renewal under § 52.29 of this chapter at least 12 months before the expiration of the existing early site permit, the existing permit will not be deemed to have expired until the application has been finally determined.

(d) If the licensee of a manufacturing license under subpart F of part 52 of this chapter files a sufficient application for renewal under § 52.177 of this chapter at least 12 months before the expiration of the existing license, the existing license will not be deemed to have expired until the application has been finally determined.

[56 FR 64975, Dec. 13, 1991; 72 FR 49473, Aug. 28, 2007]

§ 2.110 Filing and administrative action on submittals for standard design approval or early review of site suitability issues

[Top of File]

(a)(1) A submittal for a standard design approval under subpart E of part 52 of this chapter shall be subject to §§ 2.101(a) and 2.390 to the same extent as if it were an application for a permit or license.

(2) Except as specifically provided otherwise by the provisions of appendix Q to parts 50 of this chapter, a submittal for early review of site suitability issues under appendix Q to parts 50 of this chapter shall be subject to §§ 2.101(a)(2) through (4) to the same extent as if it were an application for a permit or license.

(b) Upon initiation of review by the NRC staff of a submittal for an early review of site suitability issues under Appendix Q of part 50 of this chapter, or for a standard design approval under subpart E of part 52 of this chapter, the Director, Office of New Reactors, or Director, Office of Nuclear Reactor Regulation, as appropriate shall publish in the **Federal Register** a notice of receipt of the submittal, inviting comments from interested persons within 60 days of publication or other time as may be specified, for consideration by the NRC staff and ACRS in their review.

(c)(1) Upon completion of review by the NRC staff and the ACRS of a submittal for a standard design approval, the Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate shall publish in the **Federal Register** a determination as to whether or not the design is acceptable, subject to terms and conditions as may be appropriate, and shall make available at the NRC Web site, *http://www.nrc.gov*, a report that analyzes the design.

(2) Upon completion of review by the NRC staff and, if appropriate by the ACRS, of a submittal for early review of site suitability issues, the NRC staff shall prepare a staff site report which shall identify the location of the site, state the site suitability issues reviewed, explain the nature and scope of the review, state the conclusions of the staff regarding the issues reviewed and state the reasons for those conclusions. Upon issuance of an NRC staff site report, the NRC staff shall publish a notice of the availability of the report in the **Federal Register** and shall make the report
available at the NRC Web site, *http://www.nrc.gov*. The NRC staff shall also send a copy of the report to the Governor or other appropriate official of the State in which the site is located, and to the chief executive of the municipality in which the site is located or, if the site is not located in a municipality, to the chief executive of the county.

[40 FR 2976, Jan. 17, 1975, as amended at 42 FR 22885, May 5, 1977; 54 FR 15398, Apr. 18, 1989; 64 FR 48948, Sept. 9, 1999; 69 FR 2236, Jan. 14, 2004; 72 FR 49474, Aug. 28, 2007; 73 FR 5716, Jan. 31, 2008]

§ 2.111 Prohibition of sex discrimination.

[Top of File]

No person shall on the grounds of sex be excluded from participation in, be denied a license, standard design approval, or petition for rulemaking (including a design certification), be denied the benefits of, or be subjected to discrimination under any program or activity carried on or receiving Federal assistance under the Act or the Energy Reorganization Act of 1974.

[40 FR 8777, Mar. 3, 1975; 72 FR 49474, Aug. 28, 2007]

Subpart B--Procedure for Imposing Requirements by Order, or for Modification, Suspension, or Revocation of a License, or for Imposing Civil Penalties

[Top of File]

§ 2.200 Scope of subpart.

(a) This subpart prescribes the procedures in cases initiated by the staff, or upon a request by any person, to impose requirements by order, or to modify, suspend, or revoke a license, or to take other action as may be proper, against any person subject to the jurisdiction of the Commission. However, with regard to the holder of a part 76 certificate of compliance or compliance plan, except for civil penalty procedures in this subpart, the applicable procedures are set forth in § 76.70 of this chapter.

(b) This subpart also prescribes the procedures in cases initiated by the staff to impose civil penalties pursuant to section 234 of the Act and section 206 of the Energy Reorganization Act of 1974.

[36 FR 16896, Aug. 26, 1971, as amended at 42 FR 28893, June 6, 1977; 48 FR 44172, Sept. 28, 1983; 62 FR 6668, Feb. 12, 1997]

§ 2.201 Notice of violation.

[Top of File]

(a) In response to an alleged violation of any provision of the Act or this chapter or the conditions of a license or an order issued by the Commission, the Commission may serve on the licensee or other person subject to the jurisdiction of the Commission a written notice of violation; a separate notice may be omitted if an order pursuant to § 2.202 or demand for information pursuant to § 2.204 is issued that otherwise identifies the apparent violation. The notice of violation will concisely state the alleged violation and may require that the licensee or other person submit, within 20 days of the date of the notice or other specified time, a written explanation or statement in reply if the Commission believes that the licensee has not already addressed all the issues contained in the notice of violation, including:

(1) Corrective steps which have been taken by the licensee or other person and the results achieved;

(2) Corrective steps which will be taken; and

(3) The date when full compliance will be achieved.

(b) The notice may require the licensee or other person subject to the jurisdiction of the Commission to admit or deny the violation and to state the reasons for the violation, if admitted. It may provide that, if an adequate reply is not received within the time specified in the notice, the Commission may issue an order or a demand for information as to why the license should not be modified, suspended or revoked or why such other action as may be proper should not be taken.

[56 FR 40684, Aug. 15, 1991, as amended at 61 FR 43408, Aug. 22, 1996]

§ 2.202 Orders.

[Top of File]

(a) The Commission may institute a proceeding to modify, suspend, or revoke a license or to take such other action as may be proper by serving on the licensee or other person subject to the jurisdiction of the Commission an order that will:

(1) Allege the violations with which the licensee or other person subject to the Commission's jurisdiction is charged, or the potentially hazardous conditions or other facts deemed to be sufficient ground for the proposed action, and specify the action proposed;

(2) Provide that the licensee or other person must file a written answer to the order under oath or affirmation within twenty (20) days of its date, or such other time as may be specified in the order;

(3) Inform the licensee or any other person adversely affected by the order of his or her right, within twenty (20) days of the date of the order, or such other time as may be specified in the order, to demand a hearing on all or part of the order, except in a case where the licensee or other person has consented in writing to the order;

(4) Specify the issues for hearing; and

(5) State the effective date of the order; if the Commission finds that the public health, safety, or interest so requires or that the violation or conduct causing the violation is willful, the order may provide, for stated reasons, that the proposed action be immediately effective pending further order.

(b) A licensee or other person to whom the Commission has issued an order under this section must respond to the order by filing a written answer under oath or affirmation. The answer shall specifically admit or deny each allegation or charge made in the order, and shall set forth the matters of fact and law on which the licensee or other person relies, and, if the order is not consented to, the reasons as to why the order should not have been issued. Except as provided in paragraph (d) of this section, the answer may demand a hearing.

(c) If the answer demands a hearing, the Commission will issue an order designating the time and place of hearing.

(1) If the answer demands a hearing with respect to an immediately effective order, the hearing will be conducted expeditiously, giving due consideration to the rights of the parties.

(2) (i) The licensee or other person to whom the Commission has issued an immediately effective order may, in addition to demanding a hearing, at the time the answer is filed or sooner, move the presiding officer to set aside the immediate effectiveness of the order on the ground that the order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error. The motion must state with particularity the reasons why the order is not based on adequate evidence and must be accompanied by affidavits or other evidence relied on. The NRC staff shall respond within (5) days of the receipt of the motion. The motion must be decided by the presiding officer expeditiously. During the pendency of the motion or at any other time, the presiding officer may not stay the immediate effectiveness of the order, either on its own motion, or upon motion of the licensee or other person. The presiding officer will uphold the immediate effectiveness of the order if it finds that there is adequate evidence to support immediate effectiveness. An order upholding immediate effectiveness will constitute the final agency action on immediate effectiveness. An order setting aside immediate effectiveness will be referred promptly to the Commission itself and will not be effective pending further order of the Commission.

(ii) The presiding officer may, on motion by the staff or any other party to the proceeding, where good cause exists, delay the hearing on the immediately effective order at any time for such periods as are consistent with the due process rights of the licensee and other affected parties.

(d) An answer may consent to the entry of an order in substantially the form proposed in the order with respect to all or some of the actions proposed in the order. The consent, in the answer or other written document, of the licensee or other person to whom the order has been issued to the entry of an order shall constitute a waiver by the licensee or other person of a hearing, findings of fact and conclusions of law, and of all right to seek Commission and judicial review or to contest the validity of the order in any forum as to those matters which have been consented to or agreed to or on which a hearing has not been requested. An order that has been consented to shall have the same force and effect as an order made after hearing by a presiding officer or the Commission, and shall be effective as provided in the order.

(e)(1) If the order involves the modification of a part 50 license and is a backfit, the requirements of § 50.109 of this chapter shall be followed, unless the licensee has consented to the action required.

(2) If the order involves the modification of combined license under subpart C of part 52 of this chapter, the requirements of § 52.98 of this chapter shall be followed unless the licensee has consented to the action required.

(3) If the order involves a change to an early site permit under subpart A of part 52 of this chapter, the requirements of § 52.39 of this chapter must be followed, unless the applicant or licensee has consented to the action required.

(4) If the order involves a change to a standard design certification rule referenced by that plant’s application, the requirements, if any, in the referenced design certification rule with respect to changes must be followed, or, in the absence of these requirements, the requirements of § 52.63 of this chapter must be followed, unless the applicant or licensee has consented to follow the action required.

(5) If the order involves a change to a standard design approval referenced by that plant's application, the requirements of § 52.145 of this chapter must be followed unless the applicant or licensee has consented to follow the
action required.

(6) If the order involves a modification of a manufacturing license under subpart F of part 52, the requirements of § 52.171 of this chapter must be followed, unless the applicant or licensee has consented to the action required.

[56 FR 40684, Aug. 15, 1991, as amended at 57 FR 20198, May 12, 1992; 72 FR 49474, Aug. 28, 2007]

§ 2.203 Settlement and compromise.

[Top of File]

At any time after the issuance of an order designating the time and place of hearing in a proceeding to modify, suspend, or revoke a license or for other action, the staff and a licensee or other person may enter into a stipulation for the settlement of the proceeding or the compromise of a civil penalty. The stipulation or compromise shall be subject to approval by the designated presiding officer or, if none has been designated, by the Chief Administrative Law Judge, according due weight to the position of the staff. The presiding officer, or if none has been designated, the Chief Administrative Law Judge, may order such adjudication of the issues as he may deem to be required in the public interest to dispose of the proceeding. If approved, the terms of the settlement or compromise shall be embodied in a decision or order settling and discontinuing the proceeding.

[36 FR 16896, Aug. 26, 1971]

§ 2.204 Demand for information.

[Top of File]

(a) The Commission may issue to a licensee or other person subject to the jurisdiction of the Commission a demand for information for the purpose of determining whether an order under § 2.202 should be issued, or whether other action should be taken, which demand will:

(1) Allege the violations with which the licensee or other person is charged, or the potentially hazardous conditions or other facts deemed to be sufficient ground for issuing the demand; and

(2) Provide that the licensee must, or the other person may, file a written answer to the demand for information under oath or affirmation within twenty (20) days of its date, or such other time as may be specified in the demand for information.

(b) A licensee to whom the Commission has issued a demand for information under this section must respond to the demand by filing a written answer under oath or affirmation; any other person to whom the Commission has issued a demand for information may, in its discretion, respond to the demand by filing a written answer under oath or affirmation. The licensee's answer shall specifically admit or deny each allegation or charge made in the demand for information, and shall set forth the matters of fact and law on which the licensee relies. A person other than a licensee may answer as described above, or by setting forth its reasons why the demand should not have been issued and, if the requested information is not provided, the reasons why it is not provided.

(c) Upon review of the answer filed pursuant to paragraph (a)(2) of this section, or if no answer is filed, the Commission may institute a proceeding pursuant to 10 CFR 2.202 to take such action as may be proper.

(d) An answer may consent to the entry of an order pursuant to § 2.202 in substantially the form proposed in the demand for information. Such consent shall constitute a waiver as provided in § 2.202(d).

[56 FR 40685, Aug. 15, 1991]

§ 2.205 Civil penalties.

[Top of File]

(a) Before instituting any proceeding to impose a civil penalty under section 234 of the Act, the Executive Director for Operations or the Executive Director's designee, as appropriate, shall serve a written notice of violation upon the person charged. This notice may be included in a notice issued pursuant to § 2.201 or § 76.70(d) of this chapter. The notice of violation shall specify the date or dates, facts, and the nature of the alleged act or omission with which the person is charged, and shall identify specifically the particular provision or provisions of the law, rule, regulation, license, permit, part 76 certificate of compliance or compliance plan, or cease and desist order involved in the alleged violation and must state the amount of each proposed penalty. The notice of violation shall also advise the person charged that the civil penalty may be paid in the amount specified therein, or the proposed imposition of the civil penalty may be protested in its entirety or in part, by a written answer, either denying the violation or showing extenuating circumstances. The notice of violation shall advise the person charged that upon failure to pay a civil penalty subsequently determined by the Commission, if any, unless compromised, remitted, or mitigated, be collected by civil action, pursuant to Section 234c of the Act.

(b) Within twenty (20) days of the date of a notice of violation or other time specified in the notice, the person charged may either pay the penalty in the amount proposed or answer the notice of violation. The answer to the notice of violation shall state any facts, explanations,

and arguments, denying the charges of violation, or demonstrating any extenuating circumstances, error in the notice of violation, or other reason why the penalty should not be imposed and may request remission or mitigation of the penalty.

(c) If the person charged with violation fails to answer within the time specified in paragraph (b) of this section, an order may be issued imposing the civil penalty in the amount set forth in the notice of violation described in paragraph (a) of this section.

(d) If the person charged with violation files an answer to the notice of violation, the Executive Director for Operations or the Executive Director's designee, upon consideration of the answer, will issue an order dismissing the proceeding or imposing, mitigating, or remitting the civil penalty. The person charged may, within twenty (20) days of the date of the order or other time specified in the order, request a hearing.

(e) If the person charged with violation requests a hearing, the Commission will issue an order designating the time and place of hearing.

(f) If a hearing is held, an order will be issued after the hearing by the presiding officer or the Commission dismissing the proceeding or imposing, mitigating, or remitting the civil penalty.

(g) The Executive Director for Operations or the Executive Director's designee, as appropriate may compromise any civil penalty, subject to the provisions of § 2.203.

(h) If the civil penalty is not compromised, or is not remitted by the Executive Director for Operations or the Executive Director's designee, as appropriate, the presiding officer, or the Commission, and if payment is not made within ten (10) days following either the service of the order described in paragraph (c) or (f) of this section, or the expiration of the time for requesting a hearing described in paragraph (d) of this section, the Executive Director for Operations or the Executive Director's designee, as appropriate, may refer the matter to the Attorney General for collection.

(i) Except when payment is made after compromise or mitigation by the Department of Justice or as ordered by a court of the United States, following reference of the matter to the Attorney General for collection, payment of civil penalties imposed under Section 234 of the Act are to be made payable to the U.S. Nuclear Regulatory Commission, in U.S. funds, by check, draft, money order, credit card, or electronic funds transfer such as Automated Clearing House (ACH) using Electronic Data Interchange (EDI). Federal agencies may also make payment by the On-Line Payment and Collections System (OPAC's). All payments are to be made in accordance with the specific payment instructions provided with Notices of Violation that propose civil penalties and Orders Imposing Civil Monetary Penalties.

(j) *Amount*. A civil monetary penalty imposed under section 234 of the Atomic Energy Act of 1954, as amended, or any other statute within the jurisdiction of the Commission that provides for the imposition of a civil penalty in an amount equal to the amount set forth in Section 234, may not exceed $140,000 for each violation. If any violation is a continuing one, each day of such violation shall constitute a separate violation for the purposes of computing the applicable civil penalty.

[36 FR 16896, Aug. 26, 1971, as amended at 52 FR 31608, Aug. 21, 1987; 54 FR 53315, Dec. 28, 1989; 61 FR 53555, Oct. 11, 1996; 62 FR 6668, Feb. 12, 1997; 63 FR 31850, June 10, 1998; 65 FR 59272, Oct. 4, 2000; 69 FR 62394, Oct. 26, 2004; 73 FR 54673, Sep. 23, 2008]

§ 2.206 Requests for action under this subpart.

[Top of File]

(a) Any person may file a request to institute a proceeding pursuant to § 2.202 to modify, suspend, or revoke a license, or for any other action as may be proper. Requests must be addressed to the Executive Director for Operations and must be filed either by hand delivery to the NRC's Offices at 11555 Rockville Pike, Rockville, Maryland; by mail or telegram addressed to the Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; or by electronic submissions, for example, via facsimile, Electronic Information Exchange, e-mail, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*; or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The request must specify the action requested and set forth the facts that constitute the basis for the request. The Executive Director for Operations will refer the request to the Director of the NRC office with responsibility for the subject matter of the request for appropriate action in accordance with paragraph (b) of this section.

(b) Within a reasonable time after a request pursuant to paragraph (a) of this section has been received, the Director of the NRC office with responsibility for the subject matter of the request shall either institute the requested proceeding in accordance with this subpart or shall advise the person who made the request in writing that no proceeding will be instituted in whole or in part, with respect to the request, and the reasons for the decision.

(c)(1) Director's decisions under this section will be filed with the Office of the Secretary. Within twenty-five (25) days after the date of the Director's decision under this section that no proceeding will be instituted or other action taken in whole or in part, the Commission may on its own motion review that decision, in whole or in part, to determine if the Director has abused his discretion. This review power does not limit in any way either the Commission's supervisory power over delegated staff actions or the Commission's power to consult with the staff on a formal or informal basis regarding institution of proceedings under this section.

(2) No petition or other request for Commission review of a Director's decision under this section will be entertained by the Commission.

(3) The Secretary is authorized to extend the time for Commission review on its own motion of a Director's denial under paragraph (c) of

this section.

[39 FR 12353, Apr. 5, 1974, as amended at 42 FR 36240, July 14, 1977; 45 FR 73466, Nov. 5, 1980; 52 FR 31608, Aug. 21, 1987; 53 FR 43419, Oct. 27, 1988; 64 FR 48948, Sept. 9, 1999; 68 FR 58799, Oct. 10, 2003; 69 FR 2236, Jan. 14, 2004; 69 FR 41749, July 12, 2004; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

Subpart C--Rules of General Applicability: Hearing Requests, Petitions to Intervene, Availability of Documents, Selection of Specific Hearing Procedures, Presiding Officer Powers, and General Hearing Management for NRC Adjudicatory Hearings

[Top of File]

Source: 69 FR 2236, Jan. 14, 2004, unless otherwise noted.

§ 2.300 Scope of subpart C.

The provisions of this subpart apply to all adjudications conducted under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, and 10 CFR Part 2, unless specifically stated otherwise in this subpart.

§ 2.301 Exceptions.

[Top of File]

Consistent with 5 U.S.C. 554(a)(4) of the Administrative Procedure Act, the Commission may provide alternative procedures in adjudications to the extent that the conduct of military or foreign affairs functions is involved.

§ 2.302 Filing of documents.

[Top of File]

(a) Documents filed in Commission adjudicatory proceedings subject to this part shall be electronically transmitted through the E-Filing system, unless the Commission or presiding officer grants an exemption permitting an alternative filing method or unless the filing falls within the scope of paragraph (g)(1) of this section.

(b) Upon an order from the Commission or presiding officer permitting alternative filing methods, or as otherwise set forth in Guidance for Electronic Submissions to the NRC, documents may be filed by:

(1) First-class mail: Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, Attention: Rulemakings and Adjudications Staff; or

(2) Courier, express mail, and expedited delivery services: Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, MD 20852, Attention: Rulemakings and Adjudications Staff.

(c) All documents offered for filing must be accompanied by a certificate of service stating the names and addresses of the persons served as well as the manner and date of service.

(d) Filing is considered complete:

(1) By electronic transmission when the filer performs the last act that it must perform to transmit a document, in its entirety, electronically;

(2) By first-class mail as of the time of deposit in the mail;

(3) By courier, express mail, or expedited delivery service upon depositing the document with the provider of the service; or

(4) If a filing must be submitted by two or more methods, such as a filing that the Guidance for Electronic Submission to the NRC indicates should be transmitted electronically as well as physically delivered or mailed on optical storage media, the filing is complete when all methods of filing have been completed.

(e) For filings by electronic transmission, the filer must make a good faith effort to successfully transmit the entire filing. Notwithstanding paragraph (d) of this section, a filing will not be considered complete if the filer knows or has reason to know that the entire filing has not been successfully transmitted.

(f) Digital ID Certificates.

(1) Through digital ID certificates, the NRC permits participants in the proceeding to access the E-Filing system to file documents, serve other participants, and retrieve documents in the proceeding.

(2) Any participant or participant representative that does not have a digital ID certificate shall request one from the NRC before that participant or representative intends to make its first electronic filing to the E-Filing system. A participant or representative may apply for a digital ID certificate on the NRC Web site at *http://www.nrc.gov/site-help/e-submittals.html*.

(3) Group ID Certificate. A participant wishing to obtain a digital ID certificate valid for several persons may obtain a group digital ID certificate. A Group ID cannot be used to file documents. The Group ID provides access to the E-Filing system for the individuals specifically identified in the group's application to retrieve documents recently received by the system. The Group ID also enables a group of people, all of whom may not have individual digital ID certificates, to be notified when a filing has been made in a particular proceeding.

(g) Filing Method Requirements.

(1) *Electronic filing*. Unless otherwise provided by order, all filings must be made as electronic submissions in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions may be found in the Guidance for Electronic Submissions to the NRC and on the NRC Web site at *http://www.nrc.gov/site-help/e-submittals.html*. If a filing contains sections of information or electronic formats that may not be transmitted electronically for security or other reasons, the portions not containing those sections will be transmitted electronically to the E-Filing system. In addition, optical storage media (OSM) containing the entire filing must be physically delivered or mailed. In such cases, the submitter does not need to apply to the Commission or presiding officer for an exemption to deviate from the requirements in paragraph (g)(1) of this section.

(2) *Electronic transmission exemption*. Upon a finding of good cause, the Commission or presiding officer can grant an exemption from electronic transmission requirements found in paragraph (g)(1) of this section to a participant who is filing electronic documents. The exempt participant is permitted to file electronic documents by physically delivering or mailing an OSM containing the documents. A participant granted this exemption would still be required to meet the electronic formatting requirement in paragraph (g)(1) of this section.

(3) *Electronic document exemption*. Upon a finding of good cause, the Commission or presiding officer can exempt a participant from both the electronic (computer file) formatting and electronic transmission requirements in paragraph (g)(1) of this section. A participant granted such an exemption can file paper documents either in person or by courier, express mail, some other expedited delivery service, or first-class mail, as ordered by the Commission or presiding officer.

(4) *Requesting an exemption*. A filer seeking an exemption under paragraphs (g)(2) or (g)(3) of this section must submit the exemption request with its first filing in the proceeding. In the request, a filer must show good cause as to why it cannot file electronically. The filer may not change its formats or delivery methods for filing until a ruling on the exemption request is issued. Exemption requests under paragraphs (g)(2) or (g)(3) of this section sought after the first filing in the proceeding will be granted only if the requestor shows that the interests of fairness so require.

[72 FR 49149, Aug. 28, 2007]

§ 2.303 Docket.

[Top of File]

The Secretary shall maintain a docket for each proceeding conducted under this part, commencing with either the initial notice of hearing, notice of proposed action, order, request for hearing or petition for leave to intervene, as appropriate. The Secretary shall maintain all files and records of proceedings, including transcripts and video recordings of testimony, exhibits, and all papers, correspondence, decisions and orders filed or issued. All documents, records, and exhibits filed in any proceeding must be filed with the Secretary as described in §§ 2.302 and 2.304.

§ 2.304 Formal requirements for documents; signatures; acceptance for filing.

[Top of File]

(a) *Docket numbers and titles*. Each document filed in an adjudication to which a docket number has been assigned must contain a caption setting forth the docket number and the title of the proceeding and a description of the document (e.g., motion to quash subpoena).

(b) *Paper documents*. In addition to the requirements in this part, paper documents must be stapled or bound on the left side; typewritten, printed, or otherwise reproduced in permanent form on good unglazed paper of standard letterhead size; signed in ink by the participant, its authorized representative, or an attorney having authority with respect to it; and filed with an original and two conforming copies.

(c) *Format*. Each page in a document must begin not less than one inch from the top, with side and bottom margins of not less than one inch. Text must be double-spaced, except that quotations may be single-spaced and indented. The requirements of this paragraph do not apply to original documents, or admissible copies, offered as exhibits, or to specifically prepared exhibits.

(d) *Signatures*. The original of each document must be signed by the participant or its authorized representative, or by an attorney having authority with respect to it. The document must state the capacity of the person signing; his or her address, phone number, and e-mail address; and the date of signature. The signature of a person signing a pleading or other similar document submitted by a participant is a representation that the document has been subscribed in the capacity specified with full authority, that he or she has read it and knows the contents, that to the best of his or her knowledge, information, and belief the statements made in it are true, and that it is not interposed for delay. The signature of a person signing an affidavit or similar document, which should be submitted in accord with the form outlined in 28 U.S.C. 1746, is a representation that, under penalty of perjury, the document is true and correct to the best of that individual's knowledge and belief. If a document is not signed, or is signed with intent to defeat the purpose of this section, it may be struck.

(1) An electronic document must be signed using a participant's or a participant representative's digital ID certificate. Additional signatures can be added to the electronic document, including to any affidavits that accompany the document, by a typed-in designation that indicates the signer understands and acknowledges that he or she is assenting to the representations in paragraph (d) of this section.

(i) When signing an electronic document using a digital ID certificate, the signature page for the electronic document should contain a typed signature block that includes the phrase "Signed (electronically) by" typed onto the signature line; the name and the capacity of the person signing; the person's address, phone number, and email address; and the date of signature.

(ii) If additional individuals need to sign an electronic document, including any affidavits that accompany the document, such individuals must sign by inserting a typed signature block in the electronic document that includes the phrase "Executed in Accord with 10 CFR 2.304 (d)" or its equivalent typed on the signature line as well as the name and the capacity of the person signing; the person's address, phone number, and e-mail address; and the date of signature to the extent any of these items are different from the information provided for the digital ID certificate signer.

(2) Paper documents must be signed in ink.

(e) *Designation for service*. The first document filed by any participant in a proceeding must designate the name and address of a person on whom service may be made. This document must also designate the e-mail address, if any, of the person on whom service may be made.

(f) *Acceptance for filing*. Any document that fails to conform to the requirements of this section may be refused acceptance for filing by the Secretary or the presiding officer and may be returned with an indication of the reason for nonacceptance. Any document that is not accepted for filing will not be entered on the Commission's docket.

(g) *Pre-filed written testimony and exhibits*. In any instance in which a participant submits electronically through the E-Filing system written testimony or hearing exhibits in advance of a hearing, the written testimony of each individual witness or witness panel and each individual exhibit shall be submitted as an individual electronic file.

[72 FR 49150, Aug. 28, 2007]

§ 2.305 Service of documents; methods; proof.

[Top of File]

(a) *Service of documents by the Commission*. Except for subpoenas, the Commission shall serve all orders, decisions, notices, and other documents to all participants, by the same delivery method those participants use to file and accept service.

(b) *Who may be served*. Any document required to be served upon a participant shall be served upon that person or upon the representative designated by the participant or by law to receive service of documents. When a participant has appeared by attorney, service shall be made upon the attorney of record.

(c) *Method of service accompanying a filing*. Service must be made electronically to the E-Filing system. Upon an order from the Commission or presiding officer permitting alternative filing methods under § 2.302(g)(4), service may be made by personal delivery, courier, expedited delivery service, or by first-class, express, certified or registered mail. As to each participant that cannot serve electronically, the Commission or presiding officer shall require service by the most expeditious means permitted under this paragraph that are available to the participant, unless the Commission or presiding officer finds that this requirement would impose undue burden or expense on the participant.

(1) Unless otherwise provided in this section, a participant will serve documents on the other participants by the same method by which those participants filed.

(2) A participant granted an exemption under § 2.302(g)(2) will serve the presiding officer and the participants in the proceeding that filed electronically by physically delivering or mailing optical storage media containing the electronic document.

(3) A participant granted an exemption under § 2.302(g)(3) will serve the presiding officer and the other participants in the proceeding by physically delivering or mailing a paper copy.

(4) To provide proof of service, any paper served upon participants to the proceeding as may be required by law, rule, or order of the presiding officer must be accompanied by a signed certificate of service stating the names and addresses of the persons served as well as the method and date of service.

(d) *Method of service not accompanying a filing*. Service of demonstrative evidence, e.g., maps and other physical evidence, may be made by first-class mail in all cases, unless the presiding officer directs otherwise or the participant desires to serve by a faster method. In instances when service of a document, such as a discovery document under § 2.336, will not accompany a filing with the agency, the participant may use any reasonable method of service to which the recipient agrees.

(e) *Service on the Secretary*. (1) All motions, briefs, pleadings, and other documents must be served on the Secretary of the Commission by the same or equivalent method, such as by electronic transmission or first-class mail, that they are served upon the presiding officer, so that the Secretary will receive the filing at approximately the same time that it is received by the presiding officer to which the filing is directed.

(2) When pleadings are personally delivered to a presiding officer conducting proceedings outside the Washington, DC area, service on the Secretary may be accomplished electronically to the E-Filing system, as well as by courier, express mail, or expedited delivery service.

(3) Service of demonstrative evidence (e.g., maps and other physical exhibits) on the Secretary of the Commission may be made by first-class mail in all cases, unless the presiding officer directs otherwise or the participant desires to serve by a faster method. All pre-filed testimony and exhibits shall be served on the Secretary of the Commission by the same or equivalent method that it is served upon the presiding officer to the proceedings, i.e., electronically to the E-Filing system, personal delivery or courier, express mail, or expedited delivery service.

(4) The addresses for the Secretary are:

(i) Internet: The E-Filing system at *http://www.nrc.gov*.

(ii) First-class mail: Office of the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, Attention: Rulemakings and Adjudications Staff; and

(iii) Courier, express mail, and expedited delivery services: Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852, Attention: Rulemakings and Adjudications Staff.

(f) *When service is complete*. Service upon a participant is complete:

(1) By the E-Filing system, when filing electronically to the E-Filing system is considered complete under § 2.302(d).

(2) By personal delivery, upon handing the document to the person, or leaving it at his or her office with that person's clerk or other person in charge or, if there is no one in charge, leaving it in a conspicuous place in the office, or if the office is closed or the person to be served has no office, leaving it at his or her usual place of residence with some person of suitable age and discretion then residing there;

(3) By mail, upon deposit in the United States mail, properly stamped and addressed;

(4) By expedited service, upon depositing the document with the provider of the expedited service; or

(5) When service cannot be effected by a method provided by paragraphs (f)(1)–(4) of this section, by any other method authorized by law.

(6) When two or more methods of service are required, service is considered complete when service by each method is complete under paragraphs (f)(1)–(4) of this section.

(g) *Service on the NRC staff*.

(1) Service shall be made upon the NRC staff of all documents required to be filed with participants and the presiding officer in all proceedings, including those proceedings where the NRC staff informs the presiding officer of its determination not to participate as a party. Service upon the NRC staff shall be by the same or equivalent method as service upon the Office of the Secretary and the presiding officer, e.g., electronically, personal delivery or courier, express mail, or expedited delivery service.

(2) If the NRC staff decides not to participate as a party in a proceeding, it shall, in its notification to the presiding officer and participants of its determination not to participate, designate a person and address for service of documents.

[72 FR 49150, Aug. 28, 2007]

§ 2.306 Computation of time.

[Top of File]

(a) In computing any period of time, the day of the act, event, or default after which the designated period of time begins to run is not included. The last day of the period so computed is included unless it is a Saturday or Sunday, a Federal legal holiday at the place where the action or event is to occur, or a day upon which, because of an emergency closure of the Federal government in Washington, DC, NRC Headquarters does not open for business, in which event the period runs until the end of the next day that is not a

Saturday, Sunday, Federal legal holiday, or emergency closure.

(b) Whenever a participant has the right or is required to do some act within a prescribed period after the service of a notice or other document upon him or her, no additional time is added to the prescribed period except in the following circumstances:

(1) If a notice or document is served upon a participant, by first-class mail only, three (3) calendar days will be added to the prescribed period for all the participants in the proceeding.

(2) If a notice or document is served upon a participant, by express mail or other expedited service only, two (2) calendar days will be added to the prescribed period for all the participants in the proceeding.

(3) If a document is to be served by multiple service methods, such as partially electronic and entirely on optical storage media, the additional number of days is computed according to the service method used to deliver the entire document, excluding courtesy copies, to all of the other participants in the proceeding. The presiding officer may determine the calculation of additional days when a participant is not entitled to receive an entire filing served by multiple methods.

(4) In mixed service proceedings when all participants are not using the same filing and service method, the number of days for service will be determined by the presiding officer based on considerations of fairness and efficiency.

(c) To be considered timely, a document must be served:

(1) By 5 p.m. Eastern Time for a document served in person or by expedited service; and

(2) By 11:59 p.m. Eastern Time for a document served by the E-Filing system.

[72 FR 49151, Aug. 28, 2007]

§ 2.307 Extension and reduction of time limits; delegated authority to order use of procedures for access by potential parties to certain sensitive unclassified information.

[Top of File]

(a) Except as otherwise provided by law, the time fixed or the period of time prescribed for an act that is required or allowed to be done at or within a specified time, may be extended or shortened either by the Commission or the presiding officer for good cause, or by stipulation approved by the Commission or the presiding officer.

(b) If this part does not prescribe a time limit for an action to be taken in the proceeding, the Commission or the presiding officer may set a time limit for the action.

(c) In circumstances where, in order to meet Commission requirements for intervention, potential parties may deem it necessary to obtain access to safeguards information (as defined in § 73.2 of this chapter) or to sensitive unclassified non-safeguards information, the Secretary is delegated authority to issue orders establishing procedures and timelines for submitting and resolving requests for this information.

[73 FR 10980, Feb. 29, 2008]

§ 2.308 Treatment of requests for hearing or petitions for leave to intervene by the Secretary.

[Top of File]

Upon receipt of a request for hearing or a petition to intervene, the Secretary will forward the request or petition and/or proffered contentions and any answers and replies either to the Commission for a ruling on the request/petition and/or proffered contentions or to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel for the designation of a presiding officer under § 2.313(a) to rule on the matter.

§ 2.309 Hearing requests, petitions to intervene, requirements for standing, and contentions.

[Top of File]

(a) *General requirements*. Any person whose interest may be affected by a proceeding and who desires to participate as a party must file a written request for hearing and a specification of the contentions which the person seeks to have litigated in the hearing. In a proceeding under 10 CFR 52.103, the Commission, acting as the presiding officer, will grant the request if it determines that the requestor has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section. For all other proceedings, except as provided in paragraph (e) of this section, the Commission, presiding officer, or the
Atomic Safety and Licensing Board designated to rule on the request for hearing and/or petition for leave to intervene, will grant the request/petition if it determines that the requestor/petitioner has standing under the provisions of paragraph (d) of this section and has proposed at least one admissible contention that meets the requirements of paragraph (f) of this section. In ruling on the request for

hearing/petition to intervene submitted by petitioners seeking to intervene in the proceeding on the HLW repository, the Commission, the presiding officer, or the Atomic Safety and Licensing Board shall also consider any failure of the petitioner to participate as a potential party in the pre-license
application phase under subpart J of this part in addition to the factors in paragraph (d) of this section. If a request for hearing or petition to intervene is filed in response to any notice of hearing or opportunity for hearing, the applicant/licensee shall be deemed to be a party.

(b) Timing. Unless otherwise provided by the Commission, the request and/or petition and the list of contentions must be filed as follows:

(1) In proceedings for the direct or indirect transfer of control of an NRC license when the transfer requires prior approval of the NRC under the Commission's regulations, governing statute, or pursuant to a license condition, twenty (20) days from the date of publication of the notice in the Federal Register.

(2) In proceedings for the initial authorization to construct a high-level radioactive waste geologic repository, and the initial licensee to receive and process high level radioactive waste at a geological repository operations area, thirty (30) days from the date of publication of the notice in the Federal Register.

(3) In proceedings for which a Federal Register notice of agency action is published (other than a proceeding covered by paragraphs (b)(1) or (b)(2) of this section), not later than:

(i) The time specified in any notice of hearing or notice of proposed action or as provided by the presiding officer or the Atomic Safety and Licensing Board designated to rule on the request and/or petition, which may not be less than sixty (60) days from the date of publication of the notice in the **Federal Register**; or

(ii) If no period is specified, sixty (60) days from the date of publication of the notice.

(4) In proceedings for which a Federal Register notice of agency action is not published, not later than the latest of:

(i) Sixty (60) days after publication of notice on the NRC Web site at *http://www.nrc.gov/public-involve/major-actions.html*, or

(ii) Sixty (60) days after the requestor receives actual notice of a pending application, but not more than sixty (60) days after agency action on the application.

(5) For orders issued under § 2.202 the time period provided therein.

(c) Nontimely filings. (1) Nontimely requests and/or petitions and contentions will not be entertained absent a determination by the Commission, the presiding officer or the Atomic Safety and Licensing Board designated to rule on the request and/or petition and contentions that the request and/or petition should be granted and/or the contentions should be admitted based upon a balancing of the following factors to the extent that they apply to the particular nontimely filing:

(i) Good cause, if any, for the failure to file on time;

(ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;

(iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding;

(iv) The possible effect of any order that may be entered in the proceeding on the requestor's/petitioner's interest;

(v) The availability of other means whereby the requestor's/petitioner's interest will be protected;

(vi) The extent to which the requestor's/petitioner's interests will be represented by existing parties;

(vii) The extent to which the requestor's/petitioner's participation will broaden the issues or delay the proceeding; and

(viii) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record.

(2) The requestor/petitioner shall address the factors in paragraphs (c)(1)(i) through (c)(1)(viii) of this section in its nontimely filing.

(d) Standing. (1) General requirements. A request for hearing or petition for leave to intervene must state:

(i) The name, address and telephone number of the requestor or petitioner;

(ii) The nature of the requestor's/petitioner's right under the Act to be made a party to the proceeding;

(iii) The nature and extent of the requestor's/petitioner's property, financial or other interest in the proceeding; and

(iv) The possible effect of any decision or order that may be issued in the proceeding on the requestor's/petitioner's interest.

(2) State, local governmental body, and affected, Federally-recognized Indian Tribe. (i) A State, local governmental body (county, municipality or other subdivision), and any affected Federally-recognized Indian Tribe that desires to participate as a party in the proceeding shall submit a request for hearing/petition to intervene. The request/petition must meet the requirements of this section (including the contention requirements in paragraph (f) of this section), except that a State, local governmental body or affected Federally-recognized Indian Tribe that wishes to be a party in a proceeding for a facility located within its boundaries need not address the standing requirements under this paragraph. The State, local governmental body, and affected Federally-recognized Indian Tribe shall, in its request/petition, each designate a single representative for the hearing.

(ii) The Commission, the presiding officer or the Atomic Safety and Licensing Board designated to rule on requests for hearings or petitions for leave to intervene will admit as a party to a proceeding a single designated representative of the State, a single designated representative for each local governmental body (county, municipality or other subdivision), and a single designated representative for each affected Federally-recognized Indian Tribe. In determining the request/petition of a State, local governmental body, and any affected Federally-recognized Indian Tribe that wishes to be a party in a proceeding for a facility located within its boundaries, the Commission, the presiding officer or the Atomic Safety and Licensing Board designated to rule on requests for hearings or petitions for leave to intervene shall not require a further demonstration of standing.

(iii) In any proceeding on an application for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, or an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 of this chapter, the Commission shall permit intervention by the State and local governmental body (county, municipality or other subdivision) in which such an area is located and by any affected Federally-recognized Indian Tribe as defined in parts 60 or 63 of this chapter if the requirements of paragraph (f) of this section are satisfied with respect to at least one contention. All other petitions for intervention in any such proceeding must be reviewed under the provisions of paragraphs (a) through (f) of this section.

(3) The Commission, the presiding officer, or the Atomic Safety and Licensing Board designated to rule on requests for hearing and/or petitions for leave to intervene will determine whether the petitioner has an interest affected by the proceeding considering the factors enumerated in § 2.309(d)(1)-(2), among other things. In enforcement proceedings, the licensee or other person against whom the action is taken shall have standing.

(e) Discretionary Intervention. The presiding officer may consider a request for discretionary intervention when at least one requestor/petitioner has established standing and at least one admissible contention has been admitted so that a hearing will be held. A requestor/petitioner may request that his or her petition be granted as a matter of discretion in the event that the petitioner is determined to lack standing to intervene as a matter of right under paragraph (d)(1) of this section. Accordingly, in addition to addressing the factors in paragraph (d)(1) of this section, a petitioner who wishes to seek intervention as a matter of discretion in the event it is determined that standing as a matter of right is not demonstrated shall address the following factors in his/her initial petition, which the Commission, the presiding officer or the Atomic Safety and Licensing Board will consider and balance:

(1) Factors weighing in favor of allowing intervention--

(i) The extent to which the requestor's/petitioner's participation may reasonably be expected to assist in developing a sound record;

(ii) The nature and extent of the requestor's/petitioner's property, financial or other interests in the proceeding; and

(iii) The possible effect of any decision or order that may be issued in the proceeding on the requestor's/petitioner's interest;

(2) Factors weighing against allowing intervention--

(i) The availability of other means whereby the requestor's/petitioner's interest will be protected;

(ii) The extent to which the requestor's/petitioner's interest will be represented by existing parties; and

(iii) The extent to which the requestor's/petitioner's participation will inappropriately broaden the issues or delay the proceeding.

(f) Contentions. (1) A request for hearing or petition for leave to intervene must set forth with particularity the contentions sought to be raised. For each contention, the request or petition must:

(i) Provide a specific statement of the issue of law or fact to be raised or controverted, *provided further*, that the issue of law or fact to be raised in a request for hearing under 10 CFR 52.103(b) must be directed at demonstrating that one or more of the acceptance criteria in the combined license have not been, or will not be met, and that the specific operational consequences of nonconformance would be contrary to providing reasonable assurance of adequate protection of the public health and safety;

(ii) Provide a brief explanation of the basis for the contention;

(iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;

(iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;

(v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific

sources and documents on which the requestor/petitioner intends to rely to support its position on the issue;

(vi) In a proceeding other than one under 10 CFR 52.103, provide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. This information must include references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief; and

(vii) In a proceeding under 10 CFR 52.103(b), the information must be sufficient, and include supporting information showing, *prima facie*, that one or more of the acceptance criteria in the combined license have not been, or will not be met, and that the specific operational consequences of nonconformance would be contrary to providing reasonable assurance of adequate protection of the public health and safety. This information must include the specific portion of the report required by 10 CFR 52.99(c) which the requestor believes is inaccurate, incorrect, and/or incomplete (i.e., fails to contain the necessary information required by § 52.99(c)). If the requestor identifies a specific portion of the § 52.99(c) report as incomplete and the requestor contends that the incomplete portion prevents the requestor from making the necessary *prima facie* showing, then the requestor must explain why this deficiency prevents the requestor from making the *prima facie* showing.

(2) Contentions must be based on documents or other information available at the time the petition is to be filed, such as the application, supporting safety analysis report, environmental report or other supporting document filed by an applicant or licensee, or otherwise available to a petitioner. On issues arising under the National Environmental Policy Act, the petitioner shall file contentions based on the applicant's environmental report. The petitioner may amend those contentions or file new contentions if there are data or conclusions in the NRC draft or final environmental impact statement, environmental assessment, or any supplements relating thereto, that differ significantly from the data or conclusions in the applicant's documents. Otherwise, contentions may be amended or new contentions filed after the initial filing only with leave of the presiding officer upon a showing that--

(i) The information upon which the amended or new contention is based was not previously available;

(ii) The information upon which the amended or new contention is based is materially different than information previously available; and

(iii) The amended or new contention has been submitted in a timely fashion based on the availability of the subsequent information.

(3) If two or more requestors/petitioners seek to co-sponsor a contention, the requestors/petitioners shall jointly designate a representative who shall have the authority to act for the requestors/petitioners with respect to that contention. If a requestor/petitioner seeks to adopt the contention of another sponsoring requestor/petitioner, the requestor/petitioner who seeks to adopt the contention must either agree that the sponsoring requestor/petitioner shall act as the representative with respect to that contention, or jointly designate with the sponsoring requestor/petitioner a representative who shall have the authority to act for the requestors/petitioners with respect to that contention.

(g) *Selection of hearing procedures*. A request for hearing and/or petition for leave to intervene may, except in a proceeding under 10 CFR 52.103, also address the selection of hearing procedures, taking into account the provisions of § 2.310. If a request/petition relies upon § 2.310(d), the request/petition must demonstrate, by reference to the contention and the bases provided and the specific procedures in subpart G of this part, that resolution of the contention necessitates resolution of material issues of fact which may be best determined through the use of the identified procedures.

(h) Answers to requests for hearing and petitions to intervene. Unless otherwise specified by the Commission, the presiding officer, or the Atomic Safety and Licensing Board designated to rule on requests for hearings or petitions for leave to intervene--

(1) The applicant/licensee, the NRC staff, and any other party to a proceeding may file an answer to a request for a hearing, a petition to intervene and/or proffered contentions within twenty-five (25) days after service of the request for hearing, petition and/or contentions. Answers should address, at a minimum, the factors set forth in paragraphs (a) through (g) of this section insofar as these sections apply to the filing that is the subject of the answer.

(2) Except in a proceeding under 10 CFR 52.103, the requestor/petitioner may file a reply to any answer. The reply must be filed within 7 days after service of that answer.

(3) No other written answers or replies will be entertained.

(i) *Decision on request/petition*. In all proceedings other than a proceeding under 10 CFR 52.103, the presiding officer shall, within 45 days after the filing of answers and replies under paragraph (h) of this section, issue a decision on each request for hearing/petition to intervene, absent an extension from the Commission. The Commission, acting as the presiding officer, shall expeditiously grant or deny the request for hearing in a proceeding under 10 CFR 52.103. The Commission's decision may not be the subject of any appeal under 10 CFR 2.311.

[72 FR 49474, Aug. 28, 2007; 73 FR 44620, Jul. 31, 2008]

§ 2.310 Selection of hearing procedures.

[Top of File]

Upon a determination that a request for hearing/petition to intervene should be granted and a hearing held, the Commission, the presiding officer, or the Atomic Safety and Licensing Board designated to rule on the request/petition will determine and identify the specific hearing procedures to be used for the proceeding as follows--

(a) Except as determined through the application of paragraphs (b) through (h) of this section, proceedings for the grant, renewal, licensee-initiated amendment, or termination of licenses or permits subject to parts 30, 32 through 36, 39, 40, 50, 52, 54, 55, 61, 70 and 72 of this chapter may be conducted under the procedures of subpart L of this part.

(b) Proceedings on enforcement matters must be conducted under the procedures of subpart G of this part, unless all parties agree and jointly request that the proceedings be conducted under the procedures of subpart L or subpart N of this part, as appropriate.

(c) Proceedings on the licensing of the construction and operation of a uranium enrichment facility must be conducted under the procedures of subpart G of this part.

(d) In proceedings for the grant, renewal, licensee-initiated amendment, or termination of licenses or permits for nuclear power reactors, where the presiding officer by order finds that resolution of the contention or contested matter necessitates resolution of issues of material fact relating to the occurrence of a past activity, where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness material to the resolution of the contested matter, the hearing for resolution of that contention or contested matter will be conducted under subpart G of this part.

(e) Proceedings on applications for a license or license amendment to expand the spent nuclear fuel storage capacity at the site of a civilian nuclear power plant must be conducted under the procedures of subpart L of this part, unless a party requests that the proceeding be conducted under the procedures of subpart K of this part, or if all parties agree and jointly request that the proceeding be conducted under the procedures of subpart N of this part.

(f) Proceedings on an application for initial construction authorization for a high-level radioactive waste repository at a geologic repository operations area noticed pursuant to §§ 2.101(f)(8) or 2.105(a)(5), and proceedings on an initial application for a license to receive and possess high-level radioactive waste at a geologic repository operations area must be conducted under the procedures of subparts G and J of this part. Subsequent amendments to a construction authorization for a high-level radioactive geologic repository, and amendments to a license to receive and possess high level radioactive waste at a high level waste geologic repository may be conducted under the procedures of subpart L of this part, unless all parties agree and jointly request that the proceeding be conducted under the procedures of subpart N of this part.

(g) Proceedings on an application for the direct or indirect transfer of control of an NRC license which transfer requires prior approval of the NRC under the Commission's regulations, governing statutes or pursuant to a license condition shall be conducted under the procedures of subpart M of this part, unless the Commission determines otherwise in a case-specific order.

(h) Except as determined through the application of paragraphs (b) through (g) of this section, proceedings for the grant, renewal, licensee-initiated amendment, or termination of licenses or permits subject to parts 30, 32 through 36, 39, 40, 50, 52, 54, 55, 61, 70 and 72 of this chapter, and proceedings on an application for the direct or indirect transfer of control of an NRC license may be conducted under the procedures of subpart N of this part if--

(1) The hearing itself is expected to take no more than two (2) days to complete; or

(2) All parties to the proceeding agree that it should be conducted under the procedures of subpart N of this part.

(i) In design certification rulemaking proceedings under part 52 of this chapter, any informal hearing held under § 52.51 of this chapter must be conducted under the procedures of subpart O of this part.

(j) Proceedings on a Commission finding under 10 CFR 52.103(c) and (g) shall be conducted in accordance with the procedures designated by the Commission in each proceeding.

(k) In proceedings where the Commission grants a petition filed under § 2.335(b), the Commission may, in its discretion, conduct a hearing under the procedures of subpart O of this part to assist the Commission in developing a record on the matters raised in the petition.

[72 FR 49475, Aug. 28, 2007]

§ 2.311 Interlocutory review of rulings on requests for hearings/petitions to intervene, selection of hearing procedures, and requests by potential parties for access to sensitive unclassified non-safeguards information and safeguards information.

[Top of File]

(a) An order of the presiding officer, or if a presiding officer has not been designated, of the Chief Administrative Judge, or if he or she is unavailable, of another administrative judge, or of an administrative law judge with jurisdiction under § 2.318(a), may be appealed to the Commission with respect to:

(1) A request for hearing;

(2) A petition to intervene; or

(3) A request for access to sensitive unclassified non-safeguards information (SUNSI), including, but not limited to, proprietary, confidential commercial, and security-related information, and Safeguards Information (SGI). An appeal to the Commission may also be taken from an order of an officer designated to rule on information access issues.

(b) These appeals must be made as specified by the provisions of this section, within ten (10) days after the service of the order. The appeal must be initiated by the filing of a notice of appeal and accompanying supporting brief. Any party who opposes the appeal may file a brief in opposition to the appeal within ten (10) days after service of the appeal. The supporting brief and any answer must conform to the requirements of § 2.341(c)(2). No other appeals from rulings on requests for hearings are allowed.

(c) An order denying a petition to intervene, and/or request for hearing, or a request for access to the information described in paragraph (a) of this section, is appealable by the requestor/petitioner on the question as to whether the request and/or petition should have been granted.

(d) An order granting a petition to intervene, and/or request for hearing, or granting a request for access to the information described in paragraph (a) of this section, is appealable by a party other than the requestor/petitioner on the question as to:

(1) Whether the request for hearing or petition to intervene should have been wholly denied; or

(2) Whether the request for access to the information described in paragraph (a)(3) of this section should have been denied in whole or in part. However, such a question with respect to SGI may only be appealed by the NRC staff, and such a question with respect to SUNSI may be appealed only by the NRC staff or by a party whose interest independent of the proceeding would be harmed by the release of the information.

(e) An order selecting a hearing procedure may be appealed by any party on the question as to whether the selection of the particular hearing procedures was in clear contravention of the criteria set forth in § 2.310. The appeal must be filed with the Commission no later than ten (10) days after issuance of the order selecting a hearing procedure.

[73 FR 12631, Mar. 10, 2008]

§ 2.312 Notice of hearing.

[Top of File]

(a) In a proceeding in which the terms of a notice of hearing are not otherwise prescribed by this part, the order or notice of hearing will state:

(1) The nature of the hearing and its time and place, or a statement that the time and place will be fixed by subsequent order;

(2) The legal authority and jurisdiction under which the hearing is to be held;

(3) The matters of fact and law asserted or to be considered; and

(4) A statement describing the specific hearing procedures or subpart that will be used for the hearing.

(b) The time and place of hearing will be fixed with due regard for the convenience of the parties or their representatives, the nature of the proceeding and the public interest.

§ 2.313 Designation of presiding officer, disqualification, unavailability, and substitution.

[Top of File]

(a) Designation of presiding officer. The Commission may provide in the notice of hearing that one or more members of the Commission, an administrative law judge, an administrative judge, an Atomic Safety and Licensing Board, or a named officer who has been delegated final authority in the matter, shall be the presiding officer. The Commission alone shall designate the presiding officer in a hearing conducted under subpart O. If the Commission does not designate the presiding officer for a hearing under subparts G, J, K, L, M, or N of this part, then the Chief Administrative Judge shall issue an order designating:

(1) An Atomic Safety and Licensing Board appointed under Section 191 of the Atomic Energy Act of 1954, as amended, or an administrative law judge appointed pursuant to 5 U.S.C. 3105, for a hearing conducted under subparts G, J, K, L, or N of this part; or

(2) An Atomic Safety and Licensing Board, an administrative law judge, or an administrative judge for a hearing conducted under subpart M of this part.

(b) Disqualification. (1) If a designated presiding officer or a designated member of an Atomic Safety and Licensing Board believes that he or she is disqualified to preside or to participate as a board member in the hearing, he or she shall withdraw by notice on the record and

shall notify the Commission or the Chief Administrative Judge, as appropriate, of the withdrawal.

(2) If a party believes that a presiding officer or a designated member of an Atomic Safety and Licensing Board should be disqualified, the party may move that the presiding officer or the Licensing Board member disqualify himself or herself. The motion must be supported by affidavits setting forth the alleged grounds for disqualification. If the presiding officer does not grant the motion or the Licensing Board member does not disqualify himself, the motion must be referred to the Commission. The Commission will determine the sufficiency of the grounds alleged.

(c) Unavailability. If a presiding officer or a designated member of an Atomic Safety and Licensing Board becomes unavailable during the course of a hearing, the Commission or the Chief Administrative Judge, as appropriate, will designate another presiding officer or Atomic Safety and Licensing Board member. If he or she becomes unavailable after the hearing has been concluded, then:

(1) The Commission may designate another presiding officer;

(2) The Chief Administrative Judge or the Commission, as appropriate, may designate another Atomic Safety and Licensing Board member to participate in the decision;

(3) The Commission may direct that the record be certified to it for decision.

(d) Substitution. If a presiding officer or a designated member of an Atomic Safety and Licensing Board is substituted for the one originally designated, any motion predicated upon the substitution must be made within five (5) days after the substitution.

§ 2.314 Appearance and practice before the Commission in adjudicatory proceedings.

[Top of File]

(a) Standards of practice. In the exercise of their functions under this subpart, the Commission, the Atomic Safety and Licensing Boards, Administrative Law Judges, and Administrative Judges function in a quasi-judicial capacity. Accordingly, parties and their representatives in proceedings subject to this subpart are expected to conduct themselves with honor, dignity, and decorum as they should before a court of law.

(b) Representation. A person may appear in an adjudication on his or her own behalf or by an attorney-at-law. A partnership, corporation, or unincorporated association may be represented by a duly authorized member or officer, or by an attorney-at-law. A party may be represented by an attorney-at-law if the attorney is in good standing and has been admitted to practice before any Court of the United States, the District of Columbia, or the highest court of any State, territory, or possession of the United States. Any person appearing in a representative capacity shall file with the Commission a written notice of appearance. The notice must state his or her name, address, telephone number, and facsimile number and email address, if any; the name and address of the person or entity on whose behalf he or she appears; and, in the case of an attorney-at-law, the basis of his or her eligibility as a representative or, in the case of another representative, the basis of his or her authority to act on behalf of the party.

(c) Reprimand, censure or suspension from the proceeding. (1) A presiding officer, or the Commission may, if necessary for the orderly conduct of a proceeding, reprimand, censure or suspend from participation in the particular proceeding pending before it any party or representative of a party who refuses to comply with its directions, or who is disorderly, disruptive, or engages in contemptuous conduct.

(2) A reprimand, censure, or a suspension that is ordered to run for one day or less must state the grounds for the action in the record of the proceeding, and must advise the person disciplined of the right to appeal under paragraph (c)(3) of this section. A suspension that is ordered for a longer period must be in writing, state the grounds on which it is based, and advise the person suspended of the right to appeal and to request a stay under paragraphs (c)(3) and (c)(4) of this section. The suspension may be stayed for a reasonable time in order for an affected party to obtain other representation if this would be necessary to prevent injustice.

(3) Anyone disciplined under this section may file an appeal with the Commission within ten (10) days after issuance of the order. The appeal must be in writing and state concisely, with supporting argument, why the appellant believes the order was erroneous, either as a matter of fact or law. The Commission shall consider each appeal on the merits, including appeals in cases in which the suspension period has already run. If necessary for a full and fair consideration of the facts, the Commission may conduct further evidentiary hearings, or may refer the matter to another presiding officer for development of a record. In the latter event, unless the Commission provides specific directions to the presiding officer, that officer shall determine the procedure to be followed and who shall present evidence, subject to applicable provisions of law. The hearing must begin as soon as possible. In the case of an attorney, if no appeal is taken of a suspension, or, if the suspension is upheld at the conclusion of the appeal, the presiding officer, or the Commission, as appropriate, shall notify the State bar(s) to which the attorney is admitted. The notification must include copies of the order of suspension, and, if an appeal was taken, briefs of the parties, and the decision of the Commission.

(4) A suspension exceeding one (1) day is not effective for seventy-two (72) hours from the date the suspension order is issued. Within this time, a suspended individual may request a stay of the sanction from the appropriate reviewing tribunal pending appeal. No responses to the stay request from other parties will be entertained. If a timely stay request is filed, the suspension must be stayed until the reviewing tribunal rules on the motion. The stay request must be in writing and contain the information specified in § 2.342(b). The Commission shall rule on the stay request within ten (10) days after the filing of the motion. The Commission shall consider the factors specified in § 2.342(e)(1) and (e)(2) in determining whether to grant or deny a stay application.

§ 2.315 Participation by a person not a party.

[Top of File]

(a) A person who is not a party (including persons who are affiliated with or represented by a party) may, in the discretion of the presiding officer, be permitted to make a limited appearance by making an oral or written statement of his or her position on the issues at any session of the hearing or any prehearing conference within the limits and on the conditions fixed by the presiding officer. However, that person may not otherwise participate in the proceeding. Such statements of position shall not be considered evidence in the proceeding.

(b) The Secretary will give notice of a hearing to any person who requests it before the issuance of the notice of hearing, and will furnish a copy of the notice of hearing to any person who requests it thereafter. If a communication bears more than one signature, the Commission will give the notice to the person first signing unless the communication clearly indicates otherwise.

(c) The presiding officer will afford an interested State, local governmental body (county, municipality or other subdivision), and affected, Federally-recognized Indian Tribe, which has not been admitted as a party under § 2.309, a reasonable opportunity to participate in a hearing. Each State, local governmental body, and affected Federally-recognized Indian Tribe shall, in its request to participate in a hearing, each designate a single representative for the hearing. The representative shall be permitted to introduce evidence, interrogate witnesses where cross-examination by the parties is permitted, advise the Commission without requiring the representative to take a position with respect to the issue, file proposed findings in those proceedings where findings are permitted, and petition for review by the Commission under § 2.341 with respect to the admitted contentions. The representative shall identify those contentions on which it will participate in advance of any hearing held.

(d) If a matter is taken up by the Commission under § 2.341 or *sua sponte*, a person who is not a party may, in the discretion of the Commission, be permitted to file a brief "*amicus curiae.*" Such a person shall submit the amicus brief together with a motion for leave to do so which identifies the interest of the person and states the reasons why a brief is desirable. Unless the Commission provides otherwise, the brief must be filed within the time allowed to the party whose position the brief will support. A motion of a person who is not a party to participate in oral argument before the Commission will be granted at the discretion of the Commission.

§ 2.316 Consolidation of parties.

[Top of File]

On motion or on its or his own initiative, the Commission or the presiding officer may order any parties in a proceeding who have substantially the same interest that may be affected by the proceeding and who raise substantially the same questions, to consolidate their presentation of evidence, cross-examination, briefs, proposed findings of fact, and conclusions of law and argument. However, it may not order any consolidation that would prejudice the rights of any party. A consolidation under this section may be for all purposes of the proceeding, all of the issues of the proceeding, or with respect to any one or more issues thereof.

§ 2.317 Separate hearings; consolidation of proceedings.

[Top of File]

(a) Separate hearings. On motion by the parties or upon request of the presiding officer for good cause shown, or on its own initiative, the Commission may establish separate hearings in a proceeding if it is found that the action will be conducive to the proper dispatch of its business and to the ends of justice and will be conducted in accordance with the other provisions of this subpart.

(b) Consolidation of proceedings. On motion and for good cause shown or on its own initiative, the Commission or the presiding officers of each affected proceeding may consolidate for hearing or for other purposes two or more proceedings, or may hold joint hearings with interested States and/or other Federal agencies on matters of concurrent jurisdiction, if it is found that the action will be conducive to the proper dispatch of its business and to the ends of justice and will be conducted in accordance with the other provisions of this subpart.

§ 2.318 Commencement and termination of jurisdiction of presiding officer.

[Top of File]

(a) Unless the Commission orders otherwise, the jurisdiction of the presiding officer designated to conduct a hearing over the proceeding, including motions and procedural matters, commences when the proceeding commences. If a presiding officer has not been designated, the Chief Administrative Judge has jurisdiction or, if he or she is unavailable, another administrative judge or administrative law judge has jurisdiction. A proceeding commences when a notice of hearing or a notice of proposed action under § 2.105 is issued. When a notice of hearing provides that the presiding officer is to be an administrative judge or an administrative law judge, the Chief Administrative Judge will designate by order the administrative judge or administrative law judge, as appropriate, who is to preside. The presiding officer's jurisdiction in each proceeding terminates when the period within which the Commission may direct that the record be certified to it for final decision expires, when the Commission renders a final decision, or when the presiding officer withdraws from the case upon considering himself or herself disqualified, whichever is earliest.

(b) The Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or the Director, Office of Nuclear Material Safety and Safeguards, as appropriate, may issue an order and take any otherwise proper administrative action with respect to a licensee who is a party to a pending proceeding. Any order related to the subject matter of the pending proceeding may be modified by the presiding officer as appropriate for the purpose of the proceeding.

[73 FR 5716, Jan. 31, 2008]

§ 2.319 Power of the presiding officer.

[Top of File]

A presiding officer has the duty to conduct a fair and impartial hearing according to law, to take appropriate action to control the prehearing and hearing process, to avoid delay and to maintain order. The presiding officer has all the powers necessary to those ends, including the powers to:

(a) Administer oaths and affirmations;

(b) Issue subpoenas authorized by law, including subpoenas requested by a participant for the attendance and testimony of witnesses or the production of evidence upon the requestor's showing of general relevance and reasonable scope of the evidence sought;

(c) Consolidate parties and proceedings in accordance with §§ 2.316 and 2.317 and/or direct that common interests be represented by a single spokesperson;

(d) Rule on offers of proof and receive evidence. In proceedings under this part, strict rules of evidence do not apply to written submissions. However, the presiding officer may, on motion or on the presiding officer's own initiative, strike any portion of a written presentation or a response to a written question that is irrelevant, immaterial, unreliable, duplicative or cumulative.

(e) Restrict irrelevant, immaterial, unreliable, duplicative or cumulative evidence and/or arguments;

(f) Order depositions to be taken as appropriate;

(g) Regulate the course of the hearing and the conduct of participants;

(h) Dispose of procedural requests or similar matters;

(i) Examine witnesses;

(j) Hold conferences before or during the hearing for settlement, simplification of contentions, or any other proper purpose;

(k) Set reasonable schedules for the conduct of the proceeding and take actions reasonably calculated to maintain overall schedules;

(l) Certify questions to the Commission for its determination, either in the presiding officer's discretion, or on motion of a party or on direction of the Commission;

(m) Reopen a proceeding for the receipt of further evidence at any time before the initial decision;

(n) Appoint special assistants from the Atomic Safety and Licensing Board Panel under § 2.322;

(o) Issue initial decisions as provided in this part;

(p) Dispose of motions by written order or by oral ruling during the course of a hearing or prehearing conference. The presiding officer should ensure that parties not present for the oral ruling are notified promptly of the ruling;

(q) Issue orders necessary to carry out the presiding officer's duties and responsibilities under this part; and

(r) Take any other action consistent with the Act, this chapter, and 5 U.S.C. 551-558.

§ 2.320 Default.

[Top of File]

If a party fails to file an answer or pleading within the time prescribed in this part or as specified in the notice of hearing or pleading, to appear at a hearing or prehearing conference, to comply with any prehearing order entered by the presiding officer, or to comply with any discovery order entered by the presiding officer, the Commission or the presiding officer may make any orders in regard to the failure that are just, including, among others, the following:

(a) Without further notice, find the facts as to the matters regarding which the order was made in accordance with the claim of the party obtaining the order, and enter the order as appropriate; or

(b) Proceed without further notice to take proof on the issues specified.

§ 2.321 Atomic Safety and Licensing Boards.

[Top of File]

(a) The Commission or the Chief Administrative Judge may establish one or more Atomic Safety and Licensing Boards, each comprised of three members, one of whom will be qualified in the conduct of administrative proceedings and two of whom have such technical or other qualifications as the Commission or the Chief Administrative Judge determines to be appropriate to the issues to be decided. The members of an Atomic Safety and Licensing Board shall be designated from the Atomic Safety and Licensing Board Panel established by the Commission. In proceedings for granting, suspending, revoking, or amending licenses or authorizations as the Commission may designate, the Atomic Safety and Licensing Board shall perform the adjudicatory functions that the Commission determines are appropriate.

(b) The Commission or the Chief Administrative Judge may designate an alternate qualified in the conduct of administrative proceedings, or an alternate having technical or other qualifications, or both, for an Atomic Safety and Licensing Board established under paragraph (a) of this section. If a member of a board becomes unavailable, the Commission or the Chief Administrative Judge may constitute the alternate qualified in the conduct of administrative proceedings, or the alternate having technical or other qualifications, as appropriate, as a member of the board by notifying the alternate who will, as of the date of the notification, serve as a member of the board. If an alternate is unavailable or no alternates have been designated, and a member of a board becomes unavailable, the Commission or Chief Administrative Judge may appoint a member of the Atomic Safety and Licensing Board Panel who is qualified in the conduct of administrative proceedings or a member having technical or other qualifications, as appropriate, as a member of the Atomic Safety and Licensing Board by notifying the appointee who will, as of the date of the notification, serve as a member of the board.

(c) An Atomic Safety and Licensing Board has the duties and may exercise the powers of a presiding officer as granted by § 2.319 and otherwise in this part. Any time when a board is in existence but is not actually in session, any powers which could be exercised by a presiding officer or by the Chief Administrative Judge may be exercised with respect to the proceeding by the chairman of the board having jurisdiction over it. Two members of an Atomic Safety and Licensing Board constitute a quorum if one of those members is the member qualified in the conduct of administrative proceedings.

§ 2.322 Special assistants to the presiding officer.

[Top of File]

a) In consultation with the Chief Administrative Judge, the presiding officer may, at his or her discretion, appoint personnel from the Atomic Safety and Licensing Board Panel established by the Commission to assist the presiding officer in taking evidence and preparing a suitable record for review. The appointment may occur at any appropriate time during the proceeding but must, at the time of the appointment, be subject to the notice and disqualification provisions as described in § 2.313. The special assistants may function as:

(1) Technical interrogators in their individual fields of expertise. The interrogators shall study the written testimony and sit with the presiding officer to hear the presentation and, where permitted in the proceeding, the cross-examination by the parties of all witnesses on the issues of the interrogators' expertise. The interrogators shall take a leading role in examining the witnesses to ensure that the record is as complete as possible;

(2) Upon consent of all the parties, special masters to hear evidentiary presentations by the parties on specific technical matters, and, upon completion of the presentation of evidence, to prepare a report that would become part of the record. Special masters may rule on evidentiary issues brought before them, in accordance with § 2.333. Appeals from special masters' rulings may be taken to the presiding officer in accordance with procedures established in the presiding officer's order appointing the special master. Special masters' reports are advisory only; the presiding officer retains final authority with respect to the issues heard by the special master;

(3) Alternate Atomic Safety and Licensing Board members to sit with the presiding officer, to participate in the evidentiary sessions on the issue for which the alternate members were designated by examining witnesses, and to advise the presiding officer of their conclusions through an on-the-record report. This report is advisory only; the presiding officer retains final authority on the issue for which the alternate member was designated; or

(4) Discovery master to rule on the matters specified in § 2.1018(a)(2).

(b) The presiding officer may, as a matter of discretion, informally seek the assistance of members of the Atomic Safety and Licensing Board Panel to brief the presiding officer on the general technical background of subjects involving complex issues that the presiding officer might otherwise have difficulty in quickly grasping. These briefings take place before the hearing on the subject involved and supplement the reading and study undertaken by the presiding officer. They are not subject to the procedures described in § 2.313.

§ 2.323 Motions.

[Top of File]

(a) Presentation and disposition. All motions must be addressed to the Commission or other designated presiding officer. A motion must be made no later than ten (10) days after the occurrence or circumstance from which the motion arises. All written motions must be filed with the Secretary and served on all parties to the proceeding.

(b) Form and content. Unless made orally on-the-record during a hearing, or the presiding officer directs otherwise, or under the provisions of subpart N of this part, a motion must be in writing, state with particularity the grounds and the relief sought, be accompanied by any affidavits or other evidence relied on, and, as appropriate, a proposed form of order. A motion must be rejected if it does not include a certification by the attorney or representative of the moving party that the movant has made a sincere effort to contact other parties in the proceeding and resolve the issue(s) raised in the motion, and that the movant's efforts to resolve the issue(s) have been unsuccessful.

(c) Answers to motions. Within ten (10) days after service of a written motion, or other period as determined by the Secretary, the Assistant Secretary, or the presiding officer, a party may file an answer in support of or in opposition to the motion, accompanied by affidavits or other evidence. The moving party has no right to reply, except as permitted by the Secretary, the Assistant Secretary, or the presiding officer. Permission may be granted only in compelling circumstances, such as where the moving party demonstrates that it could not reasonably have anticipated the arguments to which it seeks leave to reply.

(d) Accuracy in filing. All parties are obligated, in their filings before the presiding officer and the Commission, to ensure that their arguments and assertions are supported by appropriate and accurate references to legal authority and factual basis, including, as appropriate, citations to the record. Failure to do so may result in appropriate sanctions, including striking a matter from the record or, in extreme circumstances, dismissal of the party.

(e) Motions for reconsideration. Motions for reconsideration may not be filed except upon leave of the presiding officer or the Commission, upon a showing of compelling circumstances, such as the existence of a clear and material error in a decision, which could not have reasonably been anticipated, that renders the decision invalid. A motion must be filed within ten (10) days of the action for which reconsideration is requested. The motion and any responses to the motion are limited to ten (10) pages.

(f) Referral and certifications to the Commission. (1) If, in the judgment of the presiding officer, prompt decision is necessary to prevent detriment to the public interest or unusual delay or expense, or if the presiding officer determines that the decision or ruling involves a novel issue that merits Commission review at the earliest opportunity, the presiding officer may refer the ruling promptly to the Commission. The presiding officer must notify the parties of the referral either by announcement on-the-record or by written notice if the hearing is not in session.

(2) A party may petition the presiding officer to certify an issue to the Commission for early review. The presiding officer shall apply the alternative standards of § 2.341(f) in ruling on the petition for certification. No motion for reconsideration of the presiding officer's ruling on a petition for certification will be entertained.

(g) Effect of filing a motion, petition, or certification of question to the Commission. Unless otherwise ordered, neither the filing of a motion, the filing of a petition for certification, nor the certification of a question to the Commission stays the proceeding or extends the time for the performance of any act.

(h) Motions to compel discovery. Parties may file answers to motions to compel discovery in accordance with paragraph (c) of this section. The presiding officer, in his or her discretion, may order that the answer be given orally during a telephone conference or other prehearing conference, rather than in writing. If responses are given over the telephone, the presiding officer shall issue a written order on the motion summarizing the views presented by the parties. This does not preclude the presiding officer from issuing a prior oral ruling on the matter effective at the time of the ruling, if the terms of the ruling are incorporated in the subsequent written order.

§ 2.324 Order of procedure.

[Top of File]

The presiding officer or the Commission will designate the order of procedure at a hearing. The proponent of an order will ordinarily open and close.

§ 2.325 Burden of proof.

[Top of File]

Unless the presiding officer otherwise orders, the applicant or the proponent of an order has the burden of proof.

§ 2.326 Motions to reopen.

[Top of File]

(a) A motion to reopen a closed record to consider additional evidence will not be granted unless the following criteria are satisfied:

(1) The motion must be timely. However, an exceptionally grave issue may be considered in the discretion of the presiding officer even if untimely presented;

(2) The motion must address a significant safety or environmental issue; and

(3) The motion must demonstrate that a materially different result would be or would have been likely had the newly proffered evidence been considered initially.

(b) The motion must be accompanied by affidavits that set forth the factual and/or technical bases for the movant's claim that the criteria of paragraph (a) of this section have been satisfied. Affidavits must be given by competent individuals with knowledge of the facts alleged, or by experts in the disciplines appropriate to the issues raised. Evidence contained in affidavits must meet the admissibility standards of this subpart. Each of the criteria must be separately addressed, with a specific explanation of why it has been met. When multiple allegations are involved, the movant must identify with particularity each issue it seeks to litigate and specify the factual and/or technical

bases which it believes support the claim that this issue meets the criteria in paragraph (a) of this section.

(c) A motion predicated in whole or in part on the allegations of a confidential informant must identify to the presiding officer the source of the allegations and must request the issuance of an appropriate protective order.

(d) A motion to reopen which relates to a contention not previously in controversy among the parties must also satisfy the requirements for nontimely contentions in § 2.309(c).

§ 2.327 Official recording; transcript.

[Top of File]

(a) Recording hearings. A hearing will be recorded stenographically or by other means under the supervision of the presiding officer. If the hearing is recorded on videotape or some other video medium, before an official transcript is prepared under paragraph (b) of this section, that video recording will be considered to constitute the record of events at the hearing.

(b) Official transcript. For each hearing, a transcript will be prepared from the recording made in accordance with paragraph (a) of this section that will be the sole official transcript of the hearing. The transcript will be prepared by an official reporter who may be designated by the Commission or may be a regular employee of the Commission. Except as limited by section 181 of the Act or order of the Commission, the transcript will be available for inspection in the agency's public records system.

(c) Availability of copies. Copies of transcripts prepared in accordance with paragraph (b) of this section are available to the parties and to the public from the official reporter on payment of the charges fixed therefor. If a hearing is recorded on videotape or other video medium, copies of the recording of each daily session of the hearing may be made available to the parties and to the public from the presiding officer upon payment of a charge specified by the Chief Administrative Judge.

(d) Transcript corrections. Corrections of the official transcript may be made only in the manner provided by this paragraph. Corrections ordered or approved by the presiding officer must be included in the record as an appendix. When so incorporated, the Secretary shall make the necessary physical corrections in the official transcript so that it will incorporate the changes ordered. In making corrections, pages may not be substituted but, to the extent practicable, corrections must be made by running a line through the matter to be changed without obliteration and writing the matter as changed immediately above. If the correction consists of an insertion, it must be added by rider or interlineation as near as possible to the text which is intended to precede and follow it.

§ 2.328 Hearings to be public.

[Top of File]

Except as may be requested under section 181 of the Act, all hearings will be public unless otherwise ordered by the Commission.

§ 2.329 Prehearing conference.

[Top of File]

(a) Necessity for prehearing conference; timing. The Commission or the presiding officer may, and in the case of a proceeding on an application for a construction permit or an operating license for a facility of a type described in §§ 50.21(b) or 50.22 of this chapter or a testing facility, shall direct the parties or their counsel to appear at a specified time and place for a conference or conferences before trial. A prehearing conference in a proceeding involving a construction permit or operating license for a facility of a type described in §§ 50.21(b) or 50.22 of this chapter must be held within sixty (60) days after discovery has been completed or any other time specified by the Commission or the presiding officer.

(b) Objectives. The following subjects may be discussed, as directed by the Commission or the presiding officer, at the prehearing conference:

(1) Expediting the disposition of the proceeding;

(2) Establishing early and continuing control so that the proceeding will not be protracted because of lack of management;

(3) Discouraging wasteful prehearing activities;

(4) Improving the quality of the hearing through more thorough preparation, and;

(5) Facilitating the settlement of the proceeding or any portions of it.

(c) Other matters for consideration. As appropriate for the particular proceeding, a prehearing conference may be held to consider such matters as:

(1) Simplification, clarification, and specification of the issues;

(2) The necessity or desirability of amending the pleadings;

(3) Obtaining stipulations and admissions of fact and the contents and authenticity of documents to avoid unnecessary proof, and advance rulings from the presiding officer on the admissibility of evidence;

(4) The appropriateness and timing of summary disposition motions under subparts G and L of this part, including appropriate limitations on the page length of motions and responses thereto;

(5) The control and scheduling of discovery, including orders affecting disclosures and discovery under the discovery provisions in subpart G of this part.

(6) Identification of witnesses and documents, and the limitation of the number of expert witnesses, and other steps to expedite the presentation of evidence, including the establishment of reasonable limits on the time allowed for presenting direct and, where permitted, cross-examination evidence;

(7) The disposition of pending motions;

(8) Settlement and the use of special procedures to assist in resolving any issues in the proceeding;

(9) The need to adopt special procedures for managing potentially difficult or protracted proceedings that may involve particularly complex issues, including the establishment of separate hearings with respect to any particular issue in the proceeding;

(10) The setting of a hearing schedule, including any appropriate limitations on the scope and time permitted for cross-examination where cross-examination is permitted; and

(11) Other matters that the Commission or presiding officer determines may aid in the just and orderly disposition of the proceeding.

(d) Reports. Prehearing conferences may be reported stenographically or by other means.

(e) Prehearing conference order. The presiding officer shall enter an order that recites the action taken at the conference, the amendments allowed to the pleadings and agreements by the parties, and the issues or matters in controversy to be determined in the proceeding. Any objections to the order must be filed by a party within five (5) days after service of the order. Parties may not file replies to the objections unless the presiding officer so directs. The filing of objections does not stay the decision unless the presiding officer so orders. The presiding officer may revise the order in the light of the objections presented and, as permitted by § 2.319(l), may certify for determination to the Commission any matter raised in the objections the presiding officer finds appropriate. The order controls the subsequent course of the proceeding unless modified for good cause.

§ 2.330 Stipulations.

[Top of File]

Apart from any stipulations made during or as a result of a prehearing conference, the parties may stipulate in writing at any stage of the proceeding or orally during the hearing, any relevant fact or the contents or authenticity of any document. These stipulations may be received in evidence. The parties may also stipulate as to the procedure to be followed in the proceeding. These stipulations may, on motion of all parties, be recognized by the presiding officer to govern the conduct of the proceeding.

§ 2.331 Oral argument before the presiding officer.

[Top of File]

When, in the opinion of the presiding officer, time permits and the nature of the proceeding and the public interest warrant, the presiding officer may allow, and fix a time for, the presentation of oral argument. The presiding officer will impose appropriate limits of time on the argument. The transcript of the argument is part of the record.

§ 2.332 General case scheduling and management.

[Top of File]

(a) *Scheduling order.* The presiding officer shall, as soon as practicable after consulting with the parties by a scheduling conference, telephone, mail, or other suitable means, enter a scheduling order that establishes limits for the time to file motions, conclude discovery, commence the oral phase of the hearing (if applicable), and take other actions in the proceeding. The scheduling order may also include:

(1) Modifications of the times for disclosures under §§ 2.336 and 2.704 and of the extent of discovery to be permitted;

(2) The date or dates for prehearing conferences; and

(3) Any other matters appropriate in the circumstances of the proceeding.

(b) *Model milestones.* In developing the scheduling order under paragraph (a) of this section, the presiding officer shall utilize the applicable model milestones in Appendix B to this part as a starting point. The presiding officer shall make appropriate modifications based upon all relevant information, including but not limited to, the number of contentions admitted, the complexity of the issues presented, relevant considerations which a party may bring to the attention of the presiding officer, the NRC staff's schedule for completion of its safety and environmental evaluations (paragraph (e) of this section), and the NRC's interest in providing a fair and expeditious resolution of the issues sought to be adjudicated by the parties in the proceeding.

(1) Whether the requesting party has exercised due diligence to adhere to the schedule;

(2) Whether the requested change is the result of unavoidable circumstances; and

(3) Whether the other parties have agreed to the change and the overall effect of the change on the schedule of the case.

(c) Objectives of scheduling order. The scheduling order must have as its objectives proper case management purposes such as:

(1) Expediting the disposition of the proceeding;

(2) Establishing early and continuing control so that the proceeding will not be protracted because of lack of management;

(3) Discouraging wasteful prehearing activities;

(4) Improving the quality of the hearing through more thorough preparation; and

(5) Facilitating the settlement of the proceeding or any portions thereof, including the use of Alternative Dispute Resolution, when and if the presiding officer, upon consultation with the parties, determines that these types of efforts should be pursued.

(d) Effect of NRC staff's schedule on scheduling order. In establishing a schedule, the presiding officer shall take into consideration the NRC staff's projected schedule for completion of its safety and environmental evaluations to ensure that the hearing schedule does not adversely impact the staff's ability to complete its reviews in a timely manner. Hearings on safety issues may be commenced before publication of the NRC staff's safety evaluation upon a finding by the presiding officer that commencing the hearings at that time would expedite the proceeding. Where an environmental impact statement (EIS) is involved, hearings on environmental issues addressed in the EIS may not commence before the issuance of the final EIS. In addition, discovery against the NRC staff on safety or environmental issues, respectively, should be suspended until the staff has issued the SER or EIS, unless the presiding officer finds that the commencement of discovery against the NRC staff (as otherwise permitted by the provisions of this part) before the publication of the pertinent document will not adversely affect completion of the document and will expedite the hearing.

[70 FR 20461, Apr. 20, 2005]

§ 2.333 Authority of the presiding officer to regulate procedure in a hearing.

[Top of File]

To prevent unnecessary delays or an unnecessarily large record, the presiding officer:

(a) May limit the number of witnesses whose testimony may be cumulative;

(b) May strike argumentative, repetitious, cumulative, unreliable, immaterial, or irrelevant evidence;

(c) Shall require each party or participant who requests permission to conduct cross-examination to file a cross-examination plan for each witness or panel of witnesses the party or participant proposes to cross-examine;

(d) Must ensure that each party or participant permitted to conduct cross-examination conducts its cross-examination in conformance with the party's or participant's cross-examination plan filed with the presiding officer;

(e) May take necessary and proper measures to prevent argumentative, repetitious, or cumulative cross-examination; and

(f) May impose such time limitations on arguments as the presiding officer determines appropriate, having regard for the volume of the evidence and the importance and complexity of the issues involved.

§ 2.334 Implementing hearing schedule for proceeding.

[Top of File]

(a) Unless the Commission directs otherwise in a particular proceeding, the presiding officer assigned to the proceeding shall, based on information and projections provided by the parties and the NRC staff, take appropriate action to maintain the hearing schedule established by the presiding officer in accordance with 10 CFR 2.332(a) of this part for the completion of the evidentiary record and, as appropriate, the

issuance of its initial decision.

(b) *Modification of hearing schedule.* A hearing schedule may not be modified except upon a finding of good cause by the presiding officer or the Commission. In making such a good cause determination, the presiding officer or the Commission should take into account the following factors, among other things:

(1) Whether the requesting party has exercised due diligence to adhere to the schedule;

(2) Whether the requested change is the result of unavoidable circumstances; and

(3) Whether the other parties have agreed to the change and the overall effect of the change on the schedule of the case.

(c) The presiding officer shall provide written notification to the Commission any time during the course of the proceeding when it appears that there will be a delay of more than forty-five (45) days in meeting any of the dates for major activities in the hearing schedule established by the presiding officer under 10 CFR 2.332(a), or that the completion of the record or the issuance of the initial decision will be delayed more than sixty (60) days beyond the time specified in the hearing schedule established under 10 CFR 2.332(a). The notification must include an explanation of the reasons for the projected delay and a description of the actions, if any, that the presiding officer or the Board proposes to take to avoid or mitigate the delay.

[70 FR 20461, Apr. 20, 2005]

§ 2.335 Consideration of Commission rules and regulations in adjudicatory proceedings.

[Top of File]

(a) Except as provided in paragraphs (b), (c), and (d) of this section, no rule or regulation of the Commission, or any provision thereof, concerning the licensing of production and utilization facilities, source material, special nuclear material, or byproduct material, is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding subject to this part.

(b) A party to an adjudicatory proceeding subject to this part may petition that the application of a specified Commission rule or regulation or any provision thereof, of the type described in paragraph (a) of this section, be waived or an exception made for the particular proceeding. The sole ground for petition of waiver or exception is that special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which the rule or regulation was adopted. The petition must be accompanied by an affidavit that identifies the specific aspect or aspects of the subject matter of the proceeding as to which the application of the rule or regulation (or provision of it) would not serve the purposes for which the rule or regulation was adopted. The affidavit must state with particularity the special circumstances alleged to justify the waiver or exception requested. Any other party may file a response by counter affidavit or otherwise.

(c) If, on the basis of the petition, affidavit and any response permitted under paragraph (b) of this section, the presiding officer determines that the petitioning party has not made a *prima facie* showing that the application of the specific Commission rule or regulation (or provision thereof) to a particular aspect or aspects of the subject matter of the proceeding would not serve the purposes for which the rule or regulation was adopted and that application of the rule or regulation should be waived or an exception granted, no evidence may be received on that matter and no discovery, cross-examination or argument directed to the matter will be permitted, and the presiding officer may not further consider the matter.

(d) If, on the basis of the petition, affidavit and any response provided for in paragraph (b) of this section, the presiding officer determines that the *prima facie* showing required by paragraph (b) of this section has been made, the presiding officer shall, before ruling on the petition, certify the matter directly to the Commission (the matter will be certified to the Commission notwithstanding other provisions on certification in this part) for a determination in the matter of whether the application of the Commission rule or regulation or provision thereof to a particular aspect or aspects of the subject matter of the proceeding, in the context of this section, should be waived or an exception made. The Commission may, among other things, on the basis of the petition, affidavits, and any response, determine whether the application of the specified rule or regulation (or provision thereof) should be waived or an exception be made. The Commission may direct further proceedings as it considers appropriate to aid its determination.

(e) Whether or not the procedure in paragraph (b) of this section is available, a party to an initial or renewal licensing proceeding may file a petition for rulemaking under § 2.802.

§ 2.336 General discovery.

[Top of File]

(a) Except for proceedings conducted under subparts G and J of this part or as otherwise ordered by the Commission, the presiding officer or the Atomic Safety and Licensing Board assigned to the proceeding, all parties, other than the NRC staff, to any proceeding subject to this part shall, within thirty (30) days of the issuance of the order granting a request for hearing or petition to intervene and without further order or request from any party, disclose and provide:

(1) The name and, if known, the address and telephone number of any person, including any expert, upon whose opinion the party bases its claims and contentions and may rely upon as a witness, and a copy of the analysis or other authority upon which that person bases his or her opinion;

(2)(i) A copy, or a description by category and location, of all documents and data compilations in the possession, custody, or control of the party that are relevant to the contentions, provided that if only a description is provided of a document or data compilation, a party shall have the right to request copies of that document and/or data compilation, and

(ii) A copy (for which there is no claim of privilege or protected status), or a description by category and location, of all tangible things (e. g., books, publications and treatises) in the possession, custody or control of the party that are relevant to the contention.

(iii) When any document, data compilation, or other tangible thing that must be disclosed is publicly available from another source, such as at the NRC Web site, *http://www.nrc.gov*, and/or the NRC Public Document Room, a sufficient disclosure would be the location, the title and a page reference to the relevant document, data compilation, or tangible thing.

(3) A list of documents otherwise required to be disclosed for which a claim of privilege or protected status is being made, together with sufficient information for assessing the claim of privilege or protected status of the documents.

(b) Except for proceedings conducted under subpart J of this part or as otherwise ordered by the Commission, the presiding officer, or the Atomic Safety and Licensing Board assigned to the proceeding, the NRC staff shall, within thirty (30) days of the issuance of the order granting a request for hearing or petition to intervene and without further order or request from any party, disclose and/or provide, to the extent available (but excluding those documents for which there is a claim of privilege or protected status):

(1) The application and/or applicant/licensee requests associated with the application or proposed action that is the subject of the proceeding;

(2) NRC correspondence with the applicant or licensee associated with the application or proposed action that is the subject of the proceeding;

(3) All documents (including documents that provide support for, or opposition to, the application or proposed action) supporting the NRC staff's review of the application or proposed action that is the subject of the proceeding;

(4) Any NRC staff documents (except those documents for which there is a claim of privilege or protected status) representing the NRC staff's determination on the application or proposal that is the subject of the proceeding; and

(5) A list of all otherwise-discoverable documents for which a claim of privilege or protected status is being made, together with sufficient information for assessing the claim of privilege or protected status of the documents.

(c) Each party and the NRC staff shall make its initial disclosures under paragraphs (a) and (b) of this section, based on the information and documentation then reasonably available to it. A party, including the NRC staff, is not excused from making the required disclosures because it has not fully completed its investigation of the case, it challenges the sufficiency of another entity's disclosures, or that another entity has not yet made its disclosures. All disclosures under this section must be accompanied by a certification (by sworn affidavit) that all relevant materials required by this section have been disclosed, and that the disclosures are accurate and complete as of the date of the certification.

(d) The duty of disclosure under this section is continuing, and any information or documents that are subsequently developed or obtained must be disclosed within fourteen (14) days.

(e)(1)The presiding officer may impose sanctions, including dismissal of specific contentions, dismissal of the adjudication, denial or dismissal of the application or proposed action, or the use of the discovery provisions in subpart G of this part against the offending party, for the offending party's continuing unexcused failure to make the disclosures required by this section.

(2) The presiding officer may impose sanctions on a party that fails to provide any document or witness name required to be disclosed under this section, unless the party demonstrates good cause for its failure to make the disclosure required by this section. A sanction that may be imposed by the presiding officer is prohibiting the admission into evidence of documents or testimony of the witness proffered by the offending party in support of its case.

(f)(1) In the event of a dispute over disclosure of documents and records including Safeguards Information referred to in Sections 147 and 181 of the Atomic Energy Act of 1954, as amended, the presiding officer may issue an order requiring disclosure if—

(i) The presiding officer finds that the individual seeking access to Safeguards Information to participate in an NRC adjudication has the requisite ''need to know'', as defined in 10 CFR 73.2;

(ii) The individual has undergone an FBI criminal history records check, unless exempt under 10 CFR 73.22(b)(3) or 73.23(b)(3), as applicable, by submitting fingerprints to the NRC Office of Administration, Security Processing Unit, Mail Stop T–6E46, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, and otherwise following the procedures in 10 CFR 73.57(d) for submitting and processing fingerprints. However, before a final adverse determination by the NRC Office of Administration on an individual's criminal history records check is made, the individual shall be afforded the protections provided by 10 CFR 73.57; and

(iii) The NRC Office of Administration has found, based upon a background check, that the individual is trustworthy and reliable, unless exempt under 10 CFR 73.22(b)(3) or 73.23(b)(3), as applicable. In addition to the protections provided by 10 CFR 73.57 for adverse determinations based on criminal history records checks, the Office of Administration must take the following actions before making a final adverse determination on an individual's background check for trustworthiness and reliability. The Office of Administration will:

(A) For the purpose of assuring correct and complete information, provide to the individual any records, in addition to those required to be provided under 10 CFR 73.57(e)(1), that were considered in the trustworthiness and reliability determination;

(B) Resolve any challenge by the individual to the completeness or accuracy of the records described in § 2.336(f)(1)(iii)(A). The individual may make this challenge by submitting information and/or an explanation to the Office of Administration. The challenge must be submitted within 10 days of the distribution of the records described in § 2.336(f)(1)(iii)(A), and the Office of Administration must promptly resolve any challenge.

(iv) Individuals seeking access to Safeguards Information to participate in an NRC adjudication for whom the NRC Office of Administration has made a final adverse determination on trustworthiness and reliability may submit a request to the Chief Administrative Judge for review of the adverse determination. Upon receiving such a request, the Chief Administrative Judge shall designate an officer other than the presiding officer of the proceeding to review the adverse determination. For purposes of review, the adverse determination must be in writing and set forth the grounds for the determination. The request for review shall be served on the NRC staff and may include additional information for review by the designated officer. The request must be filed within 15 days after receipt of the adverse determination by the person against whom the adverse determination has been made. Within 10 days of receipt of the request for review and any additional information, the NRC staff will file a response indicating whether the request and additional information has caused the NRC Office of Administration to reverse its adverse determination. The designated officer may reverse the Office of Administration's final adverse determination only if the officer finds, based on all the information submitted, that the adverse determination constitutes an abuse of discretion. The designated officer's decision must be rendered within 15 days after receipt of the staff filing indicating that the request for review and additional information has not changed the NRC Office of Administration's adverse determination.

(2) The presiding officer may include in an order any protective terms and conditions (including affidavits of nondisclosure) as may be necessary and appropriate to prevent the unauthorized disclosure of Safeguards Information.

(3) When Safeguards Information protected from unauthorized disclosure under Section 147 of the Atomic Energy Act of 1954, as amended, is received and possessed by anyone other than the NRC staff, it must also be protected according to the requirements of § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

(4) The presiding officer may also prescribe additional procedures to effectively safeguard and prevent disclosure of Safeguards Information to unauthorized persons with minimum impairment of the procedural rights which would be available if Safeguards Information were not involved.

(5) In addition to any other sanction that may be imposed by the presiding officer for violation of an order issued pursuant to this paragraph, violation of a provision for the protection of Safeguards Information from unauthorized disclosure that is contained in an order may be subject to a civil penalty imposed under § 2.205.

(6) For the purpose of imposing the criminal penalties contained in Section 223 of the Atomic Energy Act of 1954, as amended, a provision for the protection of Safeguards Information from unauthorized disclosure that is contained in an order issued pursuant to this paragraph is considered to be issued under Section 161b of the Atomic Energy Act of 1954, as amended.

(7) If a presiding officer has yet to be appointed, the authority to take the actions described in paragraphs (f)(1) to (f)(6) of this section resides in the officer with jurisdiction under § 2.318(a).

(g) The disclosures required by this section constitute the sole discovery permitted for NRC proceedings under this part unless there is further provision for discovery under the specific subpart under which the hearing will be conducted or unless the Commission provides otherwise in a specific proceeding.

[73 FR 63567, Oct. 24, 2008]

§ 2.337 Evidence at a hearing.

[Top of File]

(a) Admissibility. Only relevant, material, and reliable evidence which is not unduly repetitious will be admitted. Immaterial or irrelevant parts of an admissible document will be segregated and excluded so far as is practicable.

(b) Objections. An objection to evidence must briefly state the grounds of objection. The transcript must include the objection, the grounds, and the ruling. Exception to an adverse ruling is preserved without notation on-the-record.

(c) Offer of proof. An offer of proof, made in connection with an objection to a ruling of the presiding officer excluding or rejecting proffered oral testimony, must consist of a statement of the substance of the proffered evidence. If the excluded evidence is in written form, a copy must be marked for identification. Rejected exhibits, adequately marked for identification, must be retained in the record.

(d) Exhibits. A written exhibit will not be received in evidence unless the original and two copies are offered and a copy is furnished to each party, or the parties have been previously furnished with copies or the presiding officer directs otherwise. The presiding officer may permit a party to replace with a true copy an original document admitted in evidence.

(e) Official record. An official record of a government agency or entry in an official record may be evidenced by an official publication or by a copy attested by the officer having legal custody of the record and accompanied by a certificate of his custody.

(f) Official notice. (1) The Commission or the presiding officer may take official notice of any fact of which a court of the United States may take judicial notice or of any technical or scientific fact within the knowledge of the Commission as an expert body. Each fact officially noticed under this paragraph must be specified in the record with sufficient particularity to advise the parties of the matters which have been noticed or brought to the attention of the parties before final decision and each party adversely affected by the decision shall be given opportunity to controvert the fact.

(2) If a decision is stated to rest in whole or in part on official notice of a fact which the parties have not had a prior opportunity to controvert, a party may controvert the fact by filing an appeal from an initial decision or a petition for reconsideration of a final decision. The appeal must clearly and concisely set forth the information relied upon to controvert the fact.

(g) Proceedings involving applications—

(1) Facility construction permits. In a proceeding involving an application for construction permit for a production or utilization facility, the NRC staff shall offer into evidence any report submitted by the ACRS in the proceeding in compliance with section 182(b) of the Act, any safety evaluation prepared by the NRC staff, and any environmental impact statement prepared in the proceeding under subpart A of part 51 of this chapter by the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, or his or her designee.

(2) Other applications where the NRC staff is a party. In a proceeding involving an application for other than a construction permit for a production or utilization facility, the NRC staff shall offer into evidence:

(i) Any report submitted by the ACRS in the proceeding in compliance with section 182(b) of the Act;

(ii) At the discretion of the NRC staff, a safety evaluation prepared by the NRC staff and/or NRC staff testimony and evidence on the contention/controverted matter prepared in advance of the completion of the safety evaluation;

(iii) Any NRC staff statement of position on the contention/controverted matter provided to the presiding officer under §§ 2.1202(a); and

(iv) Any environmental impact statement or environmental assessment prepared in the proceeding under subpart A of part 51 of this chapter by the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, or his or her designee if there is any, but only if there are contentions/controverted matters with respect to the adequacy of the environmental impact statement or environmental assessment.

(3) Other applications where the NRC staff is not a party. In a proceeding involving an application for other than a construction permit for a production or utilization facility, the NRC staff shall offer into evidence, and (with the exception of an ACRS report) provide one or more sponsoring witnesses, for:

(i) Any report submitted by the ACRS in the proceeding in compliance with section 182(b) of the Act;

(ii) At the discretion of the NRC staff, a safety evaluation prepared by the NRC staff and/or NRC staff testimony and evidence on the contention/controverted matter prepared in advance of the completion of the safety evaluation;

(iii) Any NRC staff statement of position on the contention/controverted matter under § 2.1202(a); and

(iv) Any environmental impact statement or environmental assessment prepared in the proceeding under subpart A of part 51 of this chapter by the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, or his or her designee if there is any, but only if there are contentions/controverted matters with respect to the adequacy of the environmental impact statement or environmental assessment.

[73 FR 5716, Jan. 31, 2008]

§ 2.338 Settlement of issues; alternative dispute resolution.

[Top of File]

The fair and reasonable settlement and resolution of issues proposed for litigation in proceedings subject to this part is encouraged. Parties are encouraged to employ various methods of alternate dispute resolution to address the issues without the need for litigation in proceedings subject to this part.

(a) Availability. The parties shall have the opportunity to submit a proposed settlement of some or all issues to the Commission or presiding officer, as appropriate, or submit a request for alternative dispute resolution under paragraph (b) of this section.

(b) Settlement judge; alternative dispute resolution. (1) The presiding officer, upon joint motion of the parties, may request the Chief Administrative Judge to appoint a Settlement Judge to conduct settlement negotiations or remit the proceeding to alternative dispute resolution as the Commission may provide or to which the parties may agree. The order appointing the Settlement Judge may confine the scope of settlement negotiations to specified issues. The order must direct the Settlement Judge to report to the Chief Administrative Judge at specified time periods.

(2) If a Settlement Judge is appointed, the Settlement Judge shall:

(i) Convene and preside over conferences and settlement negotiations between the parties and assess the practicalities of a potential settlement;

(ii) Report to the Chief Administrative Judge describing the status of the settlement negotiations and recommending the termination or continuation of the settlement negotiations; and

(iii) Not discuss the merits of the case with the Chief Administrative Judge or any other person, or appear as a witness in the case.

(3) Settlement negotiations conducted by the Settlement Judge terminate upon the order of the Chief Administrative Judge issued after consultation with the Settlement Judge.

(4) No decision concerning the appointment of a Settlement Judge or the termination of the settlement negotiation is subject to review by, appeal to, or rehearing by the presiding officer or the Commission.

(c) Availability of parties' attorneys or representatives. The presiding officer (or Settlement Judge) may require that the attorney or other representative who is expected to try the case for each party be present and that the parties, or agents having full settlement authority, also be present or available by telephone.

(d) Admissibility in subsequent hearing. No evidence, statements, or conduct in settlement negotiations under this section will be admissible in any subsequent hearing, except by stipulation of the parties. Documents disclosed may not be used in litigation unless obtained through appropriate discovery or subpoena.

(e) Imposition of additional requirements. The presiding officer (or Settlement Judge) may impose on the parties and persons having an interest in the outcome of the adjudication additional requirements as the presiding officer (or Settlement Judge) finds necessary for the fair and efficient resolution of the case.

(f) Effects of ongoing settlement negotiations. The conduct of settlement negotiations does not divest the presiding officer of jurisdiction and does not automatically stay the proceeding. A hearing must not be unduly delayed because of the conduct of settlement negotiations.

(g) Form. A settlement must be in the form of a proposed settlement agreement, a consent order, and a motion for its entry that includes the reasons why it should be accepted. It must be signed by the consenting parties or their authorized representatives.

(h) Content of settlement agreement. The proposed settlement agreement must contain the following:

(1) An admission of all jurisdictional facts;

(2) An express waiver of further procedural steps before the presiding officer, of any right to challenge or contest the validity of the order entered into in accordance with the agreement, and of all rights to seek judicial review or otherwise to contest the validity of the consent order;

(3) A statement that the order has the same force and effect as an order made after full hearing; and

(4) A statement that matters identified in the agreement, required to be adjudicated have been resolved by the proposed settlement agreement and consent order.

(i) Approval of settlement agreement. Following issuance of a notice of hearing, a settlement must be approved by the presiding officer or the Commission as appropriate in order to be binding in the proceeding. The presiding officer or Commission may order the adjudication of the issues that the presiding officer or Commission finds is required in the public interest to dispose of the proceeding. In an enforcement proceeding under subpart B of this part, the presiding officer shall accord due weight to the position of the NRC staff when reviewing the settlement. If approved, the terms of the settlement or compromise must be embodied in a decision or order. Settlements approved by a presiding officer are subject to the Commission's review in accordance with § 2.341.

§ 2.339 Expedited decisionmaking procedure.

[Top of File]

(a) The presiding officer may determine a proceeding by an order after the conclusion of a hearing without issuing an initial decision, when:

(1) All parties stipulate that the initial decision may be omitted and waive their rights to file a petition for review, to request oral argument, and to seek judicial review;

(2) No unresolved substantial issue of fact, law, or discretion remains, and the record clearly warrants granting the relief requested; and

(3) The presiding officer finds that dispensing with the issuance of the initial decision is in the public interest.

(b) An order entered under paragraph (a) of this section is subject to review by the Commission on its own motion within forty (40) days

after its date.

(c) An initial decision may be made effective immediately, subject to review by the Commission on its own motion within thirty (30) days after its date, except as otherwise provided in this chapter, when:

(1) All parties stipulate that the initial decision may be made effective immediately and waive their rights to file a petition for review, to request oral argument, and to seek judicial review;

(2) No unresolved substantial issue of fact, law, or discretion remains and the record clearly warrants granting the relief requested; and

(3) The presiding officer finds that it is in the public interest to make the initial decision effective immediately.

(d) The provisions of this section do not apply to an initial decision directing the issuance of a limited work authorization under 10 CFR 50.10, an early site permit under subpart A of part 52 of this chapter, a construction permit or construction authorization, a combined license under subpart C of part 52 of this chapter, or a manufacturing license under subpart F of part 52.

[72 FR 49475, Aug. 28, 2007]

§ 2.340 Initial decision in certain contested proceedings; immediate effectiveness of initial decisions; issuance of authorizations, permits and licenses.

[Top of File]

(a) *Initial decision—production or utilization facility operating license*. In any initial decision in a contested proceeding on an application for an operating license (including an amendment to or renewal of an operating license) for a production or utilization facility, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding, any matter designated by the Commission to be decided by the presiding officer, and any matter not put into controversy by the parties, but only to the extent that the presiding officer determines that a serious safety, environmental, or common defense and security matter exists, and the Commission approves of an examination of and decision on the matter upon its referral by the presiding officer. Depending on the resolution of those matters, the Commission, the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, after making the requisite findings, will issue, deny or appropriately condition the license.

(b) *Initial decision—combined license under 10 CFR part 52*. In any initial decision in a contested proceeding on an application for a combined license (including an amendment to or renewal of a combined license) under subpart C of part 52 of this chapter, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding, and any matter designated by the Commission to be decided by the presiding officer. Depending on the resolution of those matters, the Commission, the Director of New Reactors, or the Director of Nuclear Reactor Regulation, as appropriate, after making the requisite findings, will issue, deny or appropriately condition the license.

(c) *Initial decision on finding under 10 CFR 52.103 with respect to acceptance criteria in nuclear power reactor combined licenses*. In any initial decision under § 52.103(g) of this chapter with respect to whether acceptance criteria have been or will be met, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding, and on any matters designated by the Commission to be decided by the presiding officer. Matters not put into controversy by the parties shall be referred to the Commission for its determination. The Commission may, in its discretion, treat the matter as a request for action under § 2.206 and process the matter in accordance with § 52.103(f) of this chapter. Depending on the resolution of those matters, the Commission, the Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate, will make the finding under § 52.103 of this chapter, or appropriately condition that finding.

(d) *Initial decision—manufacturing license under 10 CFR part 52*. In any initial decision in a contested proceeding on an application for a manufactured license (including an amendment to or renewal of a combined license) under subpart C of part 52 of this chapter, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding, and any matter designated by the Commission to be decided by the presiding officer. Depending on the resolution of those matters, the Commission, the Director of New Reactors, or the Director of Nuclear Reactor Regulation, as appropriate, after making the requisite findings, will issue, deny, or appropriately condition the manufacturing license.

(e) *Initial decision—other proceedings not involving production or utilization facilities*. In proceedings not involving production or utilization facilities, the presiding officer shall make findings of fact and conclusions of law on the matters put into controversy by the parties to the proceeding, and on any matters designated by the Commission to be decided by the presiding officer. Matters not put into controversy by the parties must be referred to the Director of Nuclear Material Safety and Safeguards, or the Director of the Office of Federal and State Materials and Environmental Management Programs, as appropriate. Depending on the resolution of those matters, the Director of Nuclear Material Safety and Safeguards or the Director of the Office of Federal and State Materials and Environmental Management Programs, as appropriate, after making the requisite findings, will issue, deny, revoke or appropriately condition the license, or take other action as necessary or appropriate.

(f) *Immediate effectiveness of certain decisions*. An initial decision directing the issuance or amendment of a limited work authorization under 10 CFR 50.10, an early site permit under subpart A of part 52 of this chapter, a construction permit or construction authorization under part 50 of this chapter, an operating license under part 50 of this chapter, a combined license under subpart C of part 52 of this chapter, a manufacturing license under subpart F of part 52 of this chapter, or a license under 10 CFR

part 72 to store spent fuel in an independent spent fuel storage facility (ISFSI) or a monitored retrievable storage installation (MRS), an initial decision directing issuance of a license under part 61 of this chapter, or an initial decision under 10 CFR 52.103(g) that acceptance criteria in a combined license have been met, is immediately effective upon issuance unless the presiding officer finds that good cause has been shown by a party why the initial decision should not become immediately effective.

(g)–(h) [Reserved]

(i) *Issuance of authorizations, permits, and licenses—production and utilization facilities.* The Commission, the Director of New Reactors, or the Director of Nuclear Reactor Regulation, as appropriate, shall issue a limited work authorization under 10 CFR 50.10, an early site permit under subpart A of part 52 of this chapter, a construction permit or construction authorization under part 50 of this chapter, an operating license under part 50 of this chapter, a combined license under subpart C of part 52 of this chapter, or a manufacturing license under subpart F of part 52 of this chapter within 10 days from the date of issuance of the initial decision:

(1) If the Commission or the appropriate Director has made all findings necessary for issuance of the authorization, permit or license, not within the scope of the initial decision of the presiding officer; and

(2) Notwithstanding the pendency of a petition for reconsideration under § 2.345, a petition for review under § 2.341, or a motion for stay under § 2.342, or the filing of a petition under § 2.206.

(j) *Issuance of finding on acceptance criteria under 10 CFR 52.103.* The Commission, the Director of New Reactors, or the Director of Nuclear Reactor Regulation, as appropriate, shall make the finding under 10 CFR 52.103(g) that acceptance criteria in a combined license have been, or will be met, within 10 days from the date of issuance of the initial decision:

(1) If the Commission or the appropriate Director has made the finding under § 52.103(g) that acceptance criteria have been, or will be met, for those acceptance criteria which are not within the scope of the initial decision of the presiding officer; and

(2) Notwithstanding the pendency of a petition for reconsideration under § 2.345, a petition for review under § 2.341, or a motion for stay under § 2.342, or the filing of a petition under § 2.206.

(k) *Issuance of other licenses.* The Commission or the Director of Nuclear Material Safety and Safeguards, or the Director of the Office of Federal and State Materials and Environmental Management Programs, as appropriate, shall issue a license, including a license under 10 CFR part 72 to store spent fuel in either an independent spent fuel storage facility (ISFSI) located away from a reactor site or at a monitored retrievable storage installation (MRS), within 10 days from the date of issuance of the initial decision:

(1) If the Commission or the appropriate Director has made all findings necessary for issuance of the license, not within the scope of the initial decision of the presiding officer; and

(2) Notwithstanding the pendency of a petition for reconsideration under § 2.345, a petition for review under § 2.341, or a motion for stay under § 2.342, or the filing of a petition under § 2.206.

[72 FR 49475, Aug. 28, 2007; 73 FR 5717, Jan. 31, 2008]

§ 2.341 Review of decisions and actions of a presiding officer.

[Top of File]

(a)(1) Except for requests for review or appeals under § 2.311 or in a proceeding on the high-level radioactive waste repository (which are governed by § 2.1015), review of decisions and actions of a presiding officer are treated under this section, provided, however, that no party may request a further Commission review of a Commission determination to allow a period of interim operation under 10 CFR 52.103(c).

(2) Within forty (40) days after the date of a decision or action by a presiding officer, or within forty (40) days after a petition for review of the decision or action has been served under paragraph (b) of this section, whichever is greater, the Commission may review the decision or action on its own motion, unless the Commission, in its discretion, extends the time for its review.

(b)(1) Within fifteen (15) days after service of a full or partial initial decision by a presiding officer, and within fifteen (15) days after service of any other decision or action by a presiding officer with respect to which a petition for review is authorized by this part, a party may file a petition for review with the Commission on the grounds specified in paragraph (b)(4) of this section. Unless otherwise authorized by law, a party to an NRC proceeding must file a petition for Commission review before seeking judicial review of an agency action.

(2) A petition for review under this paragraph may not be longer than twenty-five (25) pages, and must contain the following:

(i) A concise summary of the decision or action of which review is sought;

(ii) A statement (including record citation) where the matters of fact or law raised in the petition for review were previously raised before the presiding officer and, if they were not, why they could not have been raised;

(iii) A concise statement why in the petitioner's view the decision or action is erroneous; and

(iv) A concise statement why Commission review should be exercised.

(3) Any other party to the proceeding may, within ten (10) days after service of a petition for review, file an answer supporting or opposing Commission review. This answer may not be longer than twenty-five (25) pages and should concisely address the matters in paragraph (b)(2) of this section to the extent appropriate. The petitioning party may file a reply brief within five (5) days of service of any answer. This reply brief may not be longer than five (5) pages.

(4) The petition for review may be granted in the discretion of the Commission, giving due weight to the existence of a substantial question with respect to the following considerations:

(i) A finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;

(ii) A necessary legal conclusion is without governing precedent or is a departure from or contrary to established law;

(iii) A substantial and important question of law, policy, or discretion has been raised;

(iv) The conduct of the proceeding involved a prejudicial procedural error; or

(v) Any other consideration which the Commission may deem to be in the public interest.

(5) A petition for review will not be granted to the extent that it relies on matters that could have been but were not raised before the presiding officer. A matter raised sua sponte by a presiding officer has been raised before the presiding officer for the purpose of this section.

(6) A petition for review will not be granted as to issues raised before the presiding officer on a pending motion for reconsideration.

(c) (1) If a petition for review is granted, the Commission will issue an order specifying the issues to be reviewed and designating the parties to the review proceeding. The Commission may, in its discretion, decide the matter on the basis of the petition for review or it may specify whether any briefs may be filed.

(2) Unless the Commission orders otherwise, any briefs on review may not exceed thirty (30) pages in length, exclusive of pages containing the table of contents, table of citations, and any addendum containing appropriate exhibits, statutes, or regulations. A brief in excess of ten (10) pages must contain a table of contents with page references and a table of cases (alphabetically arranged), cited statutes, regulations and other authorities, with references to the pages of the brief where they are cited.

(d) Petitions for reconsideration of Commission decisions granting or denying review in whole or in part will not be entertained. A petition for reconsideration of a Commission decision after review may be filed within ten (10) days, but is not necessary for exhaustion of administrative remedies. However, if a petition for reconsideration is filed, the Commission decision is not final until the petition is decided. Any petition for reconsideration will be evaluated against the standard in § 2.323(e).

(e) Neither the filing nor the granting of a petition under this section stays the effect of the decision or action of the presiding officer, unless the Commission orders otherwise.

(f) Interlocutory review. (1) A question certified to the Commission under § 2.319(l), or a ruling referred or issue certified to the Commission under § 2.323(f), will be reviewed if the certification or referral raises significant and novel legal or policy issues, and resolution of the issues would materially advance the orderly disposition of the proceeding.

(2) The Commission may, in its discretion, grant interlocutory review at the request of a party despite the absence of a referral or certification by the presiding officer. A petition and answer to it must be filed within the times and in the form prescribed in paragraph (b) of this section and must be treated in accordance with the general provisions of this section. The petition for interlocutory review will be granted only if the party demonstrates that the issue for which the party seeks interlocutory review:

(i) Threatens the party adversely affected by it with immediate and serious irreparable impact which, as a practical matter, could not be alleviated through a petition for review of the presiding officer's final decision; or

(ii) Affects the basic structure of the proceeding in a pervasive or unusual manner.

[72 FR 49476, Aug. 28, 2007]

§ 2.342 Stays of decisions.

[Top of File]

(a) Within ten (10) days after service of a decision or action of a presiding officer, any party to the proceeding may file an application for a stay of the effectiveness of the decision or action pending filing of and a decision on a petition for review. This application may be filed with the Commission or the presiding officer, but not both at the same time.

(b) An application for a stay may be no longer than ten (10) pages, exclusive of affidavits, and must contain the following:

(1) A concise summary of the decision or action which is requested to be stayed;

(2) A concise statement of the grounds for stay, with reference to the factors specified in paragraph (e) of this section; and

(3) To the extent that an application for a stay relies on facts subject to dispute, appropriate references to the record or affidavits by knowledgeable persons.

(c) Service of an application for a stay on the other parties must be by the same method, e.g., electronic or facsimile transmission, mail, as the method for filing the application with the Commission or the presiding officer.

(d) Within ten (10) days after service of an application for a stay under this section, any party may file an answer supporting or opposing the granting of a stay. This answer may not be longer than ten (10) pages, exclusive of affidavits, and should concisely address the matters in paragraph (b) of this section to the extent appropriate. Further replies to answers will not be entertained. Filing of and service of an answer on the other parties must be by the same method, e.g., electronic or facsimile transmission, mail, as the method for filing the application for the stay.

(e) In determining whether to grant or deny an application for a stay, the Commission or presiding officer will consider:

(1) Whether the moving party has made a strong showing that it is likely to prevail on the merits;

(2) Whether the party will be irreparably injured unless a stay is granted;

(3) Whether the granting of a stay would harm other parties; and

(4) Where the public interest lies.

(f) In extraordinary cases, where prompt application is made under this section, the Commission or presiding officer may grant a temporary stay to preserve the status quo without waiting for filing of any answer. The application may be made orally provided the application is promptly confirmed by electronic or facsimile transmission message. Any party applying under this paragraph shall make all reasonable efforts to inform the other parties of the application, orally if made orally.

§ 2.343 Oral argument.

[Top of File]

In its discretion, the Commission may allow oral argument upon the request of a party made in a petition for review, brief on review, or upon its own initiative.

§ 2.344 Final decision.

[Top of File]

(a) The Commission will ordinarily consider the whole record on review, but may limit the issues to be reviewed to those identified in an order taking review.

(b) The Commission may adopt, modify, or set aside the findings, conclusions and order in the initial decision, and will state the basis of its action. The final decision will be in writing and will include:

(1) A statement of findings and conclusions, with the basis for them on all material issues of fact, law or discretion presented;

(2) All facts officially noticed;

(3) The ruling on each material issue; and

(4) The appropriate ruling, order, or denial of relief, with the effective date.

§ 2.345 Petition for reconsideration.

[Top of File]

(a)(1) Any petition for reconsideration of a final decision must be filed by a party within ten (10) days after the date of the decision.

(2) Petitions for reconsideration of Commission decisions are subject to the requirements in § 2.341(d).

(b) A petition for reconsideration must demonstrate a compelling circumstance, such as the existence of a clear and material error in a decision, which could not have been reasonably anticipated, which renders the decision invalid. The petition must state the relief sought. Within ten (10) days after a petition for reconsideration has been served, any other party may file an answer in opposition to or in support of the petition.

(c) Neither the filing nor the granting of the petition stays the decision unless the Commission orders otherwise.

§ 2.346 Authority of the Secretary.

[Top of File]

When briefs, motions or other documents are submitted to the Commission itself, as opposed to officers who have been delegated authority to act for the Commission, the Secretary or the Assistant Secretary is authorized to:

(a) Prescribe procedures for the filing of briefs, motions, or other pleadings, when the schedules differ from those prescribed by the rules of this part or when the rules of this part do not prescribe a schedule;

(b) Rule on motions for extensions of time;

(c) Reject motions, briefs, pleadings, and other documents filed with the Commission later then the time prescribed by the Secretary or the Assistant Secretary or established by an order, rule or regulation of the Commission unless good cause is shown for the late filing;

(d) Prescribe all procedural arrangements relating to any oral argument to be held before the Commission;

(e) Extend the time for the Commission to rule on a petition for review under §§ 2.311 and 2.341;

(f) Extend the time for the Commission to grant review on its own motion under § 2.341;

(g) Direct pleadings improperly filed before the Commission to the appropriate presiding officer for action;

(h) Deny a request for hearings, where the request fails to comply with the Commission's pleading requirements set forth in this part, and fails to set forth an arguable basis for further proceedings;

(i) Refer to the Atomic Safety and Licensing Board Panel or an Administrative Judge, as appropriate requests for hearing not falling under § 2.104, where the requestor is entitled to further proceedings; and

(j) Take action on minor procedural matters.

[72 FR 49152, Aug. 28, 2007]

§ 2.347 Ex parte communications.

[Top of File]

In any proceeding under this subpart--

(a)(1) Interested persons outside the agency may not make or knowingly cause to be made to any Commission adjudicatory employee, any ex parte communication relevant to the merits of the proceeding.

(2) For purposes of this section, *merits of the proceeding* includes:

(i) A disputed issue;

(ii) A matter which a presiding officer seeks to be referred to the Commission under 10 CFR 2.340(a); and

(iii) A matter for which the Commission has approved examination by the presiding officer under § 2.340(a).

(b) Commission adjudicatory employees may not request or entertain from any interested person outside the agency or make or knowingly cause to be made to any interested person outside the agency, any *ex parte* communication relevant to the merits of the proceeding.

(c) Any Commission adjudicatory employee who receives, makes, or knowingly causes to be made a communication prohibited by this section shall ensure that it, and any responses to the communication, are promptly served on the parties and placed in the public record of the proceeding. In the case of oral communications, a written summary must be served and placed in the public record of the proceeding.

(d) Upon receipt of a communication knowingly made or knowingly caused to be made by a party in violation of this section, the

Commission or other adjudicatory employee presiding in a proceeding may, to the extent consistent with the interests of justice and the policy of the underlying statutes, require the party to show cause why its claim or interest in the proceeding should not be dismissed, denied, disregarded, or otherwise adversely affected on account of the violation.

(e) (1) The prohibitions of this section apply--

(i) When a notice of hearing or other comparable order is issued in accordance with §§ 2.104(a), 2.105(e)(2), 2.202(c), 2.204, 2.205(e), or 2.312; or

(ii) Whenever the interested person or Commission adjudicatory employee responsible for the communication has knowledge that a notice of hearing or other comparable order will be issued in accordance with §§ 2.104(a), 2.105(e)(2), 2.202(c), 2.204, 2.205(e), or 2.312.

(2) The prohibitions of this section cease to apply to *ex parte* communications relevant to the merits of a full or partial initial decision when, in accordance with § 2.341, the time has expired for Commission review of the decision.

(f) The prohibitions in this section do not apply to--

(1) Requests for and the provision of status reports;

(2) Communications specifically permitted by statute or regulation;

(3) Communications made to or by Commission adjudicatory employees in the Office of the General Counsel regarding matters pending before a court or another agency; and

(4) Communications regarding generic issues involving public health and safety or other statutory responsibilities of the agency (*e.g.*, rulemakings, congressional hearings on legislation, budgetary planning) not associated with the resolution of any proceeding under this subpart pending before the NRC.

(5) Communications, in contested proceedings and uncontested mandatory proceeding, regarding an undisputed issue.

[72 FR 49476, Aug. 28, 2007]

§ 2.348 Separation of functions.

[Top of File]

(a) In any proceeding under this part, any NRC officer or employee engaged in the performance of any investigative or litigating function in the proceeding or in a factually related proceeding with respect to a disputed issue in that proceeding, may not participate in or advise a Commission adjudicatory employee about the initial or final decision with respect to that disputed issue, except—

(1) As witness or counsel in the proceeding;

(2) Through a written communication served on all parties and made on-the-record of the proceeding; or

(3) Through an oral communication made both with reasonable prior notice to all parties and with reasonable opportunity for all parties to respond.

(b) The prohibition in paragraph (a) of this section does not apply to--

(1) Communications to or from any Commission adjudicatory employee regarding--

(i) The status of a proceeding;

(ii) Matters for which the communications are specifically permitted by statute or regulation;

(iii) NRC participation in matters pending before a court or another agency; or

(iv) Generic issues involving public health and safety or other statutory responsibilities of the NRC (e.g., rulemakings, congressional hearings on legislation, budgetary planning) not associated with the resolution of any proceeding under this subpart pending before the NRC.

(2) Communications to or from Commissioners, members of their personal staffs, Commission adjudicatory employees in the Office of the General Counsel, and the Secretary and employees of the Office of the Secretary, regarding--

(i) Initiation or direction of an investigation or initiation of an enforcement proceeding;

(ii) Supervision of NRC staff to ensure compliance with the general policies and procedures of the agency;

(iii) NRC staff priorities and schedules or the allocation of agency resources; or

(iv) General regulatory, scientific, or engineering principles that are useful for an understanding of the issues in a proceeding and are not contested in the proceeding.

(3) None of the communications permitted by paragraph (b)(2) (i) through (iii) of this section is to be associated by the Commission adjudicatory employee or the NRC officer or employee performing investigative or litigating functions with the resolution of any proceeding under this subpart pending before the NRC.

(c) Any Commission adjudicatory employee who receives a communication prohibited under paragraph (a) of this section shall ensure that it, and any responses to the communication, are placed in the public record of the proceeding and served on the parties. In the case of oral communications, a written summary must be served and placed in the public record of the proceeding.

(d)(1) The prohibitions in this section apply--

(i) When a notice of hearing or other comparable order is issued in accordance with §§ 2.104(a), 2.105(e)(2), 2.202(c), 2.204, 2.205(e), or 2.312; or

(ii) Whenever an NRC officer or employee who is or has reasonable cause to believe he or she will be engaged in the performance of an investigative or litigating function or a Commission adjudicatory employee has knowledge that a notice of hearing or other comparable order will be issued in accordance with §§ 2.104(a), 2.105(e)(2), 2.202(c), 2.204, 2.205(e), or 2.312.

(iii) A matter which a presiding officer seeks to be referred to the Commission under 10 CFR 2.340(a); and

(iv) A matter for which the Commission has approved examination by the presiding officer under § 2.340(a).

(2) The prohibitions of this section cease to apply to the disputed issues pertinent to a full or partial initial decision when the time has expired for Commission review of the decision in accordance with § 2.341.

(3) Separation of functions does not apply to uncontested proceedings, or to an undisputed issue in contested initial licensing proceedings.

(e) Communications to, from, and between Commission adjudicatory employees not prohibited by this section may not serve as a conduit for a communication that otherwise would be prohibited by this section or for an ex parte communication that otherwise would be prohibited by § 2.347.

(f) If an initial or final decision is stated to rest in whole or in part on fact or opinion obtained as a result of a communication authorized by this section, the substance of the communication must be specified in the record of the proceeding and every party must be afforded an opportunity to controvert the fact or opinion. If the parties have not had an opportunity to controvert the fact or opinion before the decision is filed, a party may controvert the fact or opinion by filing a petition for review of an initial decision, or a petition for reconsideration of a final decision that clearly and concisely sets forth the information or argument relied on to show the contrary. If appropriate, a party may be afforded the opportunity for cross-examination or to present rebuttal evidence.

[72 FR 49477, Aug. 28, 2007]

§ 2.390 Public inspections, exemptions, requests for withholding.

[Top of File]

(a) Subject to the provisions of paragraphs (b), (d), (e), and (f) of this section, final NRC records and documents, including but not limited to correspondence to and from the NRC regarding the issuance, denial, amendment, transfer, renewal, modification, suspension, revocation, or violation of a license, permit, order, or standard design approval, or regarding a rulemaking proceeding subject to this part shall not, in the absence of an NRC determination of a compelling reason for nondisclosure after a balancing of the interests of the person or agency urging nondisclosure and the public interest in disclosure, be exempt from disclosure and will be made available for inspection and copying at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room, except for matters that are:

(1)(i) Specifically authorized under criteria established by an Executive order to be kept secret in the interest of national defense or foreign policy; and

(ii) Are in fact properly classified under that Executive order;

(2) Related solely to the internal personnel rules and practices of the Commission;

(3) Specifically exempted from disclosure by statute (other than 5 U.S.C. 552(b)), but only if that statute requires that the matters be withheld from the public in such a manner as to leave no discretion on the issue, or establishes particular criteria for withholding or refers to particular types or matters to be withheld.

(4) Trade secrets and commercial or financial information obtained from a person and privileged or confidential;

(5) Interagency or intra-agency memorandums or letters which would not be available by law to a party other than an agency in litigation with the Commission;

(6) Personnel and medical files and similar files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy;

(7) Records or information compiled for law enforcement purposes, but only to the extent that the production of such law enforcement records or information:

(i) Could reasonably be expected to interfere with enforcement proceedings;

(ii) Would deprive a person of a right to a fair trial or an impartial adjudication;

(iii) Could reasonably be expected to constitute an unwarranted invasion of personal privacy;

(iv) Could reasonably be expected to disclose the identity of a confidential source, including a State, local, or foreign agency or authority, or any private institution which furnished information on a confidential basis, and, in the case of a record or information compiled by a criminal law enforcement authority in the course of a criminal investigation, or by an agency conducting a lawful national security intelligence investigation, information furnished by a confidential source;

(v) Would disclose techniques and procedures for law enforcement investigations or prosecutions, or would disclose guidelines for law enforcement investigations or prosecutions if such disclosure could reasonably be expected to risk circumvention of the law; or

(vi) Could reasonably be expected to endanger the life or physical safety of any individual;

(8) Contained in or related to examination, operating, or condition reports prepared by, on behalf of, or for the use of an agency responsible for the regulation or supervision of financial institutions; or

(9) Geological and geophysical information and data, including maps, concerning wells.

(b) The procedures in this section must be followed by anyone submitting a document to the NRC who seeks to have the document, or a portion of it, withheld from public disclosure because it contains trade secrets, privileged, or confidential commercial or financial information.

(1) The submitter shall request withholding at the time the document is submitted and shall comply with the document marking and affidavit requirements set forth in this paragraph. The NRC has no obligation to review documents not so marked to determine whether they contain information eligible for withholding under paragraph (a) of this section. Any documents not so marked may be made available to the public at the NRC Web site, *http://www.nrc.gov* or at the NRC Public Document Room.

(i) The submitter shall ensure that the document containing information sought to be withheld is marked as follows:

(A) The top of the first page of the document and the top of each page containing such information must be marked with language substantially similar to: "confidential information submitted under 10 CFR 2.390"; "withhold from public disclosure under 10 CFR 2.390"; or "proprietary" to indicate it contains information the submitter seeks to have withheld.

(B) Each document, or page, as appropriate, containing information sought to be withheld from public disclosure must indicate, adjacent to the information, or at the top if the entire page is affected, the basis (*i.e.*, trade secret, personal privacy, *etc.*) for proposing that the information be withheld from public disclosure under paragraph (a) of this section.

(ii) The Commission may waive the affidavit requirements on request, or on its own initiative, in circumstances the Commission, in its discretion, deems appropriate. Otherwise, except for personal privacy information, which is not subject to the affidavit requirement, the request for withholding must be accompanied by an affidavit that--

(A) Identifies the document or part sought to be withheld;

(B) Identifies the official position of the person making the affidavit;

(C) Declares the basis for proposing the information be withheld, encompassing considerations set forth in § 2.390(a);

(D) Includes a specific statement of the harm that would result if the information sought to be withheld is disclosed to the public; and

(E) Indicates the location(s) in the document of all information sought to be withheld.

(iii) In addition, an affidavit accompanying a withholding request based on paragraph (a)(4) of this section must contain a full statement of the reason for claiming the information should be withheld from public disclosure. This statement must address with specificity the considerations listed in paragraph (b)(4) of this section. In the case of an affidavit submitted by a company, the affidavit shall be executed by an officer or upper-level management official who has been specifically delegated the function of reviewing the information sought to be withheld and authorized to apply for its withholding on behalf of the company. The affidavit shall be executed by the owner of the

information, even though the information sought to be withheld is submitted to the Commission by another person. The application and affidavit shall be submitted at the time of filing the information sought to be withheld. The information sought to be withheld shall be incorporated, as far as possible, into a separate document. The affiant must designate with appropriate markings information submitted in the affidavit as a trade secret, or confidential or privileged commercial or financial information within the meaning of § 9.17(a)(4) of this chapter, and such information shall be subject to disclosure only in accordance with the provisions of § 9.19 of this chapter.

(2) A person who submits commercial or financial information believed to be privileged or confidential or a trade secret shall be on notice that it is the policy of the Commission to achieve an effective balance between legitimate concerns for protection of competitive positions and the right of the public to be fully apprised as to the basis for and effects of licensing or rulemaking actions, and that it is within the discretion of the Commission to withhold such information from public disclosure.

(3) The Commission shall determine whether information sought to be withheld from public disclosure under this paragraph:

(i) Is a trade secret or confidential or privileged commercial or financial information; and (ii) If so, should be withheld from public disclosure.

(4) In making the determination required by paragraph (b)(3)(i) of this section, the Commission will consider:

(i) Whether the information has been held in confidence by its owner;

(ii) Whether the information is of a type customarily held in confidence by its owner and, except for voluntarily submitted information, whether there is a rational basis therefor;

(iii) Whether the information was transmitted to and received by the Commission in confidence;

(iv) Whether the information is available in public sources;

(v) Whether public disclosure of the information sought to be withheld is likely to cause substantial harm to the competitive position of the owner of the information, taking into account the value of the information to the owner; the amount of effort or money, if any, expended by the owner in developing the information; and the ease or difficulty with which the information could be properly acquired or duplicated by others.

(5) If the Commission determines, under paragraph (b)(4) of this section, that the record or document contains trade secrets or privileged or confidential commercial or financial information, the Commission will then determine whether the right of the public to be fully apprised as to the bases for and effects of the proposed action outweighs the demonstrated concern for protection of a competitive position, and whether the information should be withheld from public disclosure under this paragraph. If the record or document for which withholding is sought is deemed by the Commission to be irrelevant or unnecessary to the performance of its functions, it will be returned to the applicant.

(6) Withholding from public inspection does not affect the right, if any, of persons properly and directly concerned to inspect the document. Either before a decision of the Commission on the matter of whether the information should be made publicly available or after a decision has been made that the information should be withheld from public disclosure, the Commission may require information claimed to be a trade secret or privileged or confidential commercial or financial information to be subject to inspection under a protective agreement by contractor personnel or government officials other than NRC officials, by the presiding officer in a proceeding, and under protective order by the parties to a proceeding. In camera sessions of hearings may be held when the information sought to be withheld is produced or offered in evidence. If the Commission subsequently determines that the information should be disclosed, the information and the transcript of such in camera session will be made publicly available.

(c) The Commission either may grant or deny a request for withholding under this section.

(1) If the request is granted, the Commission will notify the submitter of its determination to withhold the information from public disclosure.

(2) If the Commission denies a request for withholding under this section, it will provide the submitter with a statement of reasons for that determination. This decision will specify the date, which will be a reasonable time thereafter, when the document will be available at the NRC Web site, *http://www.nrc.gov*. The document will not be returned to the submitter.

(3) Whenever a submitter desires to withdraw a document from Commission consideration, it may request return of the document, and the document will be returned unless the information--

(i) Forms part of the basis of an official agency decision, including but not limited to, a rulemaking proceeding or licensing activity;

(ii) Is contained in a document that was made available to or prepared for an NRC advisory committee;

(iii) Was revealed, or relied upon, in an open Commission meeting held in accordance with 10 CFR part 9, subpart C;

(iv) Has been requested in a Freedom of Information Act request; or

(v) Has been obtained during the course of an investigation conducted by the NRC Office of Investigations.

(d) The following information is considered commercial or financial information within the meaning of § 9.17(a)(4) of this chapter and is

subject to disclosure only in accordance with the provisions of § 9.19 of this chapter.

(1) Correspondence and reports to or from the NRC which contain information or records concerning a licensee's or applicant's physical protection, classified matter protection, or material control and accounting program for special nuclear material not otherwise designated as Safeguards Information or classified as National Security Information or Restricted Data.

(2) Information submitted in confidence to the Commission by a foreign source.

(e) Submitting information to NRC for consideration in connection with NRC licensing or regulatory activities shall be deemed to constitute authority for the NRC to reproduce and distribute sufficient copies to carry out the Commission's official responsibilities.

(f) The presiding officer, if any, or the Commission may, with reference to the NRC records and documents made available pursuant to this section, issue orders consistent with the provisions of this section and § 2.705(c).

[72 FR 49477, Aug. 28, 2007; 72 FR 49152, Aug. 28, 2007]

[1] Such records and documents do not include handwritten notes and drafts.

Subpart D—Additional Procedures Applicable to Proceedings for the Issuance of Licenses To Construct and/or Operate Nuclear Power Plants of Identical Design at Multiple Sites

[Top of File]

Source: 40 FR 2976, Jan. 17, 1975, unless otherwise noted

§ 2.400 Scope of subpart.

This subpart describes procedures applicable to licensing proceedings which involve the consideration in hearings of a number of applications, filed by one or more applicants pursuant to appendix N of parts 50 or 52 of this chapter, for licenses to construct and/or operate nuclear power reactors of identical design to be located at multiple sites.

[40 FR 2976, Jan. 17, 1975, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49477, Aug. 28, 2007]

§ 2.401 Notice of hearing on construction permit or combined license applications pursuant to appendix N of 10 CFR parts 50 or 52.

[Top of File]

(a) In the case of applications pursuant to appendix N of part 50 of this chapter for construction permits for nuclear power reactors of the type described in § 50.22 of this chapter, or applications pursuant to appendix N of part 52 of this chapter for combined licenses, the Secretary will issue notices of hearing pursuant to § 2.104.

(b) The notice of hearing will also state the time and place of the hearings on any separate phase of the proceeding.

[40 FR 2976, Jan. 17, 1975, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49477, Aug. 28, 2007]

§ 2.402 Separate hearings on separate issues; consolidation of proceedings.

[Top of File]

(a) In the case of applications under appendix N of part 50 of this chapter for construction permits for nuclear power reactors of a type described in 10 CFR 50.22, or applications pursuant to appendix N of part 52 of this chapter for combined licenses, the Commission or the presiding officer may order separate hearings on particular phases of the proceeding, such as matters related to the acceptability of the design of the reactor, in the context of the site parameters postulated for the design or environmental matters.

(b) If a separate hearing is held on a particular phase of the proceeding, the Commission or presiding officers of each affected proceeding may, under 10 CFR 2.317, consolidate for hearing on that phase two or more proceedings to consider common issues relating to the applications involved in the proceedings, if it finds that this action will be conducive to the proper dispatch of its business and to the ends of justice. In specifying the place of this consolidated hearing, due regard will be given to the convenience and necessity of the parties, petitioners for leave to intervene, or the attorneys or representatives of such persons, and the public interest.

[40 FR 2976, Jan. 17, 1975, as amended at 43 FR 17801, Apr. 26, 1978; 54 FR 15398, Apr. 18, 1989; 69 FR 2256, Jan 14, 2004; 70 FR 61887, Oct. 27, 2005; 72 FR 49477, Aug. 28, 2007]

§ 2.403 Notice of proposed action on applications for operating licenses pursuant to appendix N of 10 CFR part 50.

[Top of File]

In the case of applications pursuant to appendix N of part 50 of this chapter for operating licenses for nuclear power reactors, if the Commission has not found that a hearing is in the public interest, the Commission, the Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate will, prior to acting thereon, cause to be published in the **Federal Register**, pursuant to § 2.105, a notice of proposed action with respect to each application as soon as practicable after the applications have been docketed.

[40 FR 2976, Jan. 17, 1975, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49477, Aug. 28, 2007; 73 FR 5717, Jan. 31, 2008]

§ 2.404 Hearings on applications for operating licenses pursuant to appendix N of 10 CFR part 50.

[Top of File]

If a request for a hearing and/or petition for leave to intervene is filed within the time prescribed in the notice of proposed action on an application for an operating license pursuant to appendix N of part 50 of this chapter with respect to a specific reactor(s) at a specific site, and the Commission, the Chief Administrative Judge, or a presiding officer has issued a notice of hearing or other appropriate order, then the Commission, the Chief Administrative Judge, or the presiding officer may order separate hearings on particular phases of the proceeding and/or consolidate for hearing two or more proceedings in the manner described in § 2.402.

[40 FR 2976, Jan. 17, 1975, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49477, Aug. 28, 2007]

§ 2.405 Initial decisions in consolidated hearings.

[Top of File]

At the conclusion of a hearing held under this subpart, the presiding officer will render a partial initial decision on the common design. The partial initial decision on the common design may be appealed under § 2.341. If the proceedings have also been consolidated with respect to matters other than the common design under § 2.317(b), the presiding officer may issue a consolidated partial initial decision for those proceedings. No construction permit, full-power operating license, or combined license under part 52 of this chapter will be issued until an initial decision has been issued on all phases of the hearing and all issues under the Act and the National Environmental Policy Act of 1969 appropriate to the proceeding have been resolved.

[69 FR 2256, Jan 14, 2004; 72 FR 49478, Aug. 28, 2007]

§ 2.406 Finality of decisions on separate issues.

[Top of File]

Notwithstanding any other provision of this chapter, in a proceeding conducted pursuant to this subpart and appendices N of parts 50 or 52 of this chapter, no matter which has been reserved for consideration in one phase of the hearing shall be considered at another phase of the hearing except on the basis of significant new information that substantially affects the conclusion(s) reached at the other phase or other good cause.

[40 FR 2976, Jan. 17, 1975, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49478, Aug. 28, 2007]

§ 2.407 Applicability of other sections.

[Top of File]

The provisions of subparts A, C, G, L, and N of this part relating to construction permits, operating licenses, and combined licenses apply, respectively, to construction permits, operating licenses, and combined licenses subject to this subpart, except as may be qualified by the provisions of this subpart.

[72 FR 49478, Aug. 28, 2007]

Subpart E--Additional Procedures Applicable to Proceedings for the Issuance of Licenses To Manufacture Nuclear Power Reactors to be Operated at Sites Not Identified in the License Application and Related Licensing Proceedings

[Top of File]

Source: 38 FR 30252, Nov. 2, 1973, unless otherwise noted.

§ 2.500 Scope of subpart.

This subpart prescribes procedures applicable to licensing proceedings which involve the consideration in separate hearings of an application for a license to manufacture nuclear power reactors under subpart F of part 52 of this chapter.

[40 FR 2976, Jan. 17, 1975, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49478, Aug. 28, 2007]

§ 2.501 Notice of hearing on application under subpart F of 10 CFR part 52 for a license to manufacture nuclear power reactors.

[Top of File]

(a) In the case of an application under subpart F of part 52 of this chapter for a license to manufacture nuclear power reactors of the type described in § 50.22 of this chapter to be operated at sites not identified in the license application, the Secretary will issue a notice of hearing to be published in the **Federal Register** at least 30 days before the date set for hearing in the notice.[1] The notice shall be issued as soon as practicable after the application has been docketed. The notice will state:

(1) The time, place, and nature of the hearing and/or the prehearing conference;

(2) The authority within which the hearing is to be held;

(3) The matters of fact and law to be considered; and

(4) The time within which answers to the notice shall be filed.

(b) The notice of hearing shall comply with the requirements of § 2.104(f) of this chapter.

(1) That, if the proceeding is a contested proceeding, the presiding officer will consider the following issues:[2]

(i) Whether the applicant has described the proposed design of, and the site parameters postulated for, the reactor(s), including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public;

(ii) Whether such further technical or design information as may be required to complete the design report and which can reasonably be left for later consideration, will be supplied in a supplement to the design report;

(iii) Whether safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted a research and development program reasonably designed to resolve any safety questions associated with such features or components;

(iv) Whether on the basis of the foregoing, there is reasonable assurance that (A) such safety questions will be satisfactorily resolved before any of the proposed nuclear power reactors are removed from the manufacturing site, and (B) taking into consideration the site criteria contained in part 100 of this chapter, the proposed reactor(s) can be constructed and operated at sites having characteristics that fall within the site parameters postulated for the design of the reactor(s) without undue risk to the health and safety of the public;

(v) Whether the applicant is technically and financially qualified to design and manufacture the proposed reactor(s);

(vi) Whether the issuance of a license for manufacture of the reactor(s) will be inimical to the common defense and security or to the health and safety of the public; and

(vii) Whether, in accordance with the requirements of subpart A of part 51 and appendix M of part 52 of this chapter, the license should be issued as proposed.

(2) That, if the proceeding is not a contested proceeding, the presiding officer will determine (i) without conducting a de novo evaluation of the application, whether the application and the record of the proceeding contain sufficient information, and the review of the application by the Commission's staff has been adequate to support affirmative findings on paragraphs (b)(1) (i) through (v) of this section and a negative finding on paragraph (b)(1)(vi) of this section proposed to be made and the issuance of the license to manufacture proposed by the Director of Nuclear Reactor Regulation, and (ii) whether the review conducted by the Commission pursuant to the National Environmental Policy Act (NEPA) has been adequate.

(3) That, regardless of whether the proceeding is contested or uncontested, the presiding officer will, in accordance with subpart A of part 51 and paragraph 3 of appendix M of part 52 of this chapter,

(i) Determine whether the requirements of section 102(2) (A), (C) and (E) of the National Environmental Policy Act and subpart A of part 51 of this chapter have been complied with in the proceeding;

(ii) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken; and

(iii) Determine whether the manufacturing license should be issued, denied or appropriately conditioned to protect environmental values.

(c) The place of hearing on an application for a manufacturing license will be Washington, DC, or such other location as the Commission deems appropriate.

[38 FR 30252, Nov. 2, 1973, as amended at 39 FR 26279, July 18, 1974; 39 FR 33202, Sept. 16, 1974; 49 FR 9401, Mar. 12, 1984; 54 FR 15398, Apr. 18, 1989; 54 FR 52342, Dec. 21, 1989; 72 FR 49478, Aug. 28, 2007]

1. The thirty-day (30) requirement of this paragraph is not applicable to a notice of the time and place of hearing published by the presiding officer after the notice of hearing described in this section has been published.

2. Issues (i) and (vi) are the issues pursuant to the Atomic Energy Act of 1954, as amended. Issue (vii) is the issue pursuant to the National Environmental Policy Act of 1969.

§ 2.502 [Reserved]

[Top of File]

[40 FR 2976, Jan. 17, 1975, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49478, Aug. 28, 2007]

§ 2.503 [Reserved]

[Top of File]

[72 FR 49478, Aug. 28, 2007]

§ 2.504 [Reserved]

[Top of File]

[72 FR 49478, Aug. 28, 2007]

Subpart F—Additional Procedures Applicable to Early Partial Decisions on Site Suitability Issues in Connection With an Application for a Construction Permit or Combined License To Construct Certain Utilization Facilities; and Advance Issuance of Limited Work Authorizations

[Top of File]

Source: 42 FR 22885, May 5, 1977, unless otherwise noted.

§ 2.600 Scope of subpart.

This subpart prescribes procedures applicable to licensing proceedings which involve an early submittal of site suitability information in accordance with § 2.101(a–1), and a hearing and early partial decision on issues of site suitability, in connection with an application for a permit to construct a utilization facility which is subject to § 51.20(b) of this chapter and is of the type specified in § 50.21(b)(2) or (3) or § 50.22 of this chapter or is a testing facility. This subpart also prescribes procedures applicable to proceedings for a construction permit for a utilization facility which is subject to § 51.20(b) of this chapter and is of the type specified in § 50.21(b)(2) or (3) or § 50.22 of this chapter, or proceedings for a combined license under part 52 of this chapter, either of which includes a request to conduct the activities authorized under § 50.10(d) of part 50 of this chapter in advance of issuance of the construction permit or combined license, and submits an application in accordance with § 2.101(a)(9).

(a) The procedures in §§ 2.601 through 2.609 apply to all applications under this subpart.

(b) The procedures in §§ 2.611 through 2.619 apply to applications for a permit to construct a utilization facility which is subject to § 51.20 (b) of this chapter and is of the type specified in § 50.21(b)(2) or (3) or § 50.22 of this chapter or is a testing facility.

(c) The procedures in §§ 2.621 through 2.629 apply to applications for combined license under part 52 of this chapter for a nuclear power facility.

(d) The procedures in §§ 2.641 through 2.649 apply to phased applications for construction permits or combined licenses which request

limited work authorizations to be issued in advance of issuance of the construction permit or combined license (*i.e.*, a phased application).

[49 FR 9401, Mar. 12, 1984; 72 FR 49478, Aug. 28, 2007; 72 FR 57440, Oct. 9, 2007]

§ 2.601 Applicability of other sections.

[Top of File]

The provisions of subparts A, C, G, L, and N relating to applications for construction permits and combined licenses, and proceedings thereon apply, respectively, to such applications and proceedings in accordance with this subpart, except as specifically provided otherwise by the provisions of this subpart.

[72 FR 49478, Aug. 28, 2007]

Early Partial Decisions on Site Suitability—Construction Permit

[Top of File]

§ 2.602 Filing fees.

Each application which contains a request for early review of site suitability issues under the procedures of this subpart shall be accompanied by any fee required by § 50.30(e) and part 170 of this chapter.

[72 FR 49478, Aug. 28, 2007]

§ 2.603 Acceptance and docketing of application for early review of site suitability issues in a construction permit proceeding.

[Top of File]

(a) Each part of an application for a construction permit submitted in accordance with § 2.101(a–1) of this part will be initially treated as a tendered application. If it is determined that any one of the parts as described in § 2.101(a–1) is incomplete and not acceptable for processing, the Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, will inform the applicant of this determination and the respects in which the document is deficient. Such a determination of completeness will generally be made within a period of 30 days.

(b)(1) The Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, will accept for docketing part one of an application for a construction permit for a utilization facility which is subject to § 51.20 (b) of this chapter and is of the type specified in § 50.21(b)(2) or (3) or § 50.22 of this chapter, or is a testing facility where part one of the application as described in § 2.101(a–1) is complete. Part one of any application will not be considered complete unless it contains proposed findings as required by § 2.101(a–1)(1)(i) and unless it describes the applicant's site selection process, specifies the extent to which that process involves the consideration of alternative sites, explains the relationship between that process and the application for early review of site suitability issues, and briefly describes the applicant's longrange plans for ultimate development of the site. Upon assignment of a docket number, the procedures in § 2.101(a)(3) and (4) relating to formal docketing and the submission and distribution of additional copies of the application shall be followed.

(2) Additional parts of the application will be docketed upon a determination by the Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, that they are complete.

(c) If part one of the application is docketed, the Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, will cause to be published in the **Federal Register** and send to the Governor or other appropriate official of the State in which the site is located, a notice of docketing of the application which states the purpose of the application, states the location of the proposed site, states that a notice of hearing will be published, requests comments within 120 days or such other time as may be specified on the initiation or outcome of an early site review from Federal, State, and local agencies and interested persons.

[42 FR 22885, May 5, 1977, as amended at 49 FR 9401, Mar. 12, 1984; 72 FR 49478, Aug. 28, 2007]

§ 2.604 Notice of hearing on application for early review of site suitability issues in construction permit proceeding.

[Top of File]

(a) Where an applicant for a construction permit requests an early review and hearing and an early partial decision on issues of site suitability pursuant to § 2.101(a–1), the provisions in the notice of hearing setting forth the matters of fact and law to be considered, as required by § 2.104, shall be modified so as to relate only to the site suitability issue or issues under review.

(b) After docketing of part two of the application, as provided in §§ 2.101(a–1) and 2.603, a supplementary notice of hearing will be published under § 2.104 with respect to the remaining unresolved issues in the proceeding within the scope of § 2.104. This supplementary notice of hearing will provide that any person whose interest may be affected by the proceeding and who desires to participate as a party in the resolution of the remaining issues shall file a petition for leave to intervene pursuant to § 2.309 within the time prescribed in the notice. This supplementary notice will also provide appropriate opportunities for participation by a representative of an interested State under § 2.315(c) and for limited appearances under § 2.315(a).

(c) Any person who was permitted to intervene as a party under the initial notice of hearing on site suitability issues and who was not dismissed or did not withdraw as a party may continue to participate as a party to the proceeding with respect to the remaining unresolved issues, provided that within the time prescribed for filing of petitions for leave to intervene in the supplementary notice of hearing, he or she files a notice of his intent to continue as a party, along with a supporting affidavit identifying the specific aspect or aspects of the subject matter of the proceeding as to which he or she wishes to continue to participate as a party and setting forth with particularity the basis for his contentions with regard to each aspect or aspects. A party who files a nontimely notice of intent to continue as a party may be dismissed from the proceeding, absent a determination that the party has made a substantial showing of good cause for failure to file on time, and with particular reference to the factors specified in §§ 2.309(c)(1)(i) through (iv) and 2.309(d). The notice will be ruled upon by the Commission or presiding officer designated to rule on petitions for leave to intervene.

(d) To the maximum extent practicable, the membership of any atomic safety and licensing board designated to preside in the proceeding on the remaining unresolved issues pursuant to the supplemental notice of hearing will be the same as the membership designated to preside in the initial notice of hearing on site suitability issues.

[69 FR 2256, Jan 14, 2004; 72 FR 49479, Aug. 28, 2007]

§ 2.605 Additional considerations.

[Top of File]

(a) The Commission will not conduct more than one review of site suitability issues with regard to a particular site prior to filing and review of part two of the application described in § 2.101(a–1) of this part.

(b) The Commission, upon its own initiative, or upon the motion of any party to the proceeding filed at least 60 days prior to the date of the commencement of the evidentiary hearing on site suitability issues, may decline to initiate an early hearing or render an early partial decision on any issue or issues of site suitability:

(1) In cases where no partial decision on the relative merits of the proposed site and alternative sites under subpart A of part 51 of this chapter is requested, upon determination that there is a reasonable likelihood that further review would identify one or more preferable alternative sites and the partial decision on one or more site suitability issues would lead to an irreversible and irretrievable commitment of resources prior to the submittal of the remainder of the information required by § 50.30(f) of this chapter that would prejudice the later review and decision on such alternative sites; or

(2) In cases where it appears that an early partial decision on any issue or issues of site suitability would not be in the public interest considering:

(i) The degree of likelihood that any early findings on those issues would retain their validity in later reviews;

(ii) The objections, if any, of cognizant State or local government agencies to the conduct of an early review on those issues; and

(iii) The possible effect on the public interest and the parties of having an early, if not necessarily conclusive, resolution of those issues.

[42 FR 22885, May 5, 1977, as amended at 49 FR 9401, Mar. 12, 1984; 72 FR 49479, Aug. 28, 2007]

§ 2.606 Partial decision on site suitability issues in construction permit proceeding.

[Top of File]

(a) The provisions of §§ 2.331, 2.339, 2.340(b), 2.343, 2.712, and 2.713 apply to any partial initial decision rendered in accordance with this subpart. Section 2.340(c) does not apply to any partial initial decision rendered in accordance with this subpart. No construction permit or combined license may be issued without completion of the full review required by Section 102(2) of the NEPA, as amended, and subpart A of part 51 of this chapter. The authority of the Commission to review such a partial initial decision *sua sponte*, or to raise *sua sponte* an issue that has not been raised by the parties, will be exercised within the same time as in the case of a full decision relating to the issuance of a construction permit or combined license.

(b)(1) A partial decision on one or more site suitability issues pursuant to the applicable provisions of part 50, subpart A of part 51, and part 100 of this chapter issued in accordance with this subpart shall:

(i) Clearly identify the site to which the partial decision applies; and

(ii) Indicate to what extent additional information may be needed and additional review may be required to enable the Commission to determine in accordance with the provisions of the Act and the applicable provisions of the regulations in this chapter whether a construction permit for a facility to be located on the site identified in the partial decision should be issued or denied.

(2) Following either the Commission (acting in the function of a presiding officer) issuance of a partial initial decision, or completion of Commission review of the partial initial decision of the Atomic Safety and Licensing Board, after hearing, on the site suitability issues, the partial decision shall remain in effect either for a period of 5 years or, where the applicant for the construction permit has made timely submittal of the information required to support the application as provided in § 2.101(a–1), until the proceeding for a permit to construct a facility on the site identified in the partial decision has been concluded,[3] unless the Commission or Atomic Safety and Licensing Board, upon its own initiative or upon motion by a party to the proceeding, finds that there exists significant new information that substantially affects the earlier conclusions and reopens the hearing record on site suitability issues. Upon good cause shown, the Commission may extend the 5-year period during which a partial decision shall remain in effect for a reasonable period of time not to exceed 1 year.

[42 FR 22885, May 5, 1977, as amended at 49 FR 9401, Mar. 12, 1984; 69 FR 2256, Jan 14, 2004; 72 FR 49479, Aug. 28, 2007; 72 FR 57440, Oct. 9, 2007]

3. The partial decision on site suitability issues shall be incorporated in the decision regarding issuance of the combined license to the extent that it serves as a basis for the decision on a specific site issue.

Early Partial Decisions on Site Suitability—Combined License Under 10 CFR Part 52

[Top of File]

§ 2.621 Acceptance and docketing of application for early review of site suitability issues in a combined license proceeding.

(a) Each part of an application submitted in accordance with § 2.101(a–1) of this part will be initially treated as a tendered application. If it is determined that any one of the parts as described in § 2.101(a–1) is incomplete and not acceptable for processing, the Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, will inform the applicant of this determination and the respects in which the document is deficient. Such a determination of completeness will generally be made within a period of 30 days.

(b)(1) The Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, will accept for docketing an application for a combined license for a nuclear power facility where part one of the application as described in § 2.101(a–1) is complete. Part one of any application will not be considered complete unless it contains proposed findings as required by § 2.101(a–1)(1)(i) and unless it describes the applicant's site selection process, specifies the extent to which that process involves the consideration of alternative sites, explains the relationship between that process and the application for early review of site suitability issues, and briefly describes the applicant's longrange plans for ultimate development of the site. Upon assignment of a docket number, the procedures in § 2.101(a)(3) and (4) relating to formal docketing and the submission and distribution of additional copies of the application shall be followed.

(2) Additional parts of the application will be docketed upon a determination by the Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, that they are complete.

(c) If part one of the application is docketed, the Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, will cause to be published in the **Federal Register** and send to the Governor or other appropriate official of the State in which the site is located, a notice of docketing of the application which states the purpose of the application, states the location of the proposed site, states that a notice of hearing will be published, requests comments within 120 days or such other time as may be specified on the initiation or outcome of an early site review from Federal, State, and local agencies and interested persons.

[72 FR 49480, Aug. 28, 2007]

§ 2.623 Notice of hearing on application for early review of site suitability issues in combined license proceeding.

[Top of File]

(a) Where an applicant for a combined license under part 52 of this chapter requests an early review and hearing and an early partial decision on issues of site suitability pursuant to § 2.101(a–2), the provisions in the notice of hearing setting forth the matters of fact and law to be considered, as required by § 2.104, shall be modified so as to relate only to the site suitability issue or issues under review. The notice will provide appropriate opportunities for participation by a representative of an interested State under § 2.315(c) and for limited appearances under § 2 .315(a), limited however, to the issues of site suitability for which early review has been requested by the applicant.

(b) After docketing of part two of the application, as provided in §§ 2.101(a–1) and 2.603, a supplementary notice of hearing will be published under § 2.104 with respect to the remaining unresolved issues in the proceeding within the scope of § 2.104. This supplementary notice of hearing will provide that any person whose interest may be affected by the proceeding and who desires to participate as a party in the resolution of the remaining issues shall file a petition for leave to intervene pursuant to § 2.309 within the time prescribed in the notice. This supplementary notice will also provide appropriate opportunities for participation by a representative of an interested State under § 2.315(c) and for limited appearances under § 2.315(a).

(c) Any person who was permitted to intervene as a party under the initial notice of hearing on site suitability issues and who was not dismissed or did not withdraw as a party may continue to participate as a party to the proceeding without having to demonstrate standing under § 2.309(d), provided, however, that within the time prescribed for filing of petitions for leave to intervene in the supplementary notice of hearing, the party files a notice of intent to continue as a party. The notice must include the information required by § 2.309(f). A party who files a non-timely notice of intent to continue as a party may be dismissed from the proceeding, absent a determination that the party has made a substantial showing of good cause for failure to file on time, and with particular reference to the factors specified in §§ 2.309(c)(1)(i) through (iv) and 2.309(d). The notice will be ruled upon by the Commission or presiding officer designated to rule on petitions for leave to intervene.

(d) To the maximum extent practicable, the presiding officer (as applicable, the membership of the licensing board) designated to preside in the proceeding on the remaining unresolved issues pursuant to the supplemental notice of hearing will be the same as the presiding officer (as applicable, the membership of the licensing board) designated to preside in the initial notice of hearing on site suitability issues.

[72 FR 49480, Aug. 28, 2007]

§2.625 Additional considerations.

[Top of File]

(a) The Commission will not conduct more than one review of site suitability issues with regard to a particular site prior to filing and review of part two of the application described in § 2.101(a–1) of this part.

(b) The Commission, upon its own initiative, or upon the motion of any party to the proceeding filed at least 60 days prior to the date of the commencement of the evidentiary hearing on site suitability issues, may decline to initiate an early hearing or render an early partial decision on any issue or issues of site suitability:

(1) In cases where no partial decision on the relative merits of the proposed site and alternative sites under subpart A of part 51 is requested, upon determination that there is a reasonable likelihood that further review would identify one or more preferable alternative sites and the partial decision on one or more site suitability issues would lead to an irreversible and irretrievable commitment of resources prior to the submittal of the remainder of the information required by § 50.30(f) of this chapter that would prejudice the later review and decision on such alternative sites; or

(2) In cases where it appears that an early partial decision on any issue or issues of site suitability would not be in the public interest considering:

(i) The degree of likelihood that any early findings on those issues would retain their validity in later reviews;

(ii) The objections, if any, of cognizant State or local government agencies to the conduct of an early review on those issues; and

(iii) The possible effect on the public interest and the parties of having an early, if not necessarily conclusive, resolution of those issues.

[72 FR 49481, Aug. 28, 2007]

§2.627 Partial decision on site suitability issues in combined license proceeding.

[Top of File]

(a) The provisions of §§ 2.331, 2.339, 2.340(b), 2.343, 2.712, and 2.713 shall apply to any partial initial decision rendered in accordance with this subpart. Section 2.340(c) shall not apply to any partial initial decision rendered in accordance with this subpart. A limited work authorization may not be issued under 10 CFR 50.10(e) and no construction permit may be issued without completion of the full review required by Section 102(2) of the National Environmental Policy Act of 1969, as amended, and subpart A of part 51 of this chapter. The authority of the Commission to review such a partial initial decision sua sponte, or to raise sua sponte an issue that has not been raised by the parties, will be exercised within the same time period as in the case of a full decision relating to the issuance of a construction permit.

(b)(1) A partial decision on one or more site suitability issues pursuant to the applicable provisions of part 50, subpart A of part 51, and part 100 of this chapter issued in accordance with this subpart shall:

(i) Clearly identify the site to which the partial decision applies; and

(ii) Indicate to what extent additional information may be needed and additional review may be required to enable the Commission to determine in accordance with the provisions of the Act and the applicable provisions of the regulations in this chapter whether a construction permit for a facility to be located on the site identified in the partial decision should be issued or denied.

(2) Following either the Commission (acting in the function of a presiding officer) issuance of a partial initial decision, or completion of Commission review of the partial initial decision of the presiding officer, after hearing, on the site suitability issues, the partial decision shall remain in effect either for a period of 5 years or, where the applicant for the combined license has made timely submittal of the information required to support the application as provided in § 2.101(a–2), until the proceeding for a combined license on the site identified in the partial decision has been concluded, unless the Commission or presiding officer, upon its own initiative or upon motion by a party to the proceeding, finds that there exists significant new information that substantially affects the earlier conclusions and reopens the hearing record on site suitability issues. Upon good cause shown, the Commission may extend the 5-year
period during which a partial decision shall remain in effect for a reasonable period of time not to exceed 1 year.

[72 FR 49481, Aug. 28, 2007]

§2.629 Finality of partial decision on site suitability issues in a combined license proceeding.

[Top of File]

(a) The partial decision on site suitability issues in a combined license proceeding shall be incorporated in the decision regarding issuance of a combined license. Except as provided in 10 CFR 2.758, in making the findings required for issuance of a combined license, the Commission shall treat as resolved those matters resolved in connection with the issuance of the partial decision on site suitability issues. If the Commission reaches an adverse decision, the application shall be denied without prejudice for resubmission, provided, however, that in determining whether the resubmitted application is complete and acceptable for docketing under § 2.101(a)(3), the Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation, as appropriate, shall determine whether the resubmitted application addresses those matters identified as bases for denial of the original application.

(b) Notwithstanding any provision in 10 CFR 50.109, while a partial decision on site suitability is in effect under
§ 2.617(b)(2), the Commission may not modify, rescind, or impose new requirements with respect to matters within the scope of the site suitability decision, whether on its own motion, or in response to a request or petition from any person, unless the Commission determines that a modification to the original decision is necessary either for compliance with the Commission's regulations applicable and in effect at the time the partial decision was issued, or to assure adequate protection of the public health and safety or the common defense and security.

[72 FR 49481, Aug. 28, 2007]

§ 2.641 Filing fees.

[Top of File]

Each application which contains a request for limited work authorization under the procedures of § 2.101(a)(9) and this subpart shall be accompanied by any fee required by § 50.30(e) and part 170 of this chapter.

[72 FR 57440, Oct. 9, 2007]

§ 2.643 Acceptance and docketing of application for limited work authorization.

[Top of File]

(a) Each part of an application submitted in accordance with § 2.101(a)(9) will be initially treated as a tendered application. If it is determined that any one of the parts as described in § 2.101(a)(9) is incomplete and not acceptable for processing, the Director of New Reactors or the Director of Nuclear Reactor Regulation will inform the applicant of this determination and the respects in which the document is deficient. A determination of completeness will generally be made within a period of 30 days.

(b) The Director will accept for docketing part one of an application for a construction permit for a utilization facility which is subject to § 51.20(b) of this chapter and is of the type specified in § 50.21(b)(2) or (3) or § 50.22 of this
chapter or an application for a combined license where part one of the application as described in § 2.101(a)(9) is complete. Part one will not be considered complete unless it contains the information required by § 50.10(d)(3) of this chapter. Upon assignment of a docket number, the procedures in § 2.101(a)(3) and (4) relating to formal docketing and the submission and distribution of additional copies of the application must be followed.

(c) If part one of the application is docketed, the Director will cause to be published in the **Federal Register** and send to the Governor or other appropriate official of the State in which the site is located, a notice of docketing of the application which states the purpose of the application, states the location of the proposed site, states that a notice of hearing will be published, and requests comments on the limited work authorization from Federal, State, and local agencies and interested persons. The notice will state that comments must be submitted to the NRC within 60 days or such other time as may be specified in the notice.

(d) Part two of the application will be docketed upon a determination by the Director that it is complete.

(e) If part two of the application is docketed, the Director will cause to be published in the **Federal Register** and sent to the Governor or other appropriate official of the State in which the site is located, a notice of docketing of part two of the application which states the purpose of the application, states that a notice of hearing will be published, and requests comments on the construction permit or combined license application, as applicable, from Federal, State, and local agencies and interested persons. The notice will state that comments must be submitted to the NRC within 60 days or such other time as may be specified in the notice.

[72 FR 57440, Oct. 9, 2007]

§ 2.645 Notice of hearing.

[Top of File]

(a) The notice of hearing on part one of the application must set forth the matters of fact and law to be considered, as required by § 2.104, which will be modified to state that the hearing will relate only to the matters related to
§ 50.33(a) through (f) of this chapter, and the limited work authorization.

(b) After docketing of part two of the application, as provided in §§ 2.101(a)(9) and 2.643(d), a supplementary notice of hearing will be published under § 2.104 with respect to the remaining unresolved issues in the proceeding within the scope of § 2.104. The supplementary notice of hearing will provide that any person whose interest may be affected by the proceeding and who desires to participate as a party in the resolution of the remaining issues shall, file a petition for leave to intervene within the time prescribed in the notice. The petition to intervene must meet the
applicable requirements in subpart C of this part, including § 2.309. This supplementary notice will also provide
appropriate opportunities for participation by a representative of an interested State under § 2.315(c) and for limited appearances under § 2.315(a).

(c) Any person who was permitted to intervene under the initial notice of hearing on the limited work authorization and who was not dismissed or did not withdraw as a party, may continue to participate as a party with respect to the remaining unresolved issues only if, within the time prescribed for filing of petitions for leave to intervene in the supplementary notice of hearing, that person files a petition for intervention which meets the applicable requirements in subpart C of this part, including § 2.309, *provided, however*, that the petition need not address § 2.309(d). However, a person who was granted discretionary intervention under § 2.309(e) must address in its petition the factors in
§ 2.309(e) as they apply to the supplementary hearing.

(d) A party who files a non-timely petition for intervention under paragraph (b) of this section to continue as a party may be dismissed from the proceeding, absent a determination that the party has made a substantial showing of good cause for failure to file on time, and with particular reference to the factors specified in §§ 2.309(c)(1)(i) through (iv) and 2.309(d). The notice will be ruled upon by the Commission or presiding officer designated to rule on petitions for leave to intervene.

(e) To the maximum extent practicable, the membership of the Atomic Safety and Licensing Board, or the individual presiding officer, as applicable, designated to preside in the proceeding on the remaining unresolved issues under the supplemental notice of hearing will be the same as the membership or individual designated to preside in the initial notice of hearing.

[72 FR 57441, Oct. 9, 2007]

§ 2.647 [Reserved].

[Top of File]

[72 FR 57441, Oct. 9, 2007]

§2.649 Partial decisions on limited work authorization.

[Top of File]

The provisions of §§ 2.331, 2.339, 2.340(b), 2.343, 2.712, and 2.713 apply to any partial initial decision rendered in accordance with this subpart. Section 2.340(c) does not apply to any partial initial decision rendered in accordance
with this subpart. A limited work authorization may not be issued under 10 CFR 50.10(d) without completion of the review for limited work authorizations required by subpart A of part 51 of this chapter. The authority of the Commission to review such a partial initial decision *sua sponte*, or to raise *sua sponte* an issue that has not been raised by the parties, will be exercised within the same time as in the case of a full decision relating to the issuance of a construction permit or combined license.

[72 FR 57441, Oct. 9, 2007]

Subpart G--Rules for Formal Adjudications

[Top of File]

Source: 69 FR 2256, Jan. 14, 2004, unless otherwise noted.

§ 2.700 Scope of subpart G.

The provisions of this subpart apply to and supplement the provisions set forth in subpart C of this part with respect to enforcement proceedings initiated under subpart B of this part unless otherwise agreed to by the parties, proceedings conducted with respect to the initial licensing of a uranium enrichment facility, proceedings for the grant, renewal, licensee-initiated amendment, or termination of licenses or permits for nuclear power reactors, where the presiding officer by order finds that resolution of the contention necessitates resolution of: issues of material fact relating to the occurrence of a past event, where the credibility of an eyewitness may reasonably be expected to be at issue, and/or issues of motive or intent of the party or eyewitness material to the resolution of the contested matter, proceedings for initial applications for construction authorization for high-level radioactive waste repository noticed under §§ 2.101(f)(8) or 2.105(a)(5), proceedings for initial applications for a license to receive and possess high-level radioactive waste at a geologic repository operations area, and any other proceeding as ordered by the Commission. If there is any conflict between the provisions of this subpart and those set forth in subpart C of this part, the provisions of this subpart control.

§ 2.701 Exceptions.

[Top of File]

Consistent with 5 U.S.C. 554(a)(4) of the Administrative Procedure Act, the Commission may provide alternative procedures in adjudications to the extent that there is involved the conduct of military or foreign affairs functions.

§ 2.702 Subpoenas.

[Top of File]

(a) On application by any party, the designated presiding officer or, if he or she is not available, the Chief Administrative Judge, or other designated officer will issue subpoenas requiring the attendance and testimony of witnesses or the production of evidence. The officer to whom application is made may require a showing of general relevance of the testimony or evidence sought, and may withhold the subpoena if such a showing is not made. However, the officer may not determine the admissibility of evidence.

(b) Every subpoena will bear the name of the Commission, the name and office of the issuing officer and the title of the hearing, and will command the person to whom it is directed to attend and give testimony or produce specified documents or other things at a designated time and place. The subpoena will also advise of the quashing procedure provided in paragraph (f) of this section.

(c) Unless the service of a subpoena is acknowledged on its face by the witness or is served by an officer or employee of the Commission, it must be served by a person who is not a party to the hearing and is not less than eighteen (18) years of age. Service of a subpoena must be made by delivery of a copy of the subpoena to the person named in it and tendering that person the fees for one day's attendance and the mileage allowed by law. When the subpoena is issued on behalf of the Commission, fees and mileage need not be tendered and the subpoena may be served by registered mail.

(d) Witnesses summoned by subpoena must be paid the fees and mileage paid to witnesses in the district courts of the United States by the party at whose instance they appear.

(e) The person serving the subpoena shall make proof of service by filing the subpoena and affidavit or acknowledgment of service with the officer before whom the witness is required to testify or produce evidence or with the Secretary. Failure to make proof of service does not affect the validity of the service.

(f) On motion made promptly, and in any event at or before the time specified in the subpoena for compliance by the person to whom the subpoena is directed, and on notice to the party at whose instance the subpoena was issued, the presiding officer or, if he is unavailable, the Commission may:

(1) Quash or modify the subpoena if it is unreasonable or requires evidence not relevant to any matter in issue, or

(2) Condition denial of the motion on just and reasonable terms.

(g) On application and for good cause shown, the Commission will seek judicial enforcement of a subpoena issued to a party and which has not been quashed.

(h) The provisions of paragraphs (a) through (g) of this section are not applicable to the attendance and testimony of the Commissioners or NRC personnel, or to the production of records or documents in their custody.

§ 2.703 Examination by experts.

[Top of File]

(a) A party may request the presiding officer to permit a qualified individual who has scientific or technical training or experience to participate on behalf of that party in the examination and cross-examination of expert witnesses. The presiding officer may permit the

individual to participate on behalf of the party in the examination and cross-examination of expert witnesses, upon finding:

(1) That cross-examination by that individual would serve the purpose of furthering the conduct of the proceeding;

(2) That the individual is qualified by scientific or technical training or experience to contribute to the development of an adequate decisional record in the proceeding by the conduct of such examination or cross-examination;

(3) That the individual has read any written testimony on which he intends to examine or cross-examine and any documents to be used or referred to in the course of the examination or cross-examination; and

(4) That the individual has prepared himself to conduct a meaningful and expeditious examination or cross-examination, and has submitted a cross-examination plan in accordance with § 2.711(c).

(b) Examination or cross-examination conducted under this section must be limited to areas within the expertise of the individual conducting the examination or cross-examination. The party on behalf of whom this examination or cross-examination is conducted and his or her attorney is responsible for the conduct of examination or cross-examination by such individuals.

§ 2.704 Discovery--required disclosures.

[Top of File]

(a) Initial disclosures. Except to the extent otherwise stipulated or directed by order of the presiding officer or the Commission, a party other than the NRC staff shall, without awaiting a discovery request, provide to other parties:

(1) The name and, if known, the address and telephone number of each individual likely to have discoverable information relevant to disputed issues alleged with particularity in the pleadings, identifying the subjects of the information; and

(2) A copy of, or a description by category and location of, all documents, data compilations, and tangible things in the possession, custody, or control of the party that are relevant to disputed issues alleged with particularity in the pleadings. When any document, data compilation, or other tangible thing that must be disclosed is publicly available from another source, such as at the NRC Web site, *http://www.nrc.gov*, and/or the NRC Public Document Room, a sufficient disclosure would be the location, the title and a page reference to the relevant document, data compilation, or tangible thing;

(3) Unless otherwise stipulated or directed by the presiding officer, these disclosures must be made within forty-five (45) days after the issuance of a prehearing conference order following the initial prehearing conference specified in § 2.329. A party shall make its initial disclosures based on the information then reasonably available to it. A party is not excused from making its disclosures because it has not fully completed its investigation of the case, because it challenges the sufficiency of another party's disclosures, or because another party has not made its disclosures.

(b) Disclosure of expert testimony. (1) In addition to the disclosures required by paragraph (a) of this section, a party other than the NRC staff shall disclose to other parties the identity of any person who may be used at trial to present evidence under § 2.711.

(2) Except in proceedings with pre-filed written testimony, or as otherwise stipulated or directed by the presiding officer, this disclosure must be accompanied by a written report prepared and signed by the witness, containing: A complete statement of all opinions to be expressed and the basis and reasons therefor; the data or other information considered by the witness in forming the opinions; any exhibits to be used as a summary of or support for the opinions; the qualifications of the witness, including a list of all publications authored by the witness within the preceding ten years; and a listing of any other cases in which the witness has testified as an expert at trial or by deposition within the preceding four (4) years.

(3) These disclosures must be made at the times and in the sequence directed by the presiding officer. In the absence of other directions from the presiding officer, or stipulation by the parties, the disclosures must be made at least ninety (90) days before the hearing commencement date or the date the matter is to be presented for hearing. If the evidence is intended solely to contradict or rebut evidence on the same subject matter identified by another party under paragraph (b)(2) of this section, the disclosures must be made within thirty (30) days after the disclosure made by the other party. The parties shall supplement these disclosures when required under paragraph (e) of this section.

(c) Pretrial disclosures. (1) In addition to the disclosures required in the preceding paragraphs, a party other than the NRC staff shall provide to other parties the following information regarding the evidence that it may present at trial other than solely for impeachment purposes:

(i) The name and, if not previously provided, the address and telephone number of each witness, separately identifying those whom the party expects to present and those whom the party may call if the need arises;

(ii) The designation of those witnesses whose testimony is expected to be presented by means of a deposition and, when available, a transcript of the pertinent portions of the deposition testimony; and

(iii) An appropriate identification of each document or other exhibit, including summaries of other evidence, separately identifying those which the party expects to offer and those which the party may offer if the need arises.

(2) Unless otherwise directed by the presiding officer or the Commission, these disclosures must be made at least thirty (30) days before

commencement of the hearing at which the issue is to be presented.

(3) A party may object to the admissibility of documents identified under paragraph (c) of this section. A list of those objections must be served and filed within fourteen (14) days after service of the disclosures required by paragraphs (c)(1) and (2) of this section, unless a different time is specified by the presiding officer or the Commission. Objections not so disclosed, other than objections as to a document's admissibility under § 2.711(e), are waived unless excused by the presiding officer or Commission for good cause shown.

(d) Form of disclosures; filing. Unless otherwise directed by order of the presiding officer or the Commission, all disclosures under paragraphs (a) through (c) of this section must be made in writing, signed, served, and promptly filed with the presiding officer or the Commission.

(e) Supplementation of responses. A party who has made a disclosure under this section is under a duty to supplement or correct the disclosure to include information thereafter acquired if ordered by the presiding officer or in the following circumstances:

(1) A party is under a duty to supplement at appropriate intervals its disclosures under paragraph (a) of this section within a reasonable time after a party learns that in some material respect the information disclosed is incomplete or incorrect and if the additional or corrective information has not otherwise been made known to the other parties during the discovery process or in writing.

(2) With respect to testimony of an expert from whom a report is required under paragraph (b) of this section, the duty extends both to information contained in the report and to information provided through a deposition of the expert, and any additions or other changes to this information must be disclosed by the time the party's disclosures under § 2.704(c) are due.

(f) Disclosure under this section of documents and records including Safeguards Information referred to in Sections 147 and 181 of the Atomic Energy Act of 1954, as amended, will be according to the provisions in § 2.705(c)(3) through (c)(8).

[73 FR 63567, Oct. 24, 2008]

§ 2.705 Discovery--additional methods.

[Top of File]

(a) Discovery methods. Parties may obtain discovery by one or more of the following methods: depositions upon oral examination or written interrogatories (§ 2.706); interrogatories to parties (§ 2.706); production of documents or things or permission to enter upon land or other property, for inspection and other purposes (§ 2.707); and requests for admission (§ 2.708).

(b) Scope of discovery. Unless otherwise limited by order of the presiding officer in accordance with this section, the scope of discovery is as follows:

(1) In general. Parties may obtain discovery regarding any matter, not privileged, that is relevant to the subject matter involved in the proceeding, whether it relates to the claim or defense of any other party, including the existence, description, nature, custody, condition, and location of any books, documents, or other tangible things and the identity and location of persons having knowledge of any discoverable matter. When any book, document, or other tangible thing sought is reasonably available from another source, such as at the NRC Web site, *http://www.nrc.gov*, and/or the NRC Public Document Room, sufficient response to an interrogatory on materials would be the location, the title and a page reference to the relevant book, document, or tangible thing. In a proceeding on an application for a construction permit or an operating license for a production or utilization facility, discovery begins only after the prehearing conference and relates only to those matters in controversy which have been identified by the Commission or the presiding officer in the prehearing order entered at the conclusion of that prehearing conference. In such a proceeding, discovery may not take place after the beginning of the prehearing conference held under § 2.329 except upon leave of the presiding officer upon good cause shown. It is not a ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence.

(2) Limitations. Upon his or her own initiative after reasonable notice or in response to a motion filed under paragraph (c) of this section, the presiding officer may alter the limits in these rules on the number of depositions and interrogatories, and may also limit the length of depositions under § 2.706 and the number of requests under §§ 2.707 and 2.708. The presiding officer shall limit the frequency or extent of use of the discovery methods otherwise permitted under these rules if he or she determines that:

(i) The discovery sought is unreasonably cumulative or duplicative, or is obtainable from some other source that is more convenient, less burdensome, or less expensive;

(ii) The party seeking discovery has had ample opportunity by discovery in the proceeding to obtain the information sought; or

(iii) The burden or expense of the proposed discovery outweighs its likely benefit, taking into account the needs of the proceeding, the parties' resources, the importance of the issue in the proceeding, and the importance of the proposed discovery in resolving the issues.

(3) Trial preparation materials. A party may obtain discovery of documents and tangible things otherwise discoverable under paragraph (b)(1) of this section and prepared in anticipation of or for the hearing by or for another party's representative (including his attorney, consultant, surety, indemnitor, insurer, or agent) only upon a showing that the party seeking discovery has substantial need of the materials in the preparation of this case and that he is unable without undue hardship to obtain the substantial equivalent of the materials by other means. In ordering discovery of such materials when the required showing has been made, the presiding officer shall protect against disclosure of the mental impressions, conclusions, opinions, or legal theories of an attorney for a party concerning the proceeding.

(4) Claims of privilege or protection of trial preparation materials. When a party withholds information otherwise discoverable under these rules by claiming that it is privileged or subject to protection as trial preparation material, the party shall make the claim expressly and shall describe the nature of the documents, communications, or things not produced or disclosed in a manner that, without revealing information itself privileged or protected, will enable other parties to assess the applicability of the privilege or protection. Identification of these privileged materials must be made within the time provided for disclosure of the materials, unless otherwise extended by order of the presiding officer or the Commission.

(5) Nature of interrogatories. Interrogatories may seek to elicit factual information reasonably related to a party's position in the proceeding, including data used, assumptions made, and analyses performed by the party. Interrogatories may not be addressed to, or be construed to require:

(i) Reasons for not using alternative data, assumptions, and analyses where the alternative data, assumptions, and analyses were not relied on in developing the party's position; or

(ii) Performance of additional research or analytical work beyond that which is needed to support the party's position on any particular matter.

(c) Protective order. (1) Upon motion by a party or the person from whom discovery is sought, accompanied by a certification that the movant has in good faith conferred or attempted to confer with other affected parties in an effort to resolve the dispute without action by the presiding officer, and for good cause shown, the presiding officer may make any order which justice requires to protect a party or person from annoyance, embarrassment, oppression, or undue burden or expense, including one or more of the following:

(i) That the discovery not be had;

(ii) That the discovery may be had only on specified terms and conditions, including a designation of the time or place;

(iii) That the discovery may be had only by a method of discovery other than that selected by the party seeking discovery;

(iv) That certain matters not be inquired into, or that the scope of discovery be limited to certain matters;

(v) That discovery be conducted with no one present except persons designated by the presiding officer;

(vi) That, subject to the provisions of §§ 2.709 and 2.390, a trade secret or other confidential research, development, or commercial information not be disclosed or be disclosed only in a designated way; or

(vii) That studies and evaluations not be prepared.

(2) If the motion for a protective order is denied in whole or in part, the presiding officer may, on such terms and conditions as are just, order that any party or person provide or permit discovery.

(3) In the case of documents and records including Safeguards Information referred to in Sections 147 and 181 of the Atomic Energy Act of 1954, as amended, the presiding officer may issue an order requiring disclosure if—

(i) The presiding officer finds that the individual seeking access to Safeguards Information in order to participate in an NRC proceeding has the requisite ''need to know,'' as defined in 10 CFR 73.2;

(ii) The individual has undergone an FBI criminal history records check, unless exempt under 10 CFR 73.22(b)(3) or 73.23(b)(3), as applicable, by submitting fingerprints to the NRC Office of Administration, Security Processing Unit, Mail Stop T–6E46, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, and otherwise following the procedures in 10 CFR 73.57(d) for submitting and processing fingerprints. However, before a final adverse determination by the NRC Office of Administration on an individual's criminal history records check is made, the individual shall be afforded the protections provided by 10 CFR 73.57; and

(iii) The NRC Office of Administration has found, based upon a background check, that the individual is trustworthy and reliable, unless exempt under 10 CFR 73.22(b)(3) or 73.23(b)(3), as applicable. In addition to the protections provided by 10 CFR 73.57 for adverse determinations based on criminal history records checks, the Office of Administration must take the following actions before making a final adverse determination on an individual's background check for trustworthiness and reliability. The Office of Administration will:

(A) For the purpose of assuring correct and complete information, provide to the individual any records, in addition to those required to be provided under 10 CFR 73.57(e)(1), that were considered in the trustworthiness and reliability determination;

(B) Resolve any challenge by the individual to the completeness or accuracy of the records described in § 2.705(c)(3)(iii)(A). The individual may make this challenge by submitting information and/or an explanation to the Office of Administration. The challenge must be submitted within 10 days of the distribution of the records described in § 2.705(c)(3)(iii)(A), and the Office of Administration must promptly resolve any challenge.

(iv) Individuals seeking access to Safeguards Information to participate in an NRC adjudication for whom the NRC Office of Administration has made a final adverse determination on trustworthiness and reliability may submit a request to the Chief Administrative Judge for review of the adverse determination. Upon receiving such a request, the Chief Administrative Judge shall designate an officer other than the presiding officer of the proceeding to review the adverse determination. For purposes of review, the adverse determination must be in

writing and set forth the grounds for the determination. The request for review shall be served on the NRC staff and may include additional information for review by the designated officer. The request must be filed within 15 days after receipt of the adverse determination by the person against whom the adverse determination has been made. Within 10 days of receipt of the request for review and any additional information, the NRC staff will file a response indicating whether the request and additional information has caused the NRC Office of Administration to reverse its adverse determination. The designated officer may reverse the Office of Administration's final adverse determination only if the officer finds, based on all the information submitted, that the adverse determination constitutes an abuse of discretion. The designated officer's decision must be rendered within 15 days after receipt of the staff filing indicating that the request for review and additional information has not changed the NRC Office of Administration's adverse determination.

(4) The presiding officer may include in an order any protective terms and conditions (including affidavits of nondisclosure) as may be necessary and appropriate to prevent the unauthorized disclosure of Safeguards Information.

(5) When Safeguards Information protected from unauthorized disclosure under Section 147 of the Atomic Energy Act of 1954, as amended, is received and possessed by anyone other than the NRC staff, it must also be protected according to the requirements of § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

(6) The presiding officer may also prescribe additional procedures to effectively safeguard and prevent disclosure of Safeguards Information to unauthorized persons with minimum impairment of the procedural rights which would be available if Safeguards Information were not involved.

(7) In addition to any other sanction that may be imposed by the presiding officer for violation of an order issued pursuant to this paragraph, violation of a provision for the protection of Safeguards Information from unauthorized disclosure that is contained in an order may be subject to a civil penalty imposed under § 2.205.

(8) For the purpose of imposing the criminal penalties contained in Section 223 of the Atomic Energy Act of 1954, as amended, a provision for the protection of Safeguards Information from unauthorized disclosure that is contained in an order issued pursuant to this paragraph is considered to be issued under Section 161b of the Atomic Energy Act of 1954, as amended.

(d) Sequence and timing of discovery. Except when authorized under these rules or by order of the presiding officer, or agreement of the parties, a party may not seek discovery from any source before the parties have met and conferred as required by paragraph (f) of this section, nor may a party seek discovery after the time limit established in the proceeding for the conclusion of discovery. Unless the presiding officer upon motion, for the convenience of parties and witnesses and in the interests of justice, orders otherwise, methods of discovery may be used in any sequence and the fact that a party is conducting discovery, whether by deposition or otherwise, does not operate to delay any other party's discovery.

(e) Supplementation of responses. A party who responded to a request for discovery with a response is under a duty to supplement or correct the response to include information thereafter acquired if ordered by the presiding officer or, with respect to a response to an interrogatory, request for production, or request for admission, within a reasonable time after a party learns that the response is in some material respect incomplete or incorrect, and if the additional or corrective information has not otherwise been made known to the other parties during the discovery process or in writing.

(f) Meeting of parties; planning for discovery. Except when otherwise ordered, the parties shall, as soon as practicable and in any event no more than thirty (30) days after the issuance of a prehearing conference order following the initial prehearing conference specified in § 2.329, meet to discuss the nature and basis of their claims and defenses and the possibilities for a prompt settlement or resolution of the proceeding or any portion thereof, to make or arrange for the disclosures required by § 2.704, and to develop a proposed discovery plan.

(1) The plan must indicate the parties' views and proposals concerning:

(i) What changes should be made in the timing, form, or requirement for disclosures under § 2.704, including a statement as to when disclosures under § 2.704(a)(1) were made or will be made;

(ii) The subjects on which discovery may be needed, when discovery should be completed, and whether discovery should be conducted in phases or be limited to or focused upon particular issues;

(iii) What changes should be made in the limitations on discovery imposed under these rules, and what other limitations should be imposed; and

(iv) Any other orders that should be entered by the presiding officer under paragraph (c) of this section.

(2) The attorneys of record and all unrepresented parties that have appeared in the proceeding are jointly responsible for arranging and being present or represented at the meeting, for attempting in good faith to agree on the proposed discovery plan, and for submitting to the presiding officer within ten (10) days after the meeting a written report outlining the plan.

(g) Signing of disclosures, discovery requests, responses, and objections. (1) Every disclosure made in accordance with § 2.704 must be signed by at least one attorney of record in the attorney's individual name, whose address must be stated. An unrepresented party shall sign the disclosure and state the party's address. The signature of the attorney or party constitutes a certification that to the best of the signer's knowledge, information, and belief, formed after a reasonable inquiry, the disclosure is complete and correct as of the time it is made.

(2) Every discovery request, response, or objection made by a party represented by an attorney must be signed by at least one attorney of record in the attorney's individual name, whose address must be stated. An unrepresented party shall sign the request, response, or

objection and state the party's address. The signature of the attorney or party constitutes a certification that to the best of the signer's knowledge, information, and belief, formed after a reasonable inquiry, the request, response, or objection is:

(i) Consistent with these rules and warranted by existing law or a good faith argument for the extension, modification, or reversal of existing law;

(ii) Not interposed for any improper purpose, such as to harass or to cause unnecessary delay or needless increase in the cost of litigation; and

(iii) Not unreasonable or unduly burdensome or expensive, given the needs of the case, the discovery already had in the case, the amount in controversy, and the importance of the issues at stake in the litigation.

(3) If a request, response, or objection is not signed, it must be stricken unless it is signed promptly after the omission is called to the attention of the party making the request, response, or objection, and a party shall not be obligated to take any action with respect to it until it is signed.

(4) If a certification is made in violation of the rule without substantial justification, the presiding officer, upon motion or upon its own initiative, shall impose upon the person who made the certification, the party on whose behalf the disclosure, request, response, or objection is made, or both, an appropriate sanction, which may, in appropriate circumstances, include termination of that person's right to participate in the proceeding.

(h) Motion to compel discovery. (1) If a deponent or party upon whom a request for production of documents or answers to interrogatories is served fails to respond or objects to the request, or any part thereof, or fails to permit inspection as requested, the deposing party or the party submitting the request may move the presiding officer, within ten (10) days after the date of the response or after failure of a party to respond to the request, for an order compelling a response or inspection in accordance with the request. The motion must set forth the nature of the questions or the request, the response or objection of the party upon whom the request was served, and arguments in support of the motion. The motion must be accompanied by a certification that the movant has in good faith conferred or attempted to confer with other affected parties in an effort to resolve the dispute without action by the presiding officer. Failure to answer or respond may not be excused on the ground that the discovery sought is objectionable unless the person or party failing to answer or respond has applied for a protective order pursuant to paragraph (c) of this section. For purposes of this paragraph, an evasive or incomplete answer or response will be treated as a failure to answer or respond.

(2) In ruling on a motion made under this section, the presiding officer may issue a protective order under paragraph (c) of this section.

(3) This section does not preclude an independent request for issuance of a subpoena directed to a person not a party for production of documents and things. This section does not apply to requests for the testimony or interrogatories of the NRC staff under § 2.709(a), or the production of NRC documents under §§ 2.709(b) or § 2.390, except for paragraphs (c) and (e) of this section.

[73 FR 63568, Oct. 24, 2008]

§ 2.706 Depositions upon oral examination and written interrogatories; interrogatories to parties.

[Top of File]

(a) Depositions upon oral examination and written interrogatories.

(1) Any party desiring to take the testimony of any party or other person by deposition on oral examination or written interrogatories shall, without leave of the Commission or the presiding officer, give reasonable notice in writing to every other party, to the person to be examined and to the presiding officer of the proposed time and place of taking the deposition; the name and address of each person to be examined, if known, or if the name is not known, a general description sufficient to identify him or the class or group to which he belongs; the matters upon which each person will be examined and the name or descriptive title and address of the officer before whom the deposition is to be taken.

(2) [Reserved]

(3) Within the United States, a deposition may be taken before any officer authorized to administer oaths by the laws of the United States or of the place where the examination is held. Outside of the United States, a deposition may be taken before a secretary of an embassy or legation, a consul general, vice consul or consular agent of the United States, or a person authorized to administer oaths designated by the Commission.

(4) Before any questioning, the deponent shall either be sworn or affirm the truthfulness of his or her answers. Examination and cross-examination must proceed as at a hearing. Each question propounded must be recorded and the answer taken down in the words of the witness. Objections on questions of evidence must be noted in short form without the arguments. The officer may not decide on the competency, materiality, or relevancy of evidence but must record the evidence subject to objection. Objections on questions of evidence not made before the officer will not be considered waived unless the ground of the objection is one which might have been obviated or removed if presented at that time.

(5) When the testimony is fully transcribed, the deposition must be submitted to the deponent for examination and signature unless he or she is ill, cannot be found, or refuses to sign. The officer shall certify the deposition or, if the deposition is not signed by the deponent, shall certify the reasons for the failure to sign, and shall promptly forward the deposition by registered mail to the Commission.

(6) Where the deposition is to be taken on written interrogatories, the party taking the deposition shall serve a copy of the interrogatories, showing each interrogatory separately and consecutively numbered, on every other party with a notice stating the name and address of the person who is to answer them, and the name, description, title, and address of the officer before whom they are to be taken. Within ten (10) days after service, any other party may serve cross-interrogatories. The interrogatories, cross-interrogatories, and answers must be recorded and signed, and the deposition certified, returned, and filed as in the case of a deposition on oral examination.

(7) A deposition will not become a part of the record in the hearing unless received in evidence. If only part of a deposition is offered in evidence by a party, any other party may introduce any other parts. A party does not make a person his or her own witness for any purpose by taking his deposition.

(8) A deponent whose deposition is taken and the officer taking a deposition are entitled to the same fees as are paid for like services in the district courts of the United States. The fees must be paid by the party at whose instance the deposition is taken.

(9) The witness may be accompanied, represented, and advised by legal counsel.

(10) The provisions of paragraphs (a)(1) through (a)(9) of this section are not applicable to NRC personnel. Testimony of NRC personnel by oral examination and written interrogatories addressed to NRC personnel are subject to the provisions of § 2.709.

(b) Interrogatories to parties. (1) Any party may serve upon any other party (other than the NRC staff) written interrogatories to be answered in writing by the party served, or if the party served is a public or private corporation or a partnership or association, by any officer or agent, who shall furnish such information as is available to the party. A copy of the interrogatories, answers, and all related pleadings must be filed with the Secretary of the Commission, and must be served on the presiding officer and all parties to the proceeding.

(2) Each interrogatory must be answered separately and fully in writing under oath or affirmation, unless it is objected to, in which event the reasons for objection must be stated in lieu of an answer. The answers must be signed by the person making them, and the objections by the attorney making them. The party upon whom the interrogatories were served shall serve a copy of the answers and objections upon all parties to the proceeding within fourteen (14) days after service of the interrogatories, or within such shorter or longer period as the presiding officer may allow. Answers may be used in the same manner as depositions (see § 2.706(a)(7)).

§ 2.707 Production of documents and things; entry upon land for inspections and other purposes.

[Top of File]

(a) Request for discovery. Any party may serve on any other party a request to:

(1) Produce and permit the party making the request, or a person acting on his or her behalf, to inspect and copy any designated documents, or to inspect and copy, test, or sample any tangible things which are within the scope of § 2.704 and which are in the possession, custody, or control of the party upon whom the request is served; or

(2) Permit entry upon designated land or other property in the possession or control of the party upon whom the request is served for the purpose of inspection and measuring, surveying, photographing, testing, or sampling the property or any designated object or operation on the property, within the scope of § 2.704.

(b) Service. The request may be served on any party without leave of the Commission or the presiding officer. Except as otherwise provided in § 2.704, the request may be served after the proceeding is set for hearing.

(c) Contents. The request must identify the items to be inspected either by individual item or by category, and describe each item and category with reasonable particularity. The request must specify a reasonable time, place, and manner of making the inspection and performing the related acts.

(d) Response. The party upon whom the request is served shall serve on the party submitting the request a written response within thirty (30) days after the service of the request. The response must state, with respect to each item or category, that inspection and related activities will be permitted as requested, unless the request is objected to, in which case the reasons for objection must be stated. If objection is made to part of an item or category, the part must be specified.

(e) NRC records and documents. The provisions of paragraphs (a) through (d) of this section do not apply to the production for inspection and copying or photographing of NRC records or documents. Production of NRC records or documents is subject to the provisions of §§ 2.709 and 2.390.

§ 2.708 Admissions.

[Top of File]

(a) Apart from any admissions made during or as a result of a prehearing conference, at any time after his or her answer has been filed, a party may file a written request for the admission of the genuineness and authenticity of any relevant document described in or attached to the request, or for the admission of the truth of any specified relevant matter of fact. A copy of the document for which an admission of genuineness and authenticity is requested must be delivered with the request unless a copy has already been furnished.

(b)(1) Each requested admission is considered made unless, within a time designated by the presiding officer or the Commission, and not less than ten (10) days after service of the request or such further time as may be allowed on motion, the party to whom the request is directed serves on the requesting party either:

(i) A sworn statement denying specifically the relevant matters of which an admission is requested or setting forth in detail the reasons why he can neither truthfully admit nor deny them; or

(ii) Written objections on the ground that some or all of the matters involved are privileged or irrelevant or that the request is otherwise improper in whole or in part.

(2) Answers on matters to which such objections are made may be deferred until the objections are determined. If written objections are made to only a part of a request, the remainder of the request must be answered within the time designated.

(c) Admissions obtained under the procedure in this section may be used in evidence to the same extent and subject to the same objections as other admissions.

§ 2.709 Discovery against NRC staff.

[Top of File]

(a)(1) In a proceeding in which the NRC staff is a party, the NRC staff will make available one or more witnesses, designated by the Executive Director for Operations or a delegee of the Executive Director for Operations, for oral examination at the hearing or on deposition regarding any matter, not privileged, that is relevant to the issues in the proceeding. The attendance and testimony of the Commissioners and named NRC personnel at a hearing or on deposition may not be required by the presiding officer, by subpoena or otherwise. However, the presiding officer may, upon a showing of exceptional circumstances, such as a case in which a particular named NRC employee has direct personal knowledge of a material fact not known to the witnesses made available by the Executive Director for Operations or a delegee of the Executive Director for Operations, require the attendance and testimony of named NRC personnel.

(2) A party may file with the presiding officer written interrogatories to be answered by NRC personnel with knowledge of the facts, as designated by the Executive Director for Operations, or a delegee of the Executive Director for Operations. Upon a finding by the presiding officer that answers to the interrogatories are necessary to a proper decision in the proceeding and that answers to the interrogatories are not reasonably obtainable from any other source, the presiding officer may require that the NRC staff answer the interrogatories.

(3) A deposition of a particular named NRC employee or answer to interrogatories by NRC personnel under paragraphs (a)(1) and (2) of this section may not be required before the matters in controversy in the proceeding have been identified by order of the Commission or the presiding officer, or after the beginning of the prehearing conference held in accordance with § 2.329, except upon leave of the presiding officer for good cause shown.

(4) The provisions of § 2.704(c) and (e) apply to interrogatories served under this paragraph.

(5) Records or documents in the custody of the Commissioners and NRC personnel are available for inspection and copying or photographing under paragraph (b) of this section and § 2.390.

(b) A request for the production of an NRC record or document not available under § 2.390 by a party to an initial licensing proceeding may be served on the Executive Director for Operations or a delegee of the Executive Director for Operations, without leave of the Commission or the presiding officer. The request must identify the records or documents requested, either by individual item or by category, describe each item or category with reasonable particularity, and state why that record or document is relevant to the proceeding.

(c) If the Executive Director for Operations, or a delegee of the Executive Director for Operations, objects to producing a requested record or document on the ground that it is not relevant or it is exempted from disclosure under § 2.390 and the disclosure is not necessary to a proper decision in the proceeding or the document or the information therein is reasonably obtainable from another source, the Executive Director for Operations, or a delegee of the Executive Director for Operations, shall advise the requesting party.

(d) If the Executive Director for Operations, or a delegee of the Executive Director for Operations, objects to producing a record or document, the requesting party may apply to the presiding officer, in writing, to compel production of that record or document. The application must set forth the relevancy of the record or document to the issues in the proceeding. The application will be processed as a motion in accordance with § 2.323 (a) through (d). The record or document covered by the application must be produced for the *in camera* inspection of the presiding officer, exclusively, if requested by the presiding officer and only to the extent necessary to determine:

(1) The relevancy of that record or document;

(2) Whether the document is exempt from disclosure under § 2.390;

(3) Whether the disclosure is necessary to a proper decision in the proceeding; and

(4) Whether the document or the information therein is reasonably obtainable from another source.

(e) Upon a determination by the presiding officer that the requesting party has demonstrated the relevancy of the record or document and that its production is not exempt from disclosure under § 2.390 or that, if exempt, its disclosure is necessary to a proper decision in the proceeding, and the document or the information therein is not reasonably obtainable from another source, the presiding officer shall order

the Executive Director for Operations, or a delegee of the Executive Director for Operations, to produce the document.

(f)(1) In the case of requested documents and records including Safeguards Information referred to in Sections 147 and 181 of the Atomic Energy Act of 1954, as amended exempt from disclosure under § 2.390, the presiding officer may issue an order requiring disclosure to the Executive Director for Operations or a delegee of the Executive Director for Operations, to produce the documents or records (or any other order issued ordering production of the document or records) if—

(i) The presiding officer finds that the individual seeking access to Safeguards Information to participate in an NRC adjudication has the requisite ''need to know,'' as defined in 10 CFR 73.2;

(ii) The individual has undergone an FBI criminal history records check, unless exempt under 10 CFR 73.22(b)(3) or 73.23(b)(3), as applicable, by submitting fingerprints to the NRC Office of Administration, Security Processing Unit, Mail Stop T–6E46, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, and otherwise following the procedures in 10 CFR 73.57(d) for submitting and processing fingerprints. However, before a final adverse determination by the NRC Office of Administration on an individual's criminal history records check is made, the individual shall be afforded the protections provided by 10 CFR 73.57; and

(iii) The NRC Office of Administration has found, based upon a background check, that the individual is trustworthy and reliable, unless exempt under 10 CFR 73.22(b)(3) or 73.23(b)(3), as applicable. In addition to the protections provided by 10 CFR 73.57 for adverse determinations based on criminal history records checks, the Office of Administration must take the following actions before making a final adverse determination on an individual's background check for trustworthiness and reliability. The Office of Administration will:

(A) For the purpose of assuring correct and complete information, provide to the individual any records, in addition to those required to be provided under 10 CFR 73.57(e)(1), that were considered in the trustworthiness and reliability determination;

(B) Resolve any challenge by the individual to the completeness or accuracy of the records described in § 2.709(f)(1)(iii)(A). The individual may make this challenge by submitting information and/or an explanation to the Office of Administration. The challenge must be submitted within 10 days of the distribution of the records described in § 2.709(f)(1)(iii)(A), and the Office of Administration must promptly resolve any challenge.

(iv) Individuals seeking access to Safeguards Information to participate in an NRC adjudication for whom the NRC Office of Administration has made a final adverse determination on trustworthiness and reliability may submit a request to the Chief Administrative Judge for review of the adverse determination. Upon receiving such a request, the Chief Administrative Judge shall designate an officer other than the presiding officer of the proceeding to review the adverse determination. For purposes of review, the adverse determination must be in writing and set forth the grounds for the determination. The request for review shall be served on the NRC staff and may include additional information for review by the designated officer. The request must be filed within 15 days after receipt of the adverse determination by the person against whom the adverse determination has been made. Within 10 days of receipt of the request for review and any additional information, the NRC staff will file a response indicating whether the request and additional information has caused the NRC Office of Administration to reverse its adverse determination. The designated officer may reverse the Office of Administration's final adverse determination only if the officer finds, based on all the information submitted, that the adverse determination constitutes an abuse of discretion. The designated officer's decision must be rendered within 15 days after receipt of the staff filing indicating that the request for review and additional information has not changed the NRC Office of Administration's adverse determination.

(2) The presiding officer may include in an order any protective terms and conditions (including affidavits of nondisclosure) as may be necessary and appropriate to prevent the unauthorized disclosure of Safeguards Information.

(3) When Safeguards Information protected from disclosure under Section 147 of the Atomic Energy Act of 1954, as amended, is received and possessed by anyone other than the NRC staff, it must also be protected according to the requirements of § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

(4) The presiding officer may also prescribe additional procedures to effectively safeguard and prevent disclosure of Safeguards Information to unauthorized persons with minimum impairment of the procedural rights which would be available if Safeguards Information were not involved.

(5) In addition to any other sanction that may be imposed by the presiding officer for violation of an order issued pursuant to this paragraph, violation of a provision for the protection of Safeguards Information from unauthorized disclosure that is contained in an order may be subject to a civil penalty imposed under § 2.205.

(6) For the purpose of imposing the criminal penalties contained in Section 223 of the Atomic Energy Act of 1954, as amended, a provision for the protection of Safeguards Information from unauthorized disclosure that is contained in an order issued pursuant to this paragraph is considered to be issued under Section 161b of the Atomic Energy Act of 1954, as amended.

(g) A ruling by the presiding officer or the Commission for the production of a record or document will specify the time, place, and manner of production.

(h) A request under this section may not be made or entertained before the matters in controversy have been identified by the Commission or the presiding officer, or after the beginning of the prehearing conference held under § 2.329 except upon leave of the presiding officer for good cause shown.

(i) The provisions of § 2.705 (c) and (e) apply to production of NRC records and documents under this section.

[73 FR 63568, Oct. 24, 2008]

§ 2.710 Motions for summary disposition.

[Top of File]

(a) Any party to a proceeding may move, with or without supporting affidavits, for a decision by the presiding officer in that party's favor as to all or any part of the matters involved in the proceeding. Summary disposition motions must be filed no later than twenty (20) days after the close of discovery. The moving party shall attach to the motion a separate, short, and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard. Any other party may serve an answer supporting or opposing the motion, with or without affidavits, within twenty (20) days after service of the motion. The party shall attach to any answer opposing the motion a separate, short, and concise statement of the material facts as to which it is contended there exists a genuine issue to be heard. All material facts set forth in the statement required to be served by the moving party will be considered to be admitted unless controverted by the statement required to be served by the opposing party. The opposing party may, within ten (10) days after service, respond in writing to new facts and arguments presented in any statement filed in support of the motion. No further supporting statements or responses thereto will be entertained.

(b) Affidavits must set forth the facts that would be admissible in evidence, and must demonstrate affirmatively that the affiant is competent to testify to the matters stated in the affidavit. The presiding officer may permit affidavits to be supplemented or opposed by depositions, answers to interrogatories or further affidavits. When a motion for summary decision is made and supported as provided in this section, a party opposing the motion may not rest upon the mere allegations or denials of his answer. The answer by affidavits or as otherwise provided in this section must set forth specific facts showing that there is a genuine issue of fact. If no answer is filed, the decision sought, if appropriate, must be rendered.

(c) Should it appear from the affidavits of a party opposing the motion that he or she cannot, for reasons stated, present by affidavit facts essential to justify the party's opposition, the presiding officer may refuse the application for summary decision, order a continuance to permit affidavits to be obtained, or make an order as is appropriate. A determination to that effect must be made a matter of record.

(d)(1) The presiding officer need not consider a motion for summary disposition unless its resolution will serve to expedite the proceeding if the motion is granted. The presiding officer may dismiss summarily or hold in abeyance untimely motions filed shortly before the hearing commences or during the hearing if the other parties or the presiding officer would be required to divert substantial resources from the hearing in order to respond adequately to the motion and thereby extend the proceeding.

(2) The presiding officer shall render the decision sought if the filings in the proceeding, depositions, answers to interrogatories, and admissions on file, together with the statements of the parties and the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law. However, in any proceeding involving a construction permit for a production or utilization facility, the procedure described in this section may be used only for the determination of specific subordinate issues and may not be used to determine the ultimate issue as to whether the permit shall be issued.

(e) The presiding officer shall issue an order no later than forty (40) days after any responses to the summary disposition motion are filed, indicating whether the motion is granted, or denied, and the bases therefore.

§ 2.711 Evidence.

[Top of File]

(a) General. Every party to a proceeding has the right to present oral or documentary evidence and rebuttal evidence and to conduct, in accordance with an approved cross-examination plan that contains the information specified in paragraph (c) of this section, any cross-examination required for full and true disclosure of the facts.

(b) Testimony. The parties shall submit direct testimony of witnesses in written form, unless otherwise ordered by the presiding officer on the basis of objections presented. In any proceeding in which advance written testimony is to be used, each party shall serve copies of its proposed written testimony on every other party at least fifteen (15) days in advance of the session of the hearing at which its testimony is to be presented. The presiding officer may permit the introduction of written testimony not so served, either with the consent of all parties present or after they have had a reasonable opportunity to examine it. Written testimony must be incorporated into the transcript of the record as if read or, in the discretion of the presiding officer, may be offered and admitted in evidence as an exhibit.

(c) Cross-examination. (1) The presiding officer shall require a party seeking an opportunity to cross-examine to request permission to do so in accordance with a schedule established by the presiding officer. A request to conduct cross-examination must be accompanied by a cross-examination plan containing the following information:

(i) A brief description of the issue or issues on which cross-examination will be conducted;

(ii) The objective to be achieved by cross-examination; and

(iii) The proposed line of questions that may logically lead to achieving the objective of the cross-examination.

(2) The cross-examination plan may be submitted only to the presiding officer and must be kept by the presiding officer in confidence until issuance of the initial decision on the issue being litigated. The presiding officer shall then provide each cross-examination plan to the Commission's Secretary for inclusion in the official record of the proceeding.

(d) Non-applicability to subpart B proceedings. Paragraphs (b) and (c) of this section do not apply to proceedings initiated under subpart B of this part for modification, suspension, or revocation of a license or to proceedings for imposition of a civil penalty, unless otherwise directed by the presiding officer.

(e) Admissibility. Only relevant, material, and reliable evidence which is not unduly repetitious will be admitted. Immaterial or irrelevant parts of an admissible document will be segregated and excluded so far as is practicable.

(f) Objections. An objection to evidence must briefly state the grounds of objection. The transcript must include the objection, the grounds, and the ruling. Exception to an adverse ruling is preserved without notation on-the-record.

(g) Offer of proof. An offer of proof, made in connection with an objection to a ruling of the presiding officer excluding or rejecting proffered oral testimony, must consist of a statement of the substance of the proffered evidence. If the excluded evidence is in written form, a copy must be marked for identification. Rejected exhibits, adequately marked for identification, must be retained in the record.

(h) Exhibits. A written exhibit will not be received in evidence unless the original and two copies are offered and a copy is furnished to each party, or the parties have been previously furnished with copies or the presiding officer directs otherwise. The presiding officer may permit a party to replace with a true copy an original document admitted in evidence.

(i) Official record. An official record of a government agency or entry in an official record may be evidenced by an official publication or by a copy attested by the officer having legal custody of the record and accompanied by a certificate of his custody.

(j) Official notice. (1) The Commission or the presiding officer may take official notice of any fact of which a court of the United States may take judicial notice or of any technical or scientific fact within the knowledge of the Commission as an expert body. Each fact officially noticed under this paragraph must be specified in the record with sufficient particularity to advise the parties of the matters which have been noticed or brought to the attention of the parties before final decision and each party adversely affected by the decision shall be given opportunity to controvert the fact.

(2) If a decision is stated to rest in whole or in part on official notice of a fact which the parties have not had a prior opportunity to controvert, a party may controvert the fact by filing an appeal from an initial decision or a petition for reconsideration of a final decision. The appeal must clearly and concisely set forth the information relied upon to controvert the fact.

§ 2.712 Proposed findings and conclusions.

[Top of File]

(a) Any party to a proceeding may, or if directed by the presiding officer shall, file proposed findings of fact and conclusions of law, briefs and a proposed form of order or decision within the time provided by this section, except as otherwise ordered by the presiding officer:

(1) The party who has the burden of proof shall, within thirty (30) days after the record is closed, file proposed findings of fact and conclusions of law and briefs, and a proposed form of order or decision.

(2) Other parties may file proposed findings, conclusions of law and briefs within forty (40) days after the record is closed.

(3) A party who has the burden of proof may reply within five (5) days after filing of proposed findings and conclusions of law and briefs by other parties.

(b) Failure to file proposed findings of fact, conclusions of law, or briefs when directed to do so may be considered a default, and an order or initial decision may be entered accordingly.

(c) Proposed findings of fact must be clearly and concisely set forth in numbered paragraphs and must be confined to the material issues of fact presented on-the-record, with exact citations to the transcript of record and exhibits in support of each proposed finding. Proposed conclusions of law must be set forth in numbered paragraphs as to all material issues of law or discretion presented on-the-record. An intervenor's proposed findings of fact and conclusions of law must be confined to issues which that party placed in controversy or sought to place in controversy in the proceeding.

§ 2.713 Initial decision and its effect.

[Top of File]

(a) After hearing, the presiding officer will render an initial decision which will constitute the final action of the Commission forty (40) days after its date unless any party petitions for Commission review in accordance with § 2.341 or the Commission takes review sua sponte.

(b) Where the public interest so requires, the Commission may direct that the presiding officer certify the record to it without an initial decision, and may:

(1) Prepare its own decision which will become final unless the Commission grants a petition for reconsideration under § 2.345; or

(2) Omit an initial decision on a finding that due and timely execution of its functions imperatively and unavoidably so requires.

(c) An initial decision will be in writing and will be based on the whole record and supported by reliable, probative, and substantial evidence. The initial decision will include:

(1) Findings, conclusions, and rulings, with the reasons or basis for them, on all material issues of fact, law, or discretion presented on-the-record;

(2) All facts officially noticed and relied on in making the decision;

(3) The appropriate ruling, order, or denial of relief with the effective date;

(4) The time within which a petition for review of the decision may be filed, the time within which answers in support of or in opposition to a petition for review filed by another party may be filed and, in the case of an initial decision which may become final in accordance with paragraph (a) of this section, the date when it may become final.

Subpart H--Rulemaking

[Top of File]

§ 2.800 Scope and applicability.

(a) This subpart governs the issuance, amendment, and repeal of regulations in which participation by interested persons is prescribed under Section 553 of title 5 of the U.S. Code.

(b) The procedures in §§ 2.804 through 2.810 apply to all rulemakings.

(c) The procedures in §§ 2.802 through 2.803 apply to all petitions for rulemaking except for initial applications for standard design certification rulemaking under subpart B of part 52 of this chapter, and subsequent petitions for amendment of an existing design certification rule filed by the original applicant for the design certification rule.

(d) The procedures in §§ 2.811 through 2.819, as supplemented by the provisions of subpart B of part 52, apply to standard design certification rulemaking.

[35 FR 11459, July 17, 1970; 72 FR 49481, Aug. 28, 2007]

§ 2.801 Initiation of rulemaking.

[Top of File]

Rulemaking may be initiated by the Commission at its own instance, on the recommendation of another agency of the United States, or on the petition of any other interested person, including an application for design certification under subpart B of part 52 of this chapter.

[72 FR 49482, Aug. 28, 2007]

§ 2.802 Petition for rulemaking.

[Top of File]

(a) Any interested person may petition the Commission to issue, amend or rescind any regulation. The petition should be addressed to the Secretary, Attention: Rulemakings and Adjudications Staff, and sent either by mail addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by facsimile; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, e-mail, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(b) A prospective petitioner may consult with the NRC before filing a petition for rulemaking by writing to the Chief, Rulemaking, Directives, and Editing Branch, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. A prospective petitioner also may telephone the Rulemaking, Directives, and Editing Branch on (301) 415-7163, or toll free on (800) 368-5642, or send e-mail to *NRCREP@nrc.gov*.

(1) In any consultation prior to the filing of a petition for rulemaking, the assistance that may be provided by the NRC staff is limited to --

(i) Describing the procedure and process for filing and responding to a petition for rulemaking;

(ii) Clarifying an existing NRC regulation and the basis for the regulation; and

(iii) Assisting the prospective petitioner to clarify a potential petition so that the Commission is able to understand the nature of the issues of concern to the petitioner.

(2) In any consultation prior to the filing of a petition for rulemaking, in providing the assistance permitted in paragraph (b)(1) of this section, the NRC staff will not draft or develop text or alternative approaches to address matters in the prospective petition for rulemaking.

(c) Each petition filed under this section shall:

(1) Set forth a general solution to the problem or the substance or text of any proposed regulation or amendment, or specify the regulation which is to be revoked or amended;

(2) State clearly and concisely the petitioner's grounds for and interest in the action requested;

(3) Include a statement in support of the petition which shall set forth the specific issues involved, the petitioner's views or arguments with respect to those issues, relevant technical, scientific or other data involved which is reasonably available to the petitioner, and such other pertinent information as the petitioner deems necessary to support the action sought. In support of its petition, petitioner should note any specific cases of which petitioner is aware where the current rule is unduly burdensome, deficient, or needs to be strengthened.

(d) The petitioner may request the Commission to suspend all or any part of any licensing proceeding to which the petitioner is a party pending disposition of the petition for rulemaking.

(e) If it is determined that the petition includes the information required by paragraph (c) of this section and is complete, the Director, Division of Administrative Services, Office of Administration, or designee, will assign a docket number to the petition, will cause the petition to be formally docketed, and will make a copy of the docketed petition available at the NRC Web site, *http://www.nrc.gov.* Public comment may be requested by publication of a notice of the docketing of the petition in the Federal Register, or, in appropriate cases, may be invited for the first time upon publication in the Federal Register of a proposed rule developed in response to the petition. Publication will be limited by the requirements of Section 181 of the Atomic Energy Act of 1954, as amended, and may be limited by order of the Commission.

(f) If it is determined by the Executive Director for Operations that the petition does not include the information required by paragraph (c) of this section and is incomplete, the petitioner will be notified of that determination and the respects in which the petition is deficient and will be accorded an opportunity to submit additional data. Ordinarily this determination will be made within 30 days from the date of receipt of the petition by the Office of the Secretary of the Commission. If the petitioner does not submit additional data to correct the deficiency within 90 days from the date of notification to the petitioner that the petition is incomplete, the petition may be returned to the petitioner without prejudice to the right of the petitioner to file a new petition.

(g) The Director, Division of Administrative Services, Office of Administration, will prepare on a semiannual basis a summary of petitions for rulemaking before the Commission, including the status of each petition. A copy of the report will be available for public inspection and copying at the NRC Web site, *http://www.nrc.gov,* and/or at the NRC Public Document Room.

[44 FR 61322, Oct. 25, 1979, as amended at 46 FR 35487, July 9, 1981; 52 FR 31609, Aug. 21, 1987; 53 FR 52993, Dec. 30, 1988; 54 FR 53315, Dec. 28, 1989; 56 FR 10360, Mar. 12, 1991; 59 FR 44895, Aug. 31, 1994; 59 FR 60552, Nov. 25, 1994; 62 FR 27495, May 20, 1997; 63 FR 15742, Apr. 1, 1998; 64 FR 48948, Sept. 9, 1999; 68 FR 58799, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 73 FR 5717, Jan. 31, 2008]

§ 2.803 Determination of petition.

[Top of File]

No hearing will be held on the petition unless the Commission deems it advisable. If the Commission determines that sufficient reason exists, it will publish a notice of proposed rulemaking. In any other case, it will deny the petition and will notify the petitioner with a simple statement of the grounds of denial.

§ 2.804 Notice of proposed rulemaking.

[Top of File]

(a) Except as provided by paragraph (d) of this section, when the Commission proposes to adopt, amend, or repeal a regulation, it will cause to be published in the Federal Register a notice of proposed rulemaking, unless all persons subject to the notice are named and either are personally served or otherwise have actual notice in accordance with law.

(b) The notice will include:

(1) Either the terms or substance of the proposed rule, or a specification of the subjects and issues involved;

(2) The manner and time within which interested members of the public may comment, and a statement that copies of comments may be examined will be made available at the NRC Web site, http://www.nrc.gov;

(3) The authority under which the regulation is proposed;

(4) The time, place, and nature of the public hearing, if any;

(5) If a hearing is to be held, designation of the presiding officer and any special directions for the conduct of the hearing; and

(6) Such explanatory statement as the Commission may consider appropriate.

(c) The publication or service of notice will be made not less than fifteen (15) days prior to the time fixed for hearing, if any, unless the Commission for good cause stated in the notice provides otherwise.

(d) The notice and comment provisions contained in paragraphs (a), (b), and (c) of this section will not be required to be applied --

(1) To interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice; or

(2) When the Commission for good cause finds that notice and public comment are impracticable, unnecessary, or contrary to the public interest, and are not required by statute. This finding, and the reasons therefor, will be incorporated into any rule issued without notice and comment for good cause.

(e) The Commission shall provide for a 30-day post-promulgation comment period for --

(1) Any rule adopted without notice and comment under the good cause exception on paragraph (d)(2) of this section where the basis is that notice and comment is "impracticable" or "contrary to the public interest."

(2) Any interpretative rule, or general statement of policy adopted without notice and comment under paragraph (d)(1) of this section, except for those cases for which the Commission finds that such procedures would serve no public interest, or would be so burdensome as to outweigh any foreseeable gain.

(f) For any post-promulgation comments received under paragraph (e) of this section, the Commission shall publish a statement in the Federal Register containing an evaluation of the significant comments and any revisions of the rule or policy statement made as a result of the comments and their evaluation.

[27 FR 377, Jan. 13, 1962, as amended at 50 FR 13010, Apr. 2, 1985; 64 FR 48948, Sept. 9, 1999]

§ 2.805 Participation by interested persons.

[Top of File]

(a) In all rulemaking proceedings conducted under the provisions of § 2.804(a), the Commission will afford interested persons an opportunity to participate through the submission of statements, information, opinions, and arguments in the manner stated in the notice. The Commission may grant additional reasonable opportunity for the submission of comments.

(b) The Commission may hold informal hearings at which interested persons may be heard, adopting procedures which in its judgment will best serve the purpose of the hearing.

[27 FR 377, Jan. 13, 1962, as amended at 50 FR 13010, Apr. 2, 1985; 50 FR 15865, Apr. 22, 1985]

§ 2.806 Commission action.

[Top of File]

The Commission will incorporate in the notice of adoption of a regulation a concise general statement of its basis and purpose, and will cause the notice and regulation to be published in the Federal Register or served upon affected persons.

§ 2.807 Effective date.

[Top of File]

The notice of adoption of a regulation will specify the effective date. Publication or service of the notice and regulation, other than one granting or recognizing exemptions or relieving from restrictions, will be made not less than thirty (30) days prior to the effective date unless the Commission directs otherwise on good cause found and published in the notice of rule making.

§ 2.808 Authority of the Secretary to rule on procedural matters.

[Top of File]

When briefs, motions or other documents listed herein are submitted to the Commission itself, as opposed to officers who have been delegated authority to act for the Commission, the Secretary or the Assistant Secretary is authorized to:

(a) Prescribe schedules for the filing of statements, information, briefs, motions, responses or other pleadings, where such schedules may differ from those elsewhere prescribed in these rules or where these rules do not prescribe a schedule;

(b) Rule on motions for extensions of time;

(c) Reject motions, briefs, pleadings, and other documents filed with the Commission later than the time prescribed by the Secretary or the Assistant Secretary or established by an order, rule, or regulation of the Commission unless good cause is shown for the late filing; and

(d) Prescribe all procedural arrangements relating to any oral argument to be held before the Commission.

[39 FR 24219, July 1, 1974; 72 FR 49152, Aug. 28, 2007]

§ 2.809 Participation by the Advisory Committee on Reactor Safeguards.

[Top of File]

(a) In its advisory capacity to the Commission, the ACRS may recommend that the Commission initiate rulemaking in a particular area. The Commission will respond to such rulemaking recommendation in writing within 90 days, noting its intent to implement, study, or defer action on the recommendation. In the event the Commission decides not to accept or decides to defer action on the recommendation, it will give its reasons for doing so. Both the ACRS recommendation and the Commission's response will be made available at the NRC Web site, *http://www.nrc.gov,* following transmittal of the Commission's response to the ACRS.

(b) When a rule involving nuclear safety matters within the purview of the ACRS is under development by the NRC Staff, the Staff will ensure that the ACRS is given an opportunity to provide advice at appropriate stages and to identify issues to be considered during rulemaking hearings.

[46 FR 22358, Apr. 17, 1981, as amended at 64 FR 48948, Sept. 9, 1999]

§ 2.810 NRC size standards.

[Top of File]

The NRC shall use the size standards contained in this section to determine whether a licensee qualifies as a small entity in its regulatory programs.

(a) A small business is a for-profit concern and is a --

(1) Concern that provides a service or a concern not engaged in manufacturing with average gross receipts of $6.5 million or less over its last 3 completed fiscal years; or

(2) Manufacturing concern with an average number of 500 or fewer employees based upon employment during each pay period for the preceding 12 calendar months.

(b) A small organization is a not-for-profit organization which is independently owned and operated and has annual gross receipts of $6.5 million or less.

(c) A small governmental jurisdiction is a government of a city, county, town, township, village, school district, or special district with a population of less than 50,000.

(d) A small educational institution is one that is --

(1) Supported by a qualifying small governmental jurisdiction; or

(2) Not state or publicly supported and has 500 or fewer employees.

(e) For the purposes of this section, the NRC shall use the Small Business Administration definition of receipts (13 CFR 121.402(b)(2)). A licensee who is a subsidiary of a large entity does not qualify as a small entity for purposes of this section.

(f) Whenever appropriate in the interest of administering statutes and regulations within its jurisdiction, it is the practice of the NRC to answer inquiries from small entities concerning information on and advice about compliance with the statutes and regulations that affect them. To help small entities obtain information quickly, the NRC has established a toll-free telephone number at 1-800-368-5642.

[60 FR 18346, Apr. 11, 1995, as amended at 62 FR 26220, May 13, 1997; 72 FR 44953, Aug. 10, 2007; 73 FR 42673, July 23, 2008]

§ 2.811 Filing of standard design certification application; required copies.

[Top of File]

(a) *Serving of applications*. The signed original of an application for a standard design certification, including all amendments to the applications, must be sent either by mail addressed: ATTN: Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by facsimile; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland, between the hours of 7:30 a.m. and 4:15 p.m. eastern time; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, email, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/esubmittals.html*, by calling (301) 415– 0439, by e-mail at *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. If the communication is on paper, the signed original must be sent.

(b) *Form of application*. Each original of an application and an amendment of an application must meet the requirements in § 2.813.

(c) *Capability to provide additional copies*. The applicant shall maintain the capability to generate additional copies of the general information and the safety analysis report, or part thereof or amendment thereto, for subsequent distribution in accordance with the written instructions of the Director, Office of New Reactors, the Director, Office of Nuclear Reactor Regulation, or the Director, Office of Nuclear Material Safety and Safeguards, as appropriate.

(d) *Public hearing copy*. In any hearing conducted under subpart O of this part for a design certification rulemaking, the applicant must make a copy of the updated application available at the public hearing for the use of any other parties to the proceeding, and shall certify that the updated copies of the application contain the current contents of the application submitted in accordance with the requirements of this part.

(e) *Pre-application consultation*. A prospective applicant for a standard design certification may consult with the NRC before filing an application by writing to the Director, Division of New Reactor Licensing, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, with respect to the subject matters listed in § 2.802(a)(1)(i) through (iii) of this chapter. A prospective petitioner also may telephone the Rulemaking, Directives, and Editing Branch on (301) 415–7163, or toll free on (800) 368–5642, or send e-mail to *NRCREP@nrc.gov* on these subject matters. In addition, a prospective applicant may confer informally with the NRC staff BEFORE filing an application for a standard design certification, and the limitations in § 2.802(a)(2) do not apply.

[72 FR 49482, Aug. 28, 2007]

§ 2.813 Written communications.

[Top of File]

(a) *General requirements*. All correspondence, reports, and other written communications from the applicant to the Nuclear Regulatory Commission concerning the regulations in this subpart, and parts 50, 52, and 100 of this chapter must be sent either by mail addressed: ATTN: Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland, between the hours of 7:30 a.m. and 4:15 p.m. eastern time; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, e-mail, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/esubmittals.html*, by calling (301) 415–0439, by e-mail at *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. If the communication is on paper, the signed original must be sent. If a submission due date falls on a Saturday, Sunday, or Federal holiday, the next Federal working day becomes the official due date.

(b) *Form of communications*. All paper copies submitted to meet the requirements set forth in paragraph (a) of this section must be typewritten, printed or otherwise reproduced in permanent form on unglazed paper. Exceptions to these requirements imposed on paper submissions may be granted for the submission of micrographic, photographic, or similar forms.

(c) *Regulation governing submission*. An applicant submitting correspondence, reports, and other written communications under the regulations of this chapter is requested but not required to cite whenever practical, in the upper right corner of the first page of the submission, the specific regulation or other basis requiring submission.

[72 FR 49482, Aug. 28, 2007]

§ 2.815 Docketing and acceptance review.

[Top of File]

(a) Each application for a standard design certification will be assigned a docket number. However, to allow a

determination as to whether an application is complete and acceptable for docketing, it will be initially treated as a tendered application. A copy of the tendered application will be available for public inspection at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room. Generally, the determination on acceptability for docketing will be made within a period of 30 days. The Commission may decide to determine acceptability on the basis of the technical adequacy of the application as well as its completeness.

(b) If the Commission determines that a tendered application is complete and acceptable for docketing, a docket number will be assigned to the application or part thereof, and the applicant will be notified of the determination.

[72 FR 49482, Aug. 28, 2007]

§ 2.817 Withdrawal of application.

[Top of File]

(a) The Commission may permit an applicant to withdraw an application for a standard design certification before the issuance of a notice of proposed rulemaking on such terms and conditions as the Commission may prescribe, or may, on receiving a request for withdrawal of an application, deny the application or dismiss it without prejudice. The NRC will publish in the **Federal Register** a document withdrawing the application, if the notice of receipt of the application, an advance notice of proposed rulemaking, or a notice of proposed rulemaking for the standard design certification has been previously published in the **Federal Register**. If the notice of receipt, advance notice of proposed rulemaking or notice of proposed rulemaking was published on the NRC Web site, then the notice of action on the withdrawal will also be published on the NRC Web site.

(b) The withdrawal of an application does not authorize the removal of any document from the files of the Commission.

[72 FR 49482, Aug. 28, 2007]

§ 2.819 Denial of application for failure to supply information.

[Top of File]

(a) The Commission may deny an application for a standard design certification if an applicant fails to respond to a request for additional information within 30 days from the date of the request, or within such other time as may be specified.

(b) If the Commission denies an application because the applicant has failed to respond in a timely fashion to a request for additional information, the NRC will publish in the **Federal Register** a notice of denial and will notify the applicant with a simple statement of the grounds of denial. If a notice of receipt of application, advance notice of proposed rulemaking, or notice of proposed rulemaking for a standard design certification was published on the NRC Web site, then the notice of action on the denial will also be published on the NRC Web site.

[72 FR 49483, Aug. 28, 2007]

Subpart I--Special Procedures Applicable to Adjudicatory Proceedings Involving Restricted Data and/or National Security Information

[Top of File]

Source: 41 FR 53329, Dec. 6, 1976, unless otherwise noted.

§ 2.900 Purpose.

This subpart is issued pursuant to section 181 of the Atomic Energy Act of 1954, as amended, and section 201 of the Energy Reorganization Act of 1974, as amended, to provide such procedures in proceedings subject to this part as will effectively safeguard and prevent disclosure of Restricted Data and National Security Information to unauthorized persons, with minimum impairment of procedural rights.

§ 2.901 Scope of subpart I.

[Top of File]

This subpart applies, as applicable, to all proceedings under subparts G, J, K, L, M, and N of this part.

[69 FR 2264, Jan. 14, 2004]

§ 2.902 Definitions.

[Top of File]

As used in this subpart:

(a) *Government agency* means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America, which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

(b) *Interested party* means a party having an interest in the issue or issues to which particular Restricted Data or National Security Information is relevant. Normally the interest of a party in an issue may be determined by examination of the notice of hearing, the answers and replies.

(c) The phrase *introduced into a proceeding* refers to the introduction or incorporation of testimony or documentary matter into any part of the official record of a proceeding subject to this part.

(d) *National Security Information* means information that has been classified pursuant to Executive Order 12356.

(e) *Party*, in the case of proceedings subject to this subpart includes a person admitted as a party under § 2.309 or an interested State admitted under § 2.315(c).

[41 FR 53329, Dec. 6, 1976, as amended at 47 FR 56314, Dec. 16, 1982; 69 FR 2264, Jan. 14, 2004]

§ 2.903 Protection of restricted data and national security information.

[Top of File]

Nothing in this subpart shall relieve any person from safeguarding Restricted Data or National Security Information in accordance with the applicable provisions of laws of the United States and rules, regulations or orders of any Government Agency.

§ 2.904 Classification assistance.

[Top of File]

On request of any party to a proceeding or of the presiding officer, the Commission will designate a representative to advise and assist the presiding officer and the parties with respect to security classification of information and the safeguards to be observed.

§ 2.905 Access to restricted data and national security information for parties; security clearances.

[Top of File]

(a) Access to restricted data and national security information introduced into proceedings. Except as provided in paragraph (h) of this section, restricted data or national security information introduced into a proceeding subject to this part will be made available to any interested party having the required security clearance; to counsel for an interested party provided the counsel has the required security clearance; and to such additional persons having the required security clearance as the Commission or the presiding officer determined are needed by such party for adequate preparation or presentation of his case. Where the interest of such party will not be prejudiced, the Commission or presiding officer may postpone action upon an application for access under this paragraph until after a notice of hearing, answers, and replies have been filed.

(b) Access to Restricted Data or National Security Information not introduced into proceedings.

(1) On application showing that access to Restricted Data or National Security Information may be required for the preparation of a party's case, and except as provided in paragraph (h) of this section, the Commission or the presiding officer will issue an order granting access to such Restricted Data or National Security Information to the party upon his obtaining the required security clearance, to counsel for the party upon their obtaining the required security clearance, and to such other individuals as may be needed by the party for the preparation and presentation of his case upon their obtaining the required clearance.

(2) Where the interest of the party applying for access will not be prejudiced, the Commission or the presiding officer may postpone action on an application pursuant to this paragraph until after a notice of hearing, answers and replies have been filed.

(c) The Commission will consider requests for appropriate security clearances in reasonable numbers pursuant to this section. A reasonable charge will be made by the Commission for costs of security clearance pursuant to this section.

(d) The presiding officer may certify to the Commission for its consideration and determination any questions relating to access to Restricted Data or National Security Information arising under this section. Any party affected by a determination or order of the presiding officer under this section may appeal forthwith to the Commission from the determination or order. The filing by the staff of an appeal from an order of a presiding officer granting access to Restricted Data or National Security Information shall stay the order pending determination of the appeal by the Commission.

(e) Application granting access to restricted data or national security information.

(1) An application under this section for orders granting access to restricted data or national security information not received from another Government agency will normally be acted upon by the presiding officer, or if a proceeding is not before a presiding officer, by the Commission.

(2) An application under this section for orders granting access to restricted data or national security information where the information has been received by the Commission from another Government agency will be acted upon by the Commission.

(f) To the extent practicable, an application for an order granting access under this section shall describe the subjects of Restricted Data or National Security Information to which access is desired and the level of classification (confidential, secret or other) of the information; the reasons why access to the information is requested; the names of individuals for whom clearances are requested; and the reasons why security clearances are being requested for those individuals.

(g) On the conclusion of a proceeding, the Commission will terminate all orders issued in the proceeding for access to Restricted Data or National Security Information and all security clearances granted pursuant to them; and may issue such orders requiring the disposal of classified matter received pursuant to them or requiring the observance of other procedures to safeguard such classified matter as it deems necessary to protect Restricted Data or National Security Information.

(h) Refusal to grant access to restricted data or national security information.

(1) The Commission will not grant access to restricted data or national security information unless it determines that the granting of access will not be inimical to the common defense and security.

(2) Access to Restricted Data or National Security Information which has been received by the Commission from another Government agency will not be granted by the Commission if the originating agency determines in writing that access should not be granted. The Commission will consult the originating agency prior to granting access to such data or information received from another Government agency.

§ 2.906 Obligation of parties to avoid introduction of restricted data or national security information.

[Top of File]

It is the obligation of all parties in a proceeding subject to this part to avoid, where practicable, the introduction of Restricted Data or National Security Information into the proceeding. This obligation rests on each party whether or not all other parties have the required security clearance.

§ 2.907 Notice of intent to introduce restricted data or national security information.

[Top of File]

(a) If, at the time of publication of a notice of hearing, it appears to the staff that it will be impracticable for it to avoid the introduction of Restricted Data or National Security Information into the proceeding, it will file a notice of intent to introduce Restricted Data or National Security Information.

(b) If, at the time of filing of an answer to the notice of hearing it appears to the party filing that it will be impracticable for the party to avoid the introduction of Restricted Data or National Security Information into the proceeding, the party shall state in the answer a notice of intent to introduce Restricted Data or National Security Information into the proceeding.

(c) If, at any later stage of a proceeding, it appears to any party that it will be impracticable to avoid the introduction of Restricted Data or National Security Information into the proceeding, the party shall give to the other parties prompt written notice of intent to introduce Restricted Data or National Security Information into the proceeding.

(d) Restricted Data or National Security Information shall not be introduced into a proceeding after publication of a notice of hearing unless a notice of intent has been filed in accordance with § 2.908, except as permitted in the discretion of the presiding officer when it is clear that no party or the public interest will be prejudiced.

§ 2.908 Contents of notice of intent to introduce restricted data or other national security information.

[Top of File]

(a) A party who intends to introduce Restricted Data or other National Security Information shall file a notice of intent with the Secretary. The notice shall be unclassified and, to the extent consistent with classification requirements, shall include the following:

(1) The subject matter of the Restricted Data or other National Security Information which it is anticipated will be involved;

(2) The highest level of classification of the information (confidential, secret, or other);

(3) The stage of the proceeding at which he anticipates a need to introduce the information; and

(4) The relevance and materiality of the information to the issues on the proceeding.

(b) In the discretion of the presiding officer, such notice, when required by § 2.907(c), may be given orally on the record.

§ 2.909 Rearrangement or suspension of proceedings.

[Top of File]

In any proceeding subject to this part where a party gives a notice of intent to introduce Restricted Data or other National Security Information, and the presiding officer determines that any other interested party does not have required security clearances, the presiding officer may in his discretion:

(a) Rearrange the normal order of the proceeding in a manner which gives such interested parties an opportunity to obtain required security clearances with minimum delay in the conduct of the proceeding.

(b) Suspend the proceeding or any portion of it until all interested parties have had opportunity to obtain required security clearances. No proceeding shall be suspended for such reasons for more than 100 days except with the consent of all parties or on a determination by the presiding officer that further suspension of the proceeding would not be contrary to the public interest.

(c) Take such other action as he determines to be in the best interest of all parties and the public.

§ 2.910 Unclassified statements required.

[Top of File]

(a) Whenever Restricted Data or other National Security Information is introduced into a proceeding, the party offering it shall submit to the presiding officer and to all parties to the proceeding an unclassified statement setting forth the information in the classified matter as accurately and completely as possible.

(b) In accordance with such procedures as may be agreed upon by the parties or prescribed by the presiding officer, and after notice to all parties and opportunity to be heard thereon, the presiding officer shall determine whether the unclassified statement or any portion of it, together with any appropriate modifications suggested by any party, may be substituted for the classified matter or any portion of it without prejudice to the interest of any party or to the public interest.

(c) If the presiding officer determines that the unclassified statement, together with such unclassified modifications as he finds are necessary or appropriate to protect the interest of other parties and the public interest, adequately sets forth information in the classified matter which is relevant and material to the issues in the proceeding, he shall direct that the classified matter be excluded from the record of the proceeding. His determination will be considered by the Commission as a part of the decision in the event of review.

(d) If the presiding officer determines that an unclassified statement does not adequately present the information contained in the classified matter which is relevant and material to the issues in the proceeding, he shall include his reasons in his determination. This determination shall be included as part of the record and will be considered by the Commission in the event of review of the determination.

(e) The presiding officer may postpone all or part of the procedures established in this section until the reception of all other evidence has been completed. Service of the unclassified statement required in paragraph (a) of this section shall not be postponed if any party does not have access to Restricted Data or other National Security Information.

§ 2.911 Admissibility of restricted data or other national security information.

[Top of File]

A presiding officer shall not receive any Restricted Data or other National Security Information in evidence unless:

(a) The relevance and materiality of the Restricted Data or other National Security Information to the issues in the preceeding, and its competence, are clearly established; and

(b) The exclusion of the Restricted Data or other National Security Information would prejudice the interests of a party or the public interest.

§ 2.912 Weight to be attached to classified evidence.

[Top of File]

In considering the weight and effect of any Restricted Data or other National Security Information received in evidence to which an interested party has not had opportunity to receive access, the presiding officer and the Commission shall give to such evidence such

weight as is appropriate under the circumstances, taking into consideration any lack of opportunity to rebut or impeach the evidence.

§ 2.913 Review of Restricted Data or other National Security Information received in evidence.

[Top of File]

At the close of the reception of evidence, the presiding officer shall review the record and shall direct that any Restricted Data or other National Security Information be expunged from the record where such expunction would not prejudice the interests of a party or the public interest. Such directions by the presiding officer will be considered by the Commission in the event of review of the determinations of the presiding officer.

Subpart J--Procedures Applicable to Proceedings for the Issuance of Licenses for the Receipt of High-Level Radioactive Waste at a Geologic Repository

[Top of File]

Source: 54 FR 14944, Apr. 14, 1989, unless otherwise noted.

§ 2.1000 Scope of subpart J.

The rules in this subpart, together with the rules in subparts C and G of this part, govern the procedure for an application for authorization to construct a high-level radioactive waste repository at a geologic repository operations area noticed under §§ 2.101(f)(8) or 2.105(a)(5), and for an application for a license to receive and possess high level radioactive waste at a geologic repository operations area. The procedures in this subpart take precedence over those in 10 CFR part 2, subpart C, except for the following provisions: §§ 2.301; 2.303; 2.307; 2.309; 2.312; 2.313; 2.314; 2.315; 2.316; 2.317(a); 2.318; 2.319; 2.320; 2.321; 2.322; 2.323; 2.324; 2.325; 2.326; 2.327; 2.328; 2.330; 2.331; 2.333; 2.335; 2.338; 2.339; 2.342; 2.343; 2.344; 2.345; 2.346; 2.348; and 2.390. The procedures in this subpart take precedence over those in 10 CFR part 2, subpart G, except for the following provisions: §§ 2.701, 2.702; 2.703; 2.708; 2.709; 2.710; 2.711; 2.712.

[63 FR 71736, Dec. 30, 1998; 69 FR 2264, Jan. 14, 2004]

§ 2.1001 Definitions.

[Top of File]

Bibliographic header means the minimum series of descriptive fields that a potential party, interested governmental participant, or party must submit with a document or other material.

Circulated draft means a nonfinal document circulated for supervisory concurrence or signature in which the original author or others in the concurrence process have non-concurred. A "circulated draft" meeting the above criterion includes a draft of a document that eventually becomes a final document, and a draft of a document that does not become a final document due to either a decision not to finalize the document or the passage of a substantial period of time in which no action has been taken on the document.

Complex document means a document that consists (entirely or in part) of electronic files having substantial portions that are neither textual nor image in nature, and graphic or other Binary Large Objects that exceed 50 megabytes and cannot logically be divided. For example, specialized submissions may include runtime executable software, viewer or printer executables, dynamic link library (.dll) files, large data sets associated with an executable, and actual software code for analytical programs that a party may intend to introduce into the proceeding.

Document means any written, printed, recorded, magnetic, graphic matter, or other documentary material, regardless of form or characteristic.

Documentary material means:

(1) Any information upon which a party, potential party, or interested governmental participant intends to rely and/or to cite in support of its position in the proceeding for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area pursuant to parts 60 or 63 of this chapter, a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to parts 60 or 63 of this chapter;

(2) Any information that is known to, and in the possession of, or developed by the party that is relevant to, but does not support, that information or that party's position; and

(3) All reports and studies, prepared by or on behalf of the potential party, interested governmental participant, or party, including all related "circulated drafts," relevant to both the license application and the issues set forth in the Topical Guidelines in Regulatory Guide 3.69, regardless of whether they will be relied upon and/or cited by a party. The scope of documentary material shall be guided by the topical guidelines in the applicable NRC Regulatory Guide.

DOE means the U.S. Department of Energy or its duly authorized representatives.

Electronic docket means the NRC information system that receives, distributes, stores, and retrieves the Commission's adjudicatory docket materials.

Image means a visual likeness of a document, presented on a paper copy, microform, or a bit-map on optical or magnetic media.

Interested governmental participant means any person admitted under § 2.315(c) of this part to the proceeding on an application for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, and an application for a license to receive and possess high level radioactive waste at a geologic repository operations area under parts 60 and 63 of this chapter.

Large document means a document that consists of electronic files that are larger than 50 megabytes.

Licensing Support Network means the combined system that makes documentary material available electronically to parties, potential parties, and interested governmental participants to a proceeding for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area, and an application for a license to receive and possess high level radioactive waste at a geologic repository operations area under parts 60 and 63 of this chapter.

LSN Administrator means the person within the U.S. Nuclear Regulatory Commission responsible for coordinating access to and the integrity of data available on the Licensing Support Network. The LSN Administrator shall not be in any organizational unit that either represents the U.S. Nuclear Regulatory Commission staff as a party to the high-level waste repository licensing proceeding or is a part of the management chain reporting to the Director, Office of Nuclear Material Safety and Safeguards. For the purposes of this subpart, the organizational unit within the NRC selected to be the LSN Administrator shall not be considered to be a party to the proceeding.

Marginalia means handwritten, printed, or other types of notations added to a document excluding underlining and highlighting.

NRC means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.

Party for the purpose of this subpart means the DOE, the NRC staff, the host State, any affected unit of local government as defined in Section 2 of the Nuclear Waste Policy Act of 1982, as amended (42 U.S.C. 10101), any affected Indian Tribe as defined in section 2 of the Nuclear Waste Policy Act of 1982, as amended (42 U.S.C. 10101), and a person admitted under § 2.309 to the proceeding on an application for construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, and an application for a license to receive and possess high level radioactive waste at a geologic repository operations area under parts 60 and 63 of this chapter; provided that a host State, affected unit of local government, or affected Indian Tribe files a list of contentions in accordance with the provisions of § 2.309.

Personal record means a document in the possession of an individual associated with a party, interested governmental participant, or potential party that was not required to be created or retained by the party, interested governmental participant, or potential party, and can be retained or discarded at the possessor's sole discretion, or documents of a personal nature that are not associated with any business of the party, interested governmental participant, or potential party.

Potential party means any person who, during the period before the issuance of the first pre-hearing conference order under § 2.1021(d), is given access to the Licensing Support Network and who consents to comply with the regulations set forth in subpart J of this part, including the authority of the Pre-License Application Presiding Officer designated pursuant to § 2.1010.

Pre-license application electronic docket means the NRC's electronic information system that receives, distributes, stores, and maintains NRC pre-license application docket materials during the pre-license application phase.

Pre-license application phase means the time period before a construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter is docketed under § 2.101(f)(3), and the time period before a license application to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 is docketed under § 2.101(f)(3).

Preliminary draft means any nonfinal document that is not a circulated draft.

Presiding Officer means one or more members of the Commission, or an atomic safety and licensing board, or a named officer who has been delegated final authority in the matter, designated in the notice of hearing to preside.

Searchable full text means the electronic indexed entry of a document that allows the identification of specific words or groups of words within a text file.

Simple document means a document that consists of electronic files that are 50 megabytes or less.

Topical Guidelines means the set of topics set forth in Regulatory Guide 3.69, Topical Guidelines for the Licensing Support System, which are intended to serve as guidance on the scope of "documentary material".

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7795, Feb. 26, 1991; 63 FR 17136, Dec. 30, 1998; 66 FR 29465, May 31, 2001; 66 FR 55788, Nov. 2, 2001; 69 FR 2264, Jan. 14, 2004; 69 FR 32848, June 14, 2004]

§ 2.1002 [Reserved]

[Top of File]

§ 2.1003 Availability of material.

[Top of File]

(a) Subject to the exclusions in § 2.1005 and paragraphs (b), (c), and (e) of this section, DOE shall make available, no later than six months in advance of submitting its license application for a geologic repository, the NRC shall make available no later than thirty days after the DOE certification of compliance under § 2.1009(b), and each other potential party, interested governmental participant or party shall make available no later than ninety days after the DOE certification of compliance under § 2.1009(b)--

(1) An electronic file including bibliographic header for all documentary material (including circulated drafts but excluding preliminary drafts) generated by, or at the direction of, or acquired by, a potential party, interested governmental participant or party; provided, however, that an electronic file need not be provided for acquired documentary material that has already been made available by the potential party, interested governmental participant or party that originally created the documentary material. Concurrent with the production of the electronic files will be an authentication statement for posting on the LSN Web site that indicates where an authenticated image copy of the documents can be obtained.

(2) In electronic image format, subject to the claims of privilege in § 2.1006, graphic-oriented documentary material that includes raw data, computer runs, computer programs and codes, field notes, laboratory notes, maps, diagrams and photographs, which have been printed, scripted, or hand written. Text embedded within these documents need not be separately entered in searchable full text. A bibliographic header must be provided for all graphic-oriented documentary material. Graphic-oriented documents may include--

(i) Calibration procedures, logs, guidelines, data and discrepancies;

(ii) Gauge, meter and computer settings;

(iii) Probe locations;

(iv) Logging intervals and rates;

(v) Data logs in whatever form captured;

(vi) Text data sheets;

(vii) Equations and sampling rates;

(viii) Sensor data and procedures;

(ix) Data Descriptions;

(x) Field and laboratory notebooks;

(xi) Analog computer, meter or other device print-outs;

(xii) Digital computer print-outs;

(xiii) Photographs;

(xiv) Graphs, plots, strip charts, sketches;

(xv) Descriptive material related to the information identified in this paragraph.

(3) In an electronic file, subject to the claims of privilege in § 2.1006, only a bibliographic header for each item of documentary material that is not suitable for image or searchable full text.

(4) An electronic bibliographic header for each documentary material--

(i) For which a claim of privilege is asserted;

(ii) Which constitutes confidential financial or commercial information; or

(iii) Which constitutes Safeguards Information under § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

(b) Basic licensing documents generated by DOE, such as the Site Characterization Plan, the Environmental Impact Statement, and the

license application, or by NRC, such as the Site Characterization Analysis, and the Safety Evaluation Report, shall be made available in electronic form by the respective agency that generated the document.

(c) The participation of the host State in the pre-license application phase shall not affect the State's ability to exercise its disapproval rights under section 116(b)(2) of the Nuclear Waste Policy Act, as amended, 42 U.S.C. 10136(b)(2).

(d) This subpart shall not affect any independent right of a potential party, interested governmental participant or party to receive information.

(e) Each potential party, interested governmental participant or party shall continue to supplement its documentary material made available to other participants via the LSN with any additional material created after the time of its initial certification in accordance with paragraph (a)(1) through (a)(4) of this section until the discovery period in the proceeding has concluded.

[63 FR 71737, Dec. 30, 1998, as amended at 66 FR 2946, May 31, 2001; 69 FR 2264, Jan. 14, 2004; 69 FR 32848, June 14, 2004; 73 FR 63569, Oct. 24, 2008]

§ 2.1004 Amendments and additions.

[Top of File]

Any document that has not been provided to other parties in electronic form must be identified in an electronic notice and made available for inspection and copying by the potential party, interested governmental participant, or party responsible for the submission of the document within five days after it has been requested unless some other time is approved by the Pre-License Application Presiding Officer or the Presiding Officer designated for the high-level waste proceeding. The time allowed under this paragraph will be stayed pending Officer action on a motion to extend the time.

[63 FR 71737, Dec. 30, 1998]

§ 2.1005 Exclusions.

[Top of File]

The following material is excluded from the requirement to provide electronic access, either pursuant to § 2.1003, or through derivative discovery pursuant to § 2.1019(i)--

(a) Official notice materials;

(b) Reference books and text books;

(c) Material pertaining exclusively to administration, such as material related to budgets, financial management, personnel, office space, general distribution memoranda, or procurement, except for the scope of work on a procurement related to repository siting, construction, or operation, or to the transportation of spent nuclear fuel or high-level waste;

(d) Press clippings and press releases;

(e) Junk mail;

(f) References cited in contractor reports that are readily available;

(g) Classified material subject to subpart I of this part;

(h) Readily available references, such as journal articles and proceedings, which may be subject to copyright.

(i) Correspondence between a potential party, interested governmental participant, or party and the Congress of the United States.

[63 FR 71738, Dec. 30, 1998; 69 FR 32848, June 14, 2004]

§ 2.1006 Privilege.

[Top of File]

(a) Subject to the requirements in § 2.1003(a)(4), the traditional discovery privileges recognized in NRC adjudicatory proceedings and the exceptions from disclosure in § 2.390 may be asserted by potential parties, interested States, local governmental bodies, Federally-recognized Indian Tribes, and parties. In addition to Federal agencies, the deliberative process privilege may also be asserted by States, local governmental bodies, and Federally-recognized Indian Tribes.

(b) Any document for which a claim of privilege is asserted, but is denied in whole or in part by the Pre-License Application Presiding Officer or the Presiding Officer, must be provided in electronic form by the party, interested governmental participant, or potential party that asserted the claim to--

(1) The other participants; or

(2) To the Pre-License Application Presiding Officer or to the Presiding Officer, for entry into a Protective Order file, if the Pre-License Application Presiding Officer or the Presiding Officer so directs under §§ 2.1010(b) or 2.1018(c).

(c) Notwithstanding any availability of the deliberative process privilege under paragraph (a) of this section, circulated drafts not otherwise privileged shall be provided for electronic access pursuant to § 2.1003(a).

[63 FR 71738, Dec. 30, 1998; 64 FR 15920, Apr 2, 1999; 69 FR 2265, Jan. 14, 2004]

§ 2.1007 Access.

[Top of File]

(a)(1) A system to provide electronic access to the Licensing Support Network shall be provided at the headquarters of DOE, and at all DOE Local Public Document Rooms established in the vicinity of the likely candidate site for a geologic repository, beginning in the pre-license application phase.

(2) A system to provide electronic access to the Licensing Support Network shall be provided at the NRC Web site, *http://www.nrc.gov,* and/or at the NRC Public Document Room beginning in the pre-license application phase.

(3)[Reserved]

(b) Public availability of paper and electronic copies of the records of NRC and DOE, as well as duplication fees, and fee waiver for those records, is governed by the regulations of the respective agencies.

[63 FR 71738, Dec. 30, 1998, as amended at 64 FR 48948, Sept. 9, 1999]

§ 2.1008 [Reserved]

[Top of File]

§ 2.1009 Procedures.

[Top of File]

(a) Each potential party, interested governmental participant, or party shall--

(1) Designate an official who will be responsible for administration of its responsibility to provide electronic files of documentary material ;

(2) Establish procedures to implement the requirements in § 2.1003;

(3) Provide training to its staff on the procedures for implementation of the responsibility to provide electronic files of documentary material;

(4) Ensure that all documents carry the submitter's unique identification number;

(5) Cooperate with the advisory review process established by the NRC under § 2.1011(d).

(b) The responsible official designated under paragraph (a)(1) of this section shall certify to the Pre-License Application Presiding Officer that the procedures specified in paragraph (a)(2) of this section have been implemented, and that to the best of his or her knowledge, the documentary material specified in § 2.1003 has been identified and made electronically available. The initial certification must be made at the time the participant is required to comply with § 2.1003. The responsible official for the DOE shall also update this certification at the time DOE submits the license application.

[63 FR 71738, Dec. 30, 1998 as amended at 66 FR 29466, May 31, 2001]

§ 2.1010 Pre-license application presiding officer.

[Top of File]

(a)(1) The Commission may designate one or more members of the Commission, or an atomic safety and licensing board, or a named officer who has been delegated final authority on the matter to serve as the Pre-License Application Presiding Officer to rule on disputes

over the electronic availability of documents during the pre-license application phase, including disputes relating to privilege, and disputes relating to the implementation of the recommendations of the Advisory Review Panel established under § 2.1011(d).

(2) The Pre-License Application Presiding Officer shall be designated at such time during the pre-license application phase as the Commission finds it appropriate, but in any event no later than fifteen days after the DOE certification of initial compliance under § 2.1009 (b).

(b) The Pre-License Application Presiding Officer shall rule on any claim of document withholding to determine--

(1) Whether it is documentary material within the scope of this subpart;

(2) Whether the material is excluded under § 2.1005;

(3) Whether the material is privileged or otherwise excepted from disclosure under § 2.1006;

(4) If privileged, whether it is an absolute or qualified privilege;

(5) If qualified, whether the document should be disclosed because it is necessary to a proper decision in the proceeding;

(6) Whether the material should be disclosed under a protective order containing such protective terms and conditions (including affidavits of nondisclosure) as may be necessary and appropriate to limit the disclosure to potential parties, interested governmental participants, and parties in the proceeding, or to their qualified witnesses and counsel.

(i) The Pre-License Application Presiding Officer may issue an order requiring disclosure of Safeguards Information if—

(A) The Pre-License Application Presiding Officer finds that the individual seeking access to Safeguards Information in order to participate in an NRC adjudication has the requisite ''need to know,'' as defined in 10 CFR 73.2;

(B) The individual has undergone an FBI criminal history records check, unless exempt under 10 CFR 73.22(b)(3) or 73.23(b)(3), as applicable, by submitting fingerprints to the NRC Office of Administration, Security Processing Unit, Mail Stop T–6E46, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, and otherwise following the procedures in 10 CFR 73.57(d) for submitting and processing fingerprints. However, before a final adverse determination by the NRC Office of Administration on an individual's criminal history records check is made, the individual shall be afforded the protections provided by 10 CFR 73.57; and

(C) The NRC Office of Administration has found, based upon a background check, that the individual is trustworthy and reliable, unless exempt under 10 CFR 73.22(b)(3) or 73.23(b)(3), as applicable. In addition to the protections provided by 10 CFR 73.57 for adverse determinations based on criminal history records checks, the Office of Administration must take the following actions before making a final adverse determination on an individual's background check for trustworthiness and reliability. The Office of Administration will:

(1) For the purpose of assuring correct and complete information, provide to the individual any records, in addition to those required to be provided under 10 CFR 73.57(e)(1), that were considered in the trustworthiness and reliability determination;

(2) Resolve any challenge by the individual to the completeness or accuracy of the records described in § 2.1010(b)(6)(i)(C)(1). The individual may make this challenge by submitting information and/or an explanation to the Office of Administration. The challenge must be submitted within 10 days of the distribution of the records described in § 2.1010(b)(6)(i)(C)(1), and the Office of Administration must promptly resolve any challenge.

(D) Individuals seeking access to Safeguards Information to participate in an NRC adjudication for whom the NRC Office of Administration has made a final adverse determination on trustworthiness and reliability may submit a request to the Chief Administrative Judge for review of the adverse determination. Upon receiving such a request, the Chief Administrative Judge shall designate an officer other than the Pre-License Application Presiding Officer to review the adverse determination. For purposes of review, the adverse determination must be in writing and set forth the grounds for the determination. The request for review shall be served on the NRC staff and may include additional information for review by the designated officer. The request must be filed within 15 days after receipt of the adverse determination by the person against whom the adverse determination has been made. Within 10 days of receipt of the request for review and any additional information, the NRC staff will file a response indicating whether the request and additional information has caused the NRC Office of Administration to reverse its adverse determination. The designated officer may reverse the Office of Administration's final adverse determination only if the officer finds, based on all the information submitted, that the adverse determination constitutes an abuse of discretion. The designated officer's decision must be rendered within 15 days after receipt of the staff filing indicating that the request for review and additional information has not changed the NRC Office of Administration's adverse determination.

(ii) The Pre-License Application Presiding Officer may include in an order any protective terms and conditions (including affidavits of nondisclosure) as may be necessary and appropriate to prevent the unauthorized disclosure of Safeguards Information.

(iii) When Safeguards Information, protected from disclosure under Section 147 of the Atomic Energy Act of 1954, as amended, is received and possessed by a potential party, interested government participant, or party, other than the NRC staff, it shall also be protected according to the requirements of § 73.21 and the requirements of §§ 73.22 or 73.23 of this chapter, as applicable.

(iv) The Pre-License Application Presiding Officer may also prescribe such additional procedures as will effectively safeguard and prevent disclosure of Safeguards Information to unauthorized persons with minimum impairment of the procedural rights which would be available if Safeguards Information were not involved.

(v) In addition to any other sanction that may be imposed by the Pre-License Application Presiding Officer for violation of a provision for the protection of Safeguards Information from unauthorized disclosure that is contained in an order, the entity in violation may be subject to a civil penalty imposed pursuant to § 2.205.

(vi) For the purpose of imposing the criminal penalties contained in Section 223 of the Atomic Energy Act of 1954, as amended, a provision for the protection of Safeguards Information from unauthorized disclosure that is contained in an order issued pursuant to this paragraph is considered to be issued under Section 161b of the Atomic Energy Act of 1954, as amended.

(c) Upon a final determination that the material is relevant, and not privileged, exempt from disclosure, or otherwise exempt from production under § 2.1005, the potential party, interested governmental participant, or party who asserted the claim of withholding must make the document available in accordance with the provisions of this subpart within five days.

(d) The service of all pleadings and answers, orders, and decisions during the pre-license application phase shall be made according to the procedures specified in § 2.1013(c) and entered into the pre-license application electronic docket.

(e) The Pre-License Application presiding officer possesses all the general powers specified in §§ 2.319 and 2.321(c).

(f) The Commission, in designating the Pre-License Application Presiding Officer in accordance with paragraphs (a) (1) and (2) of this section, shall specify the jurisdiction of the Officer.

[63 FR 71738, Dec. 30, 1998 as amended at 66 FR 29466, May 31, 2001; 69 FR 2265, Jan. 14, 2004; 73 FR 63569, Oct. 24, 2008]

§ 2.1011 Management of electronic information.

[Top of File]

(a) Electronic document production and the electronic docket are subject to the provisions of this subpart.

(b)(1) The NRC, DOE, parties, and potential parties participating in accordance with the provision of this subpart shall be responsible for obtaining the computer system necessary to comply with the requirements for electronic document production and service.

(2) The NRC, DOE, parties, and potential parties participating in accordance with the provision of this subpart shall comply with the following standards in the design of the computer systems necessary to comply with the requirements for electronic document production and service:

(i) The participants shall make textual (or, where non-text, image) versions of their documents available on a web accessible server which is able to be canvassed by web indexing software (i.e., a "robot", "spider", "crawler") and the participant system must make both data files and log files accessible to this software.

(ii) The participants shall make bibliographic header data available in an HTTP (Hypertext Transfer Protocol) accessible, ODBC (Open Database Connectivity) and SQL (Structured Query Language)-compliant (ANSI IX3.135091992/ISO 9075091992) database management system (DBMS). Alternatively, the structured data containing the bibliographic header may be made available in a standard database readable (e.g., XML (Extensible Markup Language http://www.w3.org/xml/), comma delimited, or comma separated value (.csv)) file.

(iii) Textual material must be formatted to comply with the ISO/IEC 8859091 character set and be in one of the following acceptable formats: ASCII, native word processing (Word, WordPerfect), PDF Normal, or HTML.

(iv) Image files must be formatted as TIFF CCITT G4 for bi-tonal images or PNG (Portable Network Graphics) per [http://www.w3.org/TR/REC-png-multi.html]) format for grey-scale or color images, or PDF (Portable Document Format--Image). TIFF, PDF, or PNG images will be stored at 300 dpi (dots per inch) or greater, grey scale images at 150 dpi or greater with eight bits of tonal depth, and color images at 150 dpi or greater with 24 bits of color depth. Images found on participant machines will be stored as single image-per-page to facilitate retrieval of no more than a single page, or alternatively, images may be stored in an image-per-document format if software is incorporated in the web server that allows image-per-page representation and delivery.

(v) The participants shall programmatically link, preferably via hyperlink or some other automated process, the bibliographic header record with the text or image file it represents. Each participant's system must afford the LSN software enough information to allow a text or image file to be identified to the bibliographic data that describes it.

(vi) To facilitate data exchange, participants shall adhere to hardware and software standards, including, but not limited to:

(A) Network access must be HTTP/1.1 [http://www.faqs.org/rfcs/rfc2068.html] over TCP (Transmission Control Protocol, [http://www.faqs.org/rfcs/rfc793.html]) over IP (Internet Protocol, [http://www.faqs.org/rfcs/rfc791.html]).

(B) Associating server names with IP addresses must follow the DNS (Domain Name System), [http://www.faqs.org/rfcs/rfc1034.html] and [http://www.faqs.org/rfcs/rfc1035.html].

(C) Web page construction must be HTML [http://www.w3.org/TR/REC-html40/].

(D) Electronic mail (e-mail) exchange between e-mail servers must be SMTP (Simple Mail Transport Protocol, [http://www.faqs.org/rfcs/rfc821.html]).

(E) Format of an electronic mail message must be per [http://www.faqs.org/rfcs/rfc822.html] optionally extended by MIME (Multipurpose Internet Mail Extensions) per [http://www.faqs.org/rfcs/rfc2045.html]) to accommodate multipurpose e-mail.

(c) The Licensing Support Network shall be coordinated by the LSN Administrator, who shall be designated before the start of the pre-license application phase. The LSN Administrator shall have the responsibility to--

(1) Identify technical and policy issues related to implementation of the LSN for LSN Advisory Review Panel and Commission consideration;

(2) Address the consensus advice of the LSN Advisory Review Panel under paragraph (e)(1) of this section that is consistent with the requirements of this subpart;

(3) Identify any problems experienced by participants regarding LSN availability, including the availability of individual participant's data, and provide a recommendation to resolve any such problems to the participant(s) and the Pre-License Application Presiding Officer relative to the resolution of any disputes regarding LSN availability, including disputes on the availability of an individual participant's data;

(4) Identify any problems regarding the integrity of documentary material certified in accordance with § 2.1009(b) by the participants to be in the LSN, and provide a recommendation to resolve any such problems to the participant(s) and the Pre-License Application Presiding Officer relative to the resolution of any disputes regarding the integrity of documentary material;

(5) Provide periodic reports to the Commission on the status of LSN functionality and operability.

(6) Evaluate LSN participant compliance with the basic design standards in paragraph (b)(2) of this section, and provide for individual variances from the design standards to accommodate changes in technology or problems identified during initial operability testing of the individual documentary collection websites or the "central LSN site".

(7) Issue guidance for LSN participants on how best to comply with the design standards in paragraph (b)(2) of this section.

(d) The Secretary of the Commission shall reconstitute the LSS Advisory Review Panel as the LSN Advisory Review Panel, composed of the interests currently represented on the LSS Advisory Review Panel. The Secretary of the Commission shall have the authority to appoint additional representatives to the LSN Advisory Review Panel consistent with the requirements of the Federal Advisory Committee Act, 5 U.S. C. app. I, giving particular consideration to potential parties, parties, and interested governmental participants who were not members of the NRC HLW Licensing Support System Advisory Review Panel.

(e)(1) The LSN Advisory Review Panel shall provide advice to--

(i) NRC on the fundamental issues of the type of computer system necessary to access the Licensing Support Network effectively under paragraph (b) of this section; and

(ii) The Secretary of the Commission on the operation and maintenance of the electronic docket established for the HLW geologic repository licensing proceeding under the Commission's Rules of Practice (10 CFR part 2).

(iii) The LSN Administrator on solutions to improve the functioning of the LSN;

(2) The responsibilities of the LSN Advisory Review Panel shall include advice on--

(i) Format standards for providing electronic access to the documentary material certified by each participant to be made available in the LSN to the other parties, interested governmental participants, or potential parties;

(ii) The procedures and standards for the electronic transmission of filings, orders, and decisions during both the pre-license application phase and the high-level waste licensing proceeding;

(iii) Other duties as specified in this subpart or as directed by the Secretary of the Commission.

[63 FR 71738, Dec. 30, 1998 as amended at 66 FR 29466, May 31, 2001]

§ 2.1012 Compliance.

[Top of File]

(a) If the Department of Energy fails to make its initial certification at least six months prior to tendering the application, upon receipt of the tendered application, notwithstanding the provisions of § 2.101(f)(3), the Director of the NRC's Office of Nuclear Material Safety and Safeguards will not docket the application until at least six months have elapsed from the time of the certification. The Director may determine that the tendered application is not acceptable for docketing under this subpart if the application is not accompanied by an updated certification pursuant to § 2.1009(b), or if the Secretary of the Commission determines that the application is not submitted on optical storage media in a format consistent with NRC regulations and guidance, or for non-compliance with any other requirements

identified in this subpart.

(b)(1) A person, including a potential party given access to the Licensing Support Network under this subpart, may not be granted party status under § 2.309, or status as an interested governmental participant under § 2.315, if it cannot demonstrate substantial and timely compliance with the requirements of § 2.1003 at the time it requests participation in the HLW licensing proceeding under § 2.309 or § 2.315.

(2) A person denied party status or interested governmental participant status under paragraph (b)(1) of this section may request party status or interested governmental participant status upon a showing of subsequent compliance with the requirements of § 2.1003. Admission of such a party or interested governmental participant under §§ 2.309 or 2.315, respectively, is conditioned on accepting the status of the proceeding at the time of admission.

(c) The Presiding Officer shall not make a finding of substantial and timely compliance pursuant to paragraph (b) of this section for any person who is not in compliance with all applicable orders of the Pre-License Application Presiding Officer designated pursuant to § 2.1010.

[54 FR 14944, Apr. 14, 1991, as amended at 56 FR 7796, Feb. 26, 1991; 63 FR 71739, Dec. 30, 1998; 66 FR 29466, May 31, 2001; 69 FR 2265, Jan. 14, 2004; 69 FR 32849, June 14, 2004]

§ 2.1013 Use of the electronic docket during the proceeding.

[Top of File]

(a)(1) As specified in § 2.303, the Secretary of the Commission will maintain the official docket of the proceeding on the application for construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, and for applications for a license to receive and possess high level radioactive waste at a geologic repository operations area under parts 60 or 63 of this Chapter.

(2) The Secretary of the Commission will establish an electronic docket to contain the official record materials of the high-level radioactive waste repository licensing proceeding in searchable full text, or, for material that is not suitable for entry in searchable full text, by header and image, as appropriate.

(b) Absent good cause, all exhibits tendered during the hearing must have been made available to the parties in electronic form before the commencement of that portion of the hearing in which the exhibit will be offered. The electronic docket will contain a list of all exhibits, showing where in the transcript each was marked for identification and where it was received into evidence or rejected. For any hearing sessions recorded stenographically or by other means, transcripts will be entered into the electronic docket on a daily basis in order to afford next-day availability at the hearing. However, for any hearing sessions recorded on videotape or other video medium, if a copy of the video recording is made available to all parties on a daily basis that affords next-day availability at the hearing, a transcript of the session prepared from the video recording will be entered into the electronic docket within twenty-four (24) hours of the time the transcript is tendered to the electronic docket by the transcription service.

(c)(1) All filings in the adjudicatory proceeding on the application for a high-level radioactive waste geologic repository under part 60 or 63 of this chapter shall be transmitted by the submitter to the Presiding Officer, parties, and Secretary of the Commission, according to the following requirements--

(i) "Simple documents" must be transmitted electronically via EIE;

(ii) "Large documents" must be transmitted electronically in multiple transmissions of 50 megabytes or less each via EIE;

(iii) "Complex documents":

(A) Those portions that can be electronically submitted through the EIE, in 50 MB or less segments, must be transmitted electronically, along with a transmittal letter; and

(B) Those portions that are not capable of being transmitted electronically must be submitted on optical storage media which must also include those portions of the document that had been or will be transmitted electronically.

(iv) Electronic submissions must have the following resolution--

(A) Electronic submissions of files created after January 1, 2004 must have 300 dots per inch (dpi) as the minimum resolution for bi-tonal, color, and grayscale, except in limited circumstances where submitters may need to use an image scanned before January 1, 2004, in a document created after January 1, 2004, or the scanning process for a large, one-page image may not successfully complete at the 300 dpi standard resolution.

(B) Electronic submissions of files created before January 1, 2004, or electronic submissions created after January 1, 2004, which cannot meet the 300 dpi standard for color and grayscale, must meet the standard for documents placed on LSN participant Web sites in § 2.1011 (b)(2)(iv) of this subpart, which is 150 dpi for color and grayscale documents and 300 dpi for bi-tonal documents.

(v) Electronic submissions must be generated in the appropriate PDF output format by using:

(A) PDF--Formatted Text and Graphics for textual documents converted from native applications;

(B) PDF--Searchable Image (Exact) for textual documents converted from scanned documents; and

(C) PDF--Image Only for graphic-, image-, and forms-oriented documents. In addition, Tagged Image File Format (TIFF) images and the results of spreadsheet applications must to be converted to PDF, except in those rare instances where PDF conversion is not practicable.

(vi) Electronic submissions must not rely on hyperlinks to other documents or Web sites for completeness or access except for hyperlinks that link to material within the same PDF file. If the submittal contains hyperlinks to other documents or Web sites, then it must include a disclaimer to the effect that the hyperlinks may be inoperable or are not essential to the use of the filing. Information contained in hyperlinks to a Web site on the Internet or to another PDF file, that is necessary for the completeness of a filing, must be submitted in its entirety in the filing or as an attachment to the filing.

(vii) All electronic submissions must be free of author-imposed security restrictions.

(2) The Secretary of the Commission will establish an electronic docket to contain the official record materials of the high-level radioactive waste repository licensing proceeding in searchable full text, or, for material that is not suitable for entry in searchable full text, by header and image, as appropriate.

(3) Service upon a party or interested governmental participant is completed when the sender receives electronic acknowledgment ("delivery receipt") that the electronic submission has been placed in the recipient's electronic mailbox.

(4) Proof of service, stating the name and address of the person on whom served and the manner and date of service, shall be shown for each document filed, by--

(i) Electronic acknowledgment ("delivery receipt");

(ii) The affidavit of the person making the service; or

(iii) The certificate of counsel.

(5) All Presiding Officer and Commission issuances and orders will be transmitted electronically to the parties and interested governmental participants.

(d) Online access to the electronic docket, including a Protective Order File if authorized by a Presiding Officer, shall be provided to the Presiding Officer, the representatives of the parties and interested governmental participants, and the witnesses while testifying, for use during the hearing. Use of paper copy and other images will also be permitted at the hearing.

[63 FR 71739, Dec. 30, 1998, as amended at 66 FR 55788, Nov. 2, 2001; 69 FR 2265, Jan. 14, 2004; 69 FR 32849, June 14, 2004]

§ 2.1015 Appeals.

[Top of File]

(a) No appeals from any Pre-License Application Presiding Officer or Presiding Officer order or decision issued under this subpart are permitted, except as prescribed in paragraphs (b), (c), and (d) of this section.

(b) A notice of appeal from a Pre-License Application presiding officer order issued under § 2.1010, a presiding officer prehearing conference order issued under § 2.1021, a presiding officer order granting or denying a motion for summary disposition issued in accordance with § 2.1025, or a presiding officer order granting or denying a petition to amend one or more contentions under § 2.309, must be filed with the Commission no later than ten (10) days after service of the order. A supporting brief must accompany the notice of appeal. Any other party, interested governmental participant, or potential party may file a brief in opposition to the appeal no later than ten (10) days after service of the appeal.

(c) Appeals from a Presiding Officer initial decision or partial initial decision must be filed and briefed before the Commission in accordance with the following requirements.

(1) *Notice of appeal*. Within ten (10) days after service of an initial decision, any party may take an appeal to the Commission by filing a notice of appeal. The notice shall specify:

(i) The party taking the appeal; and

(ii) The decision being appealed.

(2) *Filing appellant's brief*. Each appellant shall file a brief supporting its position on appeal within thirty (30) days (40 days if Commission staff is the appellant) after the filing of notice required by paragraph (a) of this section.

(3) *Filing responsive brief*. Any party who is not an appellant may file a brief in support of or in opposition to the appeal within thirty (30)

days after the period has expired for the filing and service of the brief of all appellants. Commission staff may file a responsive brief within forty (40) days after the period has expired for the filing and service of the briefs of all appellants. A responding party shall file a single responsive brief regardless of the number of appellants' briefs filed.

(4) *Brief content*. A brief in excess of ten (10) pages must contain a table of contents, with page references, and a table of cases (alphabetically arranged), statutes, regulations, and other authorities cited, with references to the pages of the brief where they are cited.

(i) An appellant's brief must clearly identify the errors of fact or law that are the subject of the appeal. An intervenor-appellant's brief must be confined to issues which the intervenor-appellant placed in controversy or sought to place in controversy in the proceeding. For each issue appealed, the precise portion of the record relied upon in support of the assertion of error must also be provided.

(ii) Each responsive brief must contain a reference to the precise portion of the record which supports each factual assertion made.

(5) *Brief length*. A party shall not file a brief in excess of seventy (70) pages in length, exclusive of pages containing the table of contents, table of citations and any addendum containing statutes, rules, regulations, etc. A party may request an increase of this page limit for good cause. Such a request shall be made by motion submitted at least seven (7) days before the date upon which the brief is due for filing and shall specify the enlargement requested.

(6) *Certificate of service*. All documents filed under this section must be accompanied by a certificate reflecting service upon all other parties to the proceeding.

(7) *Failure to comply*. A brief which in form or content is not in substantial compliance with the provisions of this section may be stricken, either on motion of a party or by the Commission on its own initiative.

(d) When, in the judgment of a Pre-License Application presiding officer or presiding officer, prompt appellate review of an order not immediately appealable under paragraph (b) of this section is necessary to prevent detriment to the public interest or unusual delay or expense, the Pre-License Application presiding officer or presiding officer may refer the ruling promptly to the Commission, and shall provide notice of this referral to the parties, interested governmental participants, or potential parties. The parties, interested governmental participants, or potential parties may also request that the Pre-License Application presiding officer or presiding officer certify under § 2.319 rulings not immediately appealable under paragraph (b) of this section.

(e) Unless otherwise ordered, the filing of an appeal, petition for review, referral, or request for certification of a ruling shall not stay the proceeding or extend the time for the performance of any act.

[56 FR 7797, Feb. 26, 1991, as amended at 56 FR 29410, June 27, 1991; 69 FR 2265, Jan. 14, 2004]

§ 2.1017 Computation of time.

[Top of File]

In computing any period of time, the day of the act, event, or default after which the designated period of time begins to run is not included. The last day of the period so computed is included unless it is a Saturday, Sunday, or legal holiday at the place where the action or event is to occur, in which event the period runs until the end of the next day which is neither a Saturday, Sunday, nor holiday. Whenever a party, potential party, or interested governmental participant, has the right or is required to do some act within a prescribed period after the service of a notice or other document upon it, one day shall be added to the prescribed period. If the electronic docket is unavailable for more than four access hours of any day that would be counted in the computation of time, that day will not be counted in the computation of time.

[63 FR 71740, Dec. 30, 1998]

§ 2.1018 Discovery.

[Top of File]

(a)(1) Parties, potential parties, and interested governmental participants in the high-level waste licensing proceeding may obtain discovery by one or more of the following methods:

(i) Access to the documentary material made available pursuant to § 2.1003;

(ii) Entry upon land for inspection, access to raw data, or other purposes pursuant to § 2.1020;

(iii) Access to, or the production of, copies of documentary material for which bibliographic headers only have been submitted pursuant to § 2.1003(a);

(iv) Depositions upon oral examination pursuant to § 2.1019;

(v) Requests for admissions pursuant to § 2.708;

(vi) Informal requests for information not made electronically available, such as the names of witnesses and the subjects they plan to address; and

(vii) Interrogatories and depositions upon written questions, as provided in paragraph (a)(2) of this section.

(2) Interrogatories and depositions upon written questions may be authorized by order of the discovery master appointed under paragraph (g) of this section, or if no discovery master has been appointed, by order of the Presiding Officer, in the event that the parties are unable, after informal good faith efforts, to resolve a dispute in a timely fashion concerning the production of information.

(b)(1) Parties, potential parties, and interested governmental participants, pursuant to the methods set forth in paragraph (a) of this section, may obtain discovery regarding any matter, not privileged, which is relevant to the licensing of the likely candidate site for a geologic repository, whether it relates to the claim or defense of the person seeking discovery or to the claim or defense of any other person. Except for discovery pursuant to §§ 2.1018(a)(2) and 2.1019 of this subpart, all other discovery shall begin during the pre-license application phase. Discovery pursuant to §§ 2.1018(a)(2) and 2.1019 of this subpart shall begin after the issuance of the first pre-hearing conference order under § 2.1021 of this subpart, and shall be limited to the issues defined in that order or subsequent amendments to the order. It is not ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to the discovery of admissible evidence.

(2) A party, potential party, or interested governmental participant may obtain discovery of documentary material otherwise discoverable under paragraph (b)(1) of this section and prepared in anticipation of, or for the hearing by, or for another party's, potential party's, or interested governmental participant's representative (including its attorney, surety, indemnitor, insurer, or similar agent) only upon a showing that the party, potential party, or interested governmental participant seeking discovery has substantial need of the materials in the preparation of its case and that it is unable without undue hardship to obtain the substantial equivalent of the materials by other means. In ordering discovery of these materials when the required showing has been made, the Presiding Officer shall protect against disclosure of the mental impressions, conclusions, opinions, or legal theories of an attorney or other representative of a party, potential party, or interested governmental participant concerning the proceeding.

(c)(1) Upon motion by a party, potential party, interested governmental participant, or the person from whom discovery is sought, and for good cause shown, the presiding officer may make any order that justice requires to protect a party, potential party, interested governmental participant, or other person from annoyance, embarrassment, oppression, or undue burden, delay, or expense, including one or more of the following:

(i) That the discovery not be had;

(ii) That the discovery may be had only on specified terms and conditions, including a designation of the time or place;

(iii) That the discovery may be had only by a method of discovery other than that selected by the party, potential party, or interested governmental participant seeking discovery;

(iv) That certain matters not be inquired into, or that the scope of discovery be limited to certain matters;

(v) That discovery be conducted with no one present except persons designated by the presiding officer;

(vi) That, subject to the provisions of § 2.390 of this part, a trade secret or other confidential research, development, or commercial information not be disclosed or be disclosed only in a designated way; or

(vii) That studies and evaluations not be prepared.

(2) If the motion for a protective order is denied in whole or in part, the presiding officer may, on such terms and conditions as are just, order that any party, potential party, interested governmental participant or other person provide or permit discovery.

(d) Except as provided in paragraph (b) of this section, and unless the Presiding Officer upon motion, for the convenience of parties, potential parties, interested governmental participants, and witnesses and in the interest of justice, orders otherwise, methods of discovery may be used in any sequence, and the fact that a party, potential party, or interested governmental participant is conducting discovery, whether by deposition or otherwise, shall not operate to delay any other party's, potential party's, or interested governmental participant's discovery.

(e) A party, potential party, or interested governmental participant who has made available in electronic form all material relevant to any discovery request or who has responded to a request for discovery with a response that was complete when made is under no duty to supplement its response to include information thereafter acquired, except as follows:

(1) To the extent that written interrogatories are authorized pursuant to paragraph (a)(2) of this section, a party or interested governmental participant is under a duty to seasonably supplement its response to any question directly addressed to (i) the identity and location of persons having knowledge of discoverable matters, and (ii) the identity of each person expected to be called as an expert witness at the hearing, the subject matter on which the witness is expected to testify, and the substance of the witness' testimony.

(2) A party, potential party, or interested governmental participant is under a duty seasonably to amend a prior response if it obtains information upon the basis of which (i) it knows that the response was incorrect when made, or (ii) it knows that the response though correct when made is no longer true and the circumstances are such that a failure to amend the response is in substance a knowing concealment.

(3) A duty to supplement responses may be imposed by order of the Presiding Officer or agreement of the parties, potential parties, and interested governmental participants.

(f)(1) If a deponent of a party, potential party, or interested governmental participant upon whom a request for discovery is served fails to respond or objects to the request, or any part thereof, the party, potential party, or interested governmental participant submitting the request or taking the deposition may move the Presiding Officer, within five days after the date of the response or after failure to respond to the request, for an order compelling a response in accordance with the request. The motion shall set forth the nature of the questions or the request, the response or objection of the party, potential party, interested governmental participant, or other person upon whom the request was served, and arguments in support of the motion. For purposes of this paragraph, an evasive or incomplete answer or response shall be treated as a failure to answer or respond. Failure to answer or respond shall not be excused on the ground that the discovery sought is objectionable unless the person, party, potential party, or interested governmental participant failing to answer or respond has applied for a protective order pursuant to paragraph (c) of this section.

(2) In ruling on a motion made pursuant to this section, the Presiding Officer may make such a protective order as it is authorized to make on a motion made pursuant to paragraph (c) of this section.

(3) An independent request for issuance of a subpoena may be directed to a nonparty for production of documents. This section does not apply to requests for the testimony of the NRC regulatory staff under § 2.709.

(g) The presiding officer, under § 2.322, may appoint a discovery master to resolve disputes between parties concerning informal requests for information as provided in paragraphs (a)(1) and (a)(2) of this section.

(h) Discovery under this section of documentary material including Safeguards Information referred to in Sections 147 and 181 of the Atomic Energy Act of 1954, as amended, will be according to the provisions in § 2.1010(b)(6)(i) through (b)(6)(vi).

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7797, Feb. 26, 1991; 63 FR 71740, Dec. 30, 1998; 69 FR 2266, Jan. 14, 2004; 73 FR 63570, Oct. 24, 2008]

§ 2.1019 Depositions.

[Top of File]

(a) Any party or interested governmental participant desiring to take the testimony of any person by deposition on oral examination shall, without leave of the Commission or the Presiding Officer, give reasonable notice in writing to every other party and interested governmental participant, to the person to be examined, and to the Presiding Officer of the proposed time and place of taking the deposition; the name and address of each person to be examined, if known, or if the name is not known, a general description sufficient to identify him or her or the class or group to which he or she belongs, the matters upon which each person will be examined and the name or descriptive title and address of the officer before whom the deposition is to be taken.

(b) Within the United States, a deposition may be taken before any officer authorized to administer oaths by the laws of the United States or of the place where the examination is held. Outside of the United States, a deposition may be taken before a secretary of an embassy or legation, a consul general, vice consul or consular agent of the United States, or a person authorized to administer oaths designated by the Commission. Depositions may be conducted by telephone or by video teleconference at the option of the party or interested governmental participant taking the deposition.

(c) The deponent shall be sworn or shall affirm before any questions are put to him or her. Examination and cross-examination shall proceed as at a hearing. Each question propounded shall be recorded and the answer taken down in the words of the witness. Objections on questions of evidence shall be noted in short form without the arguments. The officer shall not decide on the competency, materiality, or relevancy of evidence but shall record the evidence subject to objection. Objections on questions of evidence not made before the officer shall not be deemed waived unless the ground of the objection is one which might have been obviated or removed if presented at that time.

(d) When the testimony is fully transcribed, the deposition shall be submitted to the deponent for examination and signature unless the deponent is ill or cannot be found or refuses to sign. The officer shall certify the deposition or, if the deposition is not signed by the deponent, shall certify the reasons for the failure to sign, and shall promptly transmit an electronic copy of the deposition to the Secretary of the Commission for entry into the electronic docket.

(e) Where the deposition is to be taken on written questions as authorized under § 2.1018(a)(2), the party or interested governmental participant taking the deposition shall electronically serve a copy of the questions, showing each question separately and consecutively numbered, on every other party and interested governmental participant with a notice stating the name and address of the person who is to answer them, and the name, description, title, and address of the officer before whom they are to be asked. Within ten days after service, any other party or interested governmental participant may serve cross-questions. The questions, cross-questions, and answers shall be recorded and signed, and the deposition certified, returned, and transmitted in electronic form to the Secretary of the Commission for entry into the electronic docket as in the case of a deposition on oral examination.

(f) A deposition will not become a part of the evidentiary record in the hearing unless received in evidence. If only part of a deposition is offered in evidence by a party or interested governmental participant, any other party or interested governmental participant may introduce any other parts. A party or interested governmental participant shall not be deemed to make a person its own witness for any purpose by taking his or her deposition.

(g) A deponent whose deposition is taken and the officer taking a deposition shall be entitled to the same fees as are paid for like services in the district courts of the United States, to be paid by the party or interested governmental participant at whose instance the deposition is

taken.

(h) The deponent may be accompanied, represented, and advised by legal counsel.

(i)(1) After receiving written notice of the deposition under paragraph (a) or paragraph (e) of this section, and ten days before the scheduled date of the deposition, the deponent shall submit an electronic index of all documents in his or her possession, relevant to the subject matter of the deposition, including the categories of documents set forth in paragraph (i)(2) of this section, to all parties and interested governmental participants. The index shall identify those records which have already been made available electronically. All documents that are not identical to documents already made available electronically, whether by reason of subsequent modification or by the addition of notations, shall be treated as separate documents.

(2) The following material is excluded from the initial requirements of § 2.1003 to be made available electronically, but is subject to derivative discovery under paragraph (i)(1) of this section--

(i) Personal records;

(ii) Travel vouchers;

(iii) Speeches;

(iv) Preliminary drafts;

(v) Marginalia.

(3) Subject to paragraph (i)(6) of this section, any party or interested governmental participant may request from the deponent a paper copy of any or all of the documents on the index that have not already been provided electronically.

(4) Subject to paragraph (i)(6) of this section, the deponent shall bring a paper copy of all documents on the index that the deposing party or interested governmental participant requests that have not already been provided electronically to an oral deposition conducted pursuant to paragraph (a) of this section, or in the case of a deposition taken on written questions pursuant to paragraph (e) of this section, shall submit such documents with the certified deposition.

(5) Subject to paragraph (i)(6) of this section, a party or interested governmental participant may request that any or all documents on the index that have not already been provided electronically, and on which it intends to rely at hearing, be made electronically available by the deponent.

(6) The deposing party or interested governmental participant shall assume the responsibility for the obligations set forth in paragraphs (i)(1), (i)(3), (i)(4), and (i)(5) of this section when deposing someone other than a party or interested governmental participant.

[54 FR 14944, Apr. 14, 1989, as amended at 56 FR 7797, Feb. 26, 1991; 63 FR 71740, Dec. 30, 1998 as amended at 69 FR 2265, Jan. 14, 2004]

§ 2.1020 Entry upon land for inspection.

[Top of File]

(a) Any party, potential party, or interested governmental participant may serve on any other party, potential party, or interested governmental participant a request to permit entry upon designated land or other property in the possession or control of the party, potential party, or interested governmental participant upon whom the request is served for the purpose of access to raw data, inspection and measuring, surveying, photographing, testing, or sampling the property or any designated object or operation thereon, within the scope of § 2.1018 of this subpart.

(b) The request may be served on any party, potential party, or interested governmental participant without leave of the Commission or the Presiding Officer.

(c) The request shall describe with reasonable particularity the land or other property to be inspected either by individual item or by category. The request shall specify a reasonable time, place, and manner of making the inspection and performing the related acts.

(d) The party, potential party, or interested governmental participant upon whom the request is served shall serve on the party, potential party, or interested governmental participant submitting the request a written response within ten days after the service of the request. The response shall state, with respect to each item or category, that inspection and related activities will be permitted as requested, unless the request is objected to, in which case the reasons for objection shall be stated. If objection is made to part of an item or category, the part shall be specified.

[54 FR 14944, Apr. 14, 1991, as amended at 56 FR 7797, Feb. 26, 1991]

§ 2.1021 First prehearing conference.

[Top of File]

(a) In any proceeding involving an application for a construction authorization for a HLW repository at a geologic repository operations area under parts 60 or 63 of this chapter, or an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area pursuant to parts 60 or 63 of this chapter, the Commission or the presiding officer will direct the parties, interested governmental participants and any petitioners for intervention, or their counsel, to appear at a specified time and place, within seventy days after the notice of hearing is published, or such other time as the Commission or the presiding officer may deem appropriate, for a conference to:

(1) Permit identification of the key issues in the proceeding;

(2) Take any steps necessary for further identification of the issues;

(3) Consider all intervention petitions to allow the Presiding Officer to make such preliminary or final determination as to the parties and interested governmental participants, as may be appropriate;

(4) Establish a schedule for further actions in the proceeding; and

(5) Establish a discovery schedule for the proceeding taking into account the objective of meeting the three year time schedule specified in section 114(d) of the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. 10134(d).

(b) The Presiding Officer may order any further formal and informal conferences among the parties and interested governmental participants including teleconferences, to the extent that it considers that such a conference would expedite the proceeding.

(c) A prehearing conference held pursuant to this section shall be stenographically reported.

(d) The Presiding Officer shall enter an order which recites the action taken at the conference, the schedule for further actions in the proceeding, and any agreements by the parties, and which identifies the key issues in the proceeding, makes a preliminary or final determination as to the parties and interested governmental participants in the proceeding, and provides for the submission of status reports on discovery.

[54 FR 14944, Apr. 14, 1991, as amended at 56 FR 7797, Feb. 26, 1991; 66 FR 55788, Nov. 2, 2001; 69 FR 2266, Jan. 14, 2004]

§ 2.1022 Second prehearing conference.

[Top of File]

(a) The Commission or the presiding officer in a proceeding on either an application for construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, or an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 of this chapter, shall direct the parties, interested governmental participants, or their counsel to appear at a specified time and place not later than thirty days after the Safety Evaluation Report is issued by the NRC staff for a conference to consider:

(1) Any amended contentions submitted, which must be reviewed under the criteria in § 2.309(c) of this part;

(2) Simplification, clarification, and specification of the issues;

(3) The obtaining of stipulations and admissions of fact and of the contents and authenticity of documents to avoid unnecessary proof;

(4) Identification of witnesses and the limitation of the number of expert witnesses, and other steps to expedite the presentation of evidence;

(5) The setting of a hearing schedule;

(6) Establishing a discovery schedule for the proceeding taking into account the objective of meeting the three year time schedule specified in section 114(d) of the Nuclear Waste Policy Act of 1982, as amended, 42 U.S.C. 10134(d); and

(7) Such other matters as may aid in the orderly disposition of the proceeding.

(b) A prehearing conference held pursuant to this section shall be stenographically reported.

(c) The Presiding Officer shall enter an order which recites the action taken at the conference and the agreements by the parties, limits the issues or defines the matters in controversy to be determined in the proceeding, sets a discovery schedule, and sets the hearing schedule.

[54 FR 14944, Apr. 14, 1991, as amended at 56 FR 7797, Feb. 26, 1991; 69 FR 2266, Jan. 14, 2004]

§ 2.1023 Immediate effectiveness.

[Top of File]

(a) Pending review and final decision by the Commission, and initial decision resolving all issues before the presiding officer in favor of issuance or amendment of either an authorization to construct a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, or a license to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 of this chapter will be immediately effective upon issuance except:

(1) As provided in any order issued in accordance with § 2.342 that stays the effectiveness of an initial decision; or

(2) As otherwise provided by the Commission in special circumstances.

(b) The Director of Nuclear Material Safety and Safeguards, notwithstanding the filing or pendency of an appeal or a petition for review pursuant to § 2.1015 of this subpart, promptly shall issue a construction authorization or a license to receive and possess high-level radioactive waste at a geologic respository operations area, or amendments thereto, following an initial decision resolving all issues before the Presiding Officer in favor of the licensing action, upon making the appropriate licensing findings, except --

(1) As provided in paragraph (c) of this section; or

(2) As provided in any order issued in accordance with § 2.342 of this part that stays the effectiveness of an initial decision; or

(3) As otherwise provided by the Commission in special circumstances.

(c)(1) Before the Director of Nuclear Material Safety and Safeguards may issue a construction authorization or a license to receive and possess waste at a geologic repository operations area in accordance with paragraph (b) of this section, the Commission, in the exercise of its supervisory authority over agency proceedings, shall undertake and complete a supervisory examination of those issues contested in the proceeding before the Presiding Officer to consider whether there is any significant basis for doubting that the facility will be constructed or operated with adequate protection of the public health and safety, and whether the Commission should take action to suspend or to otherwise condition the effectiveness of a Presiding Officer decision that resolves contested issues in a proceeding in favor of issuing a construction authorization or a license to receive and possess high-level radioactive waste at a geologic repository operations area. This supervisory examination is not part of the adjudicatory proceeding. The Commission shall notify the Director in writing when its supervisory examination conducted in accordance with this paragraph has been completed.

(2) Before the Director of Nuclear Material Safety and Safeguards issues a construction authorization or a license to receive and possess high-level radioactive waste at a geologic repository operations area, the Commission shall review those issues that have not been contested in the proceeding before the Presiding Officer but about which the Director must make appropriate findings prior to the issuance of such a license. The Director shall issue a construction authorization or a license to receive and possess high-level radioactive waste at a geologic repository operations area only after written notification from the Commission of its completion of its review under this paragraph and of its determination that it is appropriate for the Director to issue such a construction authorization or license. This Commission review of uncontested issues is not part of the adjudicatory proceeding.

(3) No suspension of the effectiveness of a Presiding Officer's initial decision or postponement of the Director's issuance of a construction authorization or license that results from a Commission supervisory examination of contested issues under paragraph (c)(1) of this section or a review of uncontested issues under paragraph (c)(2) of this section will be entered except in writing with a statement of the reasons. Such suspension or postponement will be limited to such period as is necessary for the Commission to resolve the matters at issue. If the supervisory examination results in a suspension of the effectiveness of the Presiding Officer's initial decision under paragraph (c)(1) of this section, the Commission will take review of the decision sua sponte and further proceedings relative to the contested matters at issue will be in accordance with procedures for participation by the DOE, the NRC staff, or other parties and interested governmental participants to the Presiding Officer proceeding established by the Commission in its written statement of reasons. If a postponement results from a review under paragraph (c)(2) of this section, comments on the uncontested matters at issue may be filed by the DOE within ten days of service of the Commission's written statement.

[54 FR 14944, Apr. 14, 1991, as amended at 56 FR 7797, Feb. 26, 1991; 66 FR 55789, Nov. 2, 2001; 69 FR 2266, Jan. 14, 2004]

§ 2.1025 Authority of the Presiding Officer to dispose of certain issues on the pleadings.

[Top of File]

(a) Any party may move, with or without supporting affidavits, for a decision by the Presiding Officer in that party's favor as to all or any part of the matters involved in the proceeding. The moving party shall annex to the motion a separate, short, and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard. Motions may be filed at any time. Any other party may file an answer supporting or opposing the motion, with or without affidavits, within twenty (20) days after service of the motion. The party shall annex to any answer opposing the motion a separate, short, and concise, statement of the material facts as to which it is contended there exists a genuine issue to be heard. All material facts set forth in the statement to be filed by the moving party will be deemed to be admitted unless controverted by the statement required to be filed by the opposing party. The opposing party may, within ten (10) days after service, respond in writing to new facts and arguments presented in any statement filed in support of the motion. No further supporting statements or responses thereto may be entertained. The Presiding Officer may dismiss summarily or hold in abeyance motions filed shortly before the hearing commences or during the hearing if the other parties or the Presiding Officer would be required to divert substantial resources from the hearing in order to respond adequately to the motion.

(b) Affidavits must set forth those facts that would be admissible in evidence and show affirmatively that the affiant is competent to testify

to the matters stated therein. The Presiding Officer may permit affidavits to be supplemented or opposed by further affidavits. When a motion for summary disposition is made and supported as provided in this section, a party opposing the motion may not rest upon the mere allegations or denials of its answer; its answer by affidavits or as otherwise provided in this section must set forth specific facts showing that there is a genuine issue of fact. If no such answer is filed, the decision sought, if appropriate, must be rendered.

(c) The Presiding Officer shall render the decision sought if the filings in the proceeding show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law. However, in any proceeding involving a construction authorization for a geologic repository operations area, the procedure described in this section may be used only for the determination of specific subordinate issues and may not be used to determine the ultimate issue as to whether the authorization must be issued.

[56 FR 7798, Feb. 26, 1991]

§ 2.1026 Schedule.

[Top of File]

(a) Subject to paragraphs (b) and (c) of this section, the Presiding Officer shall adhere to the schedule set forth in appendix D of this part.

(b)(1) Pursuant to § 2.307, the presiding officer may approve extensions of no more than fifteen (15) days beyond any required time set forth in this subpart for a filing by a party to the proceeding. Except in the case of exceptional and unforseen circumstances, requests for extensions of more than fifteen (15) days must be filed no later than five (5) days in advance of the required time set forth in this subpart for a filing by a party to the proceeding.

(2) Extensions beyond 15 days must be referred to the Commission. If the Commission does not disapprove the extension within 10 days of receiving the request, the extension will be effective. If the Commission disapproves the extension, the date which was the subject of the extension request will be set for 5 days after the Commission's disapproval action.

(c)(1) The Presiding Officer may delay the issuance of an order up to thirty days beyond the time set forth for the issuance in appendix D.

(2) If the Presiding Officer anticipates that the issuance of an order will not occur until after the thirty day extension specified in paragraph (c)(1) of this section, the Presiding Officer shall notify the Commission at least ten days in advance of the scheduled date for the milestone and provide a justification for the delay.

[56 FR 7798, Feb. 26, 1991; 69 FR 2266, Jan. 14, 2004]

§ 2.1027 Sua sponte.

[Top of File]

In any initial decision in a proceeding on an application for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 or 63 of this chapter, or an application for a license to receive and possess high-level radioactive waste at a geologic repository operations area under parts 60 or 63 of this chapter, the Presiding Officer, other than the Commission, shall make findings of fact and conclusions of law on, and otherwise give consideration to, only those matters put into controversy by the parties and determined to be litigable issues in the proceeding.

[56 FR 7798, Feb. 26, 1991; 69 FR 2266, Jan. 14, 2004]

Subpart K--Hybrid Hearing Procedures for Expansion of Spent Nuclear Fuel Storage Capacity at Civilian Nuclear Power Reactors

[Top of File]

Source: 50 FR 41670, Oct. 15, 1985, unless otherwise noted.

§ 2.1101 Purpose.

The regulations in this subpart establish hybrid hearing procedures, as authorized by section 134 of the Nuclear Waste Policy Act of 1982 (96 Stat. 2230), to be used at the request of any party in certain contested proceedings on applications for a license or license amendment to expand the spent nuclear fuel storage capacity at the site of a civilian nuclear power plant. These procedures are intended to encourage and expedite onsite expansion of spent nuclear fuel storage capacity.

§ 2.1103 Scope of subpart K.

[Top of File]

The provisions of this subpart, together with subpart C and applicable provisions of subparts G and L of this part, govern all adjudicatory proceedings on applications filed after January 7, 1983, for a license or license amendment under part 50 of this chapter, to expand the

spent fuel storage capacity at the site of a civilian nuclear power plant, through the use of high density fuel storage racks, fuel rod compaction, the transshipment of spent nuclear fuel to another civilian nuclear power reactor within the same utility system, the construction of additional spent nuclear fuel pool capacity or dry storage capacity, or by other means. This subpart also applies to proceedings on applications for a license under part 72 of this chapter to store spent nuclear fuel in an independent spent fuel storage installation located at the site of a civilian nuclear power reactor. This subpart shall not apply to the first application for a license or license amendment to expand the spent fuel storage capacity at a particular site through the use of a new technology not previously approved by the Commission for use at any other nuclear power plant. This subpart shall not apply to proceedings on applications for transfer of a license issued under part 72 of this chapter. Subpart M of this part applies to license transfer proceedings.

[50 FR 41670, Oct. 15, 1985, as amended at 63 FR 66730, Dec. 3, 1998; 69 FR 2266, Jan. 14, 2004]

§ 2.1105 Definitions.

[Top of File]

As used in this part:

(a) *Civilian nuclear power reactor* means a civilian nuclear power plant required to be licensed as a utilization facility under section 103 or 104(b) of the Atomic Energy Act of 1954.

(b) *Spent nuclear fuel* means fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing.

§ 2.1107 Notice of proposed action.

[Top of File]

In connection with each application filed after January 7, 1983, for a license or an amendment to a license to expand the spent nuclear fuel storage capacity at the site of a civilian nuclear power plant, for which the Commission has not found that a hearing is required in the public interest, for which an adjudicatory hearing has not yet been convened, and for which a notice of proposed action has not yet been published as of the effective date of this subpart, the Commission will, prior to acting thereon, cause to be published in the Federal Register a notice of proposed action in accordance with § 2.105. The notice of proposed action will identify the availability of the hybrid hearing procedures in this subpart, specify that any party may invoke these procedures by filing a timely request for oral argument under § 2.1109, and provide that if a request for oral argument is granted, any hearing held on the application shall be conducted in accordance with the procedures in this subpart.

§ 2.1109 Requests for oral argument.

[Top of File]

(a)(1) In its request for hearing/petition to intervene filed in accordance with § 2.309 or in the applicant's or the NRC staff's response to a request for a hearing/petition to intervene, any party may invoke the hybrid hearing procedures in this Subpart by requesting an oral argument. If it is determined that a hearing will be held, the presiding officer shall grant a timely request for oral argument.

(2) The presiding officer may grant an untimely request for oral argument only upon a showing of good cause by the requesting party for failure to file on time and after providing the other parties an opportunity to respond to the untimely request.

(b) The presiding officer shall issue a written order ruling on any requests for oral argument. If the presiding officer grants a request for oral argument, the order shall include a schedule for discovery and subsequent oral argument with respect to the admitted contentions.

(c) If no party to the proceeding requests oral argument, or if all untimely requests for oral argument are denied, the presiding officer shall conduct the proceeding in accordance with the subpart under which the proceeding was initially conducted as determined in accordance with § 2.310.

[69 FR 2267, Jan. 14, 2004]

§ 2.1111 [Reserved]

[Top of File]

[69 FR 2267, Jan. 14, 2004]

§ 2.1113 Oral argument.

[Top of File]

(a) Twenty-five (25) days prior to the date set for oral argument, each party, including the NRC staff, shall submit to the presiding officer a

detailed written summary of all the facts, data, and arguments which are known to the party at such time and on which the party proposes to rely at the oral argument either to support or to refute the existence of a genuine and substantial dispute of fact. Each party shall also submit all supporting facts and data in the form of sworn written testimony or other sworn written submission. Each party's written summary and supporting information shall be simultaneously served on all other parties to the proceeding.

(b) Ten (10) days prior to the date set for oral argument, each party, including the NRC staff, may submit to the presiding officer a reply limited to addressing whether the written summaries, facts, data, and arguments filed under paragraph (a) of this section support or refute the existence of a genuine and substantial dispute of fact. Each party's reply shall be simultaneously served on all other parties to the proceeding.

(c) Only facts and data in the form of sworn written testimony or other sworn written submission may be relied on by the parties during oral argument, and the presiding officer shall consider those facts and data only if they are submitted in that form.

[69 FR 2267, Jan. 14, 2004]

§ 2.1115 Designation of issues for adjudicatory hearing.

[Top of File]

(a) After due consideration of the oral presentation and the written facts and data submitted by the parties and relied on at the oral argument, the presiding officer shall promptly by written order:

(1) Designate any disputed issues of fact, together with any remaining issues of law, for resolution in an adjudicatory hearing; and

(2) Dispose of any issues of law or fact not designated for resolution in an adjudicatory hearing.

With regard to each issue designated for resolution in an adjudicatory hearing, the presiding officer shall identify the specific facts that are in genuine and substantial dispute, the reason why the decision of the Commission is likely to depend on the resolution of that dispute, and the reason why an adjudicatory hearing is likely to resolve the dispute. With regard to issues not designated for resolution in an adjudicatory hearing, the presiding officer shall include a brief statement of the reasons for the disposition. If the presiding officer finds that there are no disputed issues of fact or law requiring resolution in an adjudicatory hearing, the presiding officer shall also dismiss the proceeding.

(b) No issue of law or fact shall be designated for resolution in an adjudicatory hearing unless the presiding officer determines that:

(1) There is a genuine and substantial dispute of fact which can only be resolved with sufficient accuracy by the introduction of evidence in an adjudicatory hearing; and

(2) The decision of the Commission is likely to depend in whole or in part on the resolution of that dispute.

(c) In making a determination under paragraph (b) of this section, the presiding officer shall not consider:

(1) Any issue relating to the design, construction, or operation of any civilian nuclear power reactor already licensed to operate at the site, or any civilian nuclear power reactor for which a construction permit has been granted at the site, unless the presiding officer determines that any such issue substantially affects the design, construction, or operation of the facility or activity for which a license application, authorization, or amendment to expand the spent nuclear fuel storage capacity is being considered; or

(2) Any siting or design issue fully considered and decided by the Commission in connection with the issuance of a construction permit or operating license for a civilian nuclear power reactor at that site, unless (i) such issue results from any revision of siting or design criteria by the Commission following such decision; and (ii) the presiding officer determines that such issue substantially affects the design, construction, or operation of the facility or activity for which a license application, authorization, or amendment to expand the spent nuclear fuel storage capacity is being considered.

(d) The provisions of paragraph (c) of this section shall apply only with respect to licenses, authorizations, or amendments to licenses or authorizations applied for under the Atomic Energy Act of 1954, as amended, before December 31, 2005.

(e) Unless the presiding officer disposes of all issues and dismisses the proceeding, appeals from the presiding officer's order disposing of issues and designating one or more issues for resolution in an adjudicatory hearing are interlocutory and must await the end of the proceeding.

[50 FR 41671, Oct. 15, 1985; 50 FR 45398, Oct. 31, 1985]

§ 2.1117 Burden of proof.

[Top of File]

The applicant bears the ultimate burden of proof (risk of non-persuasion) with respect to the contention in the proceeding. The proponent of the request for an adjudicatory hearing bears the burden of demonstrating under § 2.1115(b) that an adjudicatory hearing should be held.

[69 FR 2267, Jan. 14, 2004]

§ 2.1119 Applicability of other sections.

[Top of File]

In proceedings subject to this part, the provisions of subparts A, C, and L of this part are also applicable, except where inconsistent with the provisions of this subpart.

Subpart L--Informal Hearing Procedures for NRC Adjudications

[Top of File]

Source: 69 FR 2267, Jan. 14, 2004, unless otherwise noted.

§ 2.1200 Scope of subpart L.

The provisions of this subpart, together with subpart C of this part, govern all adjudicatory proceedings conducted under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act, and 10 CFR part 2, except for proceedings on the licensing of the construction and operation of a uranium enrichment facility, proceedings on an initial application for construction authorization for a high-level radioactive waste geologic repository at a geologic repository operations area noticed under §§ 2.101(f)(8) or 2.105(a)(5), proceedings on an initial application for a license to receive and possess high-level radioactive waste at a geologic repository operations area, proceedings on enforcement matters unless all parties otherwise agree and request the application of Subpart L procedures, and proceedings for the direct or indirect transfer of control of an NRC license when the transfer requires prior approval of the NRC under the Commission's regulations, governing statutes, or pursuant to a license condition.

§ 2.1201 Definitions.

[Top of File]

The definitions of terms contained in § 2.4 apply to this subpart unless a different definition is provided in this subpart.

§ 2.1202 Authority and role of NRC staff.

[Top of File]

(a) During the pendency of any hearing under this subpart, consistent with the NRC staff's findings in its review of the application or matter which is the subject of the hearing and as authorized by law, the NRC staff is expected to issue its approval or denial of the application promptly, or take other appropriate action on the underlying regulatory matter for which a hearing was provided. When the NRC staff takes its action, it shall notify the presiding officer and the parties to the proceeding of its action. That notice must include the NRC staff's position on the matters in controversy before the presiding officer with respect to the staff action. The NRC staff's action on the matter is effective upon issuance by the staff, except in matters involving:

(1) An application to construct and/or operate a production or utilization facility (including an application for a limited work authorization under 10 CFR 50.12, or an application for a combined license under subpart C of 10 CFR part 52);

(2) An application for an early site permit under subpart A of 10 CFR part 52;

(3) An application for a manufacturing license under subpart F of 10 CFR part 52;

(4) An application for an amendment to a construction authorization for a high-level radioactive waste repository at a geologic repository operations area falling under either 10 CFR 60.32(c)(1) or 10 CFR part 63;

(5) An application for the construction and operation of an independent spent fuel storage installation (ISFSI) located at a site other than a reactor site or a monitored retrievable storage installation (MRS) under 10 CFR part 72; and

(6) Production or utilization facility licensing actions that involve significant hazards considerations as defined in 10 CFR 50.92.

(b)(1) The NRC staff is not required to be a party to a proceeding under this subpart, except where:

(i) The proceeding involves an application denied by the NRC staff or an enforcement action proposed by the NRC staff; or

(ii) The presiding officer determines that the resolution of any issue in the proceeding would be aided materially by the NRC staff's participation in the proceeding as a party and orders the staff to participate as a party for the identified issue. In the event that the presiding officer determines that the NRC staff's participation is necessary, the presiding officer shall issue an order identifying the issue(s)

on which the staff is to participate as well as setting forth the basis for the determination that staff participation will materially aid in resolution of the issue(s).

(2) Within fifteen (15) days of the issuance of the order granting requests for hearing/petitions to intervene and admitting contentions, the NRC staff shall notify the presiding officer and the parties whether it desires to participate as a party, and identify the contentions on which it wishes to participate as a party. If the NRC staff desires to be a party thereafter, the NRC staff shall notify the presiding officer and the parties, identify the contentions on which it wishes to participate as a party, and make the disclosures required by § 2.336(b)(3) through (5) unless accompanied by an affidavit explaining why the disclosures cannot be provided to the parties with the notice.

(3) Once the NRC staff chooses to participate as a party, it shall have all the rights and responsibilities of a party with respect to the admitted contention/matter in controversy on which the staff chooses to participate.

[72 FR 49483, Aug. 28, 2007]

§ 2.1203 Hearing file; prohibition on discovery.

[Top of File]

(a)(1) Within thirty (30) days of the issuance of the order granting requests for hearing/petitions to intervene and admitting contentions, the NRC staff shall file in the docket, present to the presiding officer, and make available to the parties to the proceeding a hearing file.

(2) The hearing file must be made available to the parties either by service of hard copies or by making the file available at the NRC Web site, *http://www.nrc.gov*.

(3) The hearing file also must be made available for public inspection and copying at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room.

(b) The hearing file consists of the application, if any, and any amendment to the application, and, when available, any NRC environmental impact statement or assessment and any NRC report related to the proposed action, as well as any correspondence between the applicant/licensee and the NRC that is relevant to the proposed action. Hearing file documents already available at the NRC Web site and/or the NRC Public Document Room when the hearing request/petition to intervene is granted may be incorporated into the hearing file at those locations by a reference indicating where at those locations the documents can be found. The presiding officer shall rule upon any issue regarding the appropriate materials for the hearing file.

(c) The NRC staff has a continuing duty to keep the hearing file up to date with respect to the materials set forth in paragraph (b) of this section and to provide those materials as required in paragraphs (a) and (b) of this section.

(d) Except as otherwise permitted by subpart C of this part, a party may not seek discovery from any other party or the NRC or its personnel, whether by document production, deposition, interrogatories or otherwise.

§ 2.1204 Motions and requests.

[Top of File]

(a) General requirements. In proceedings under this subpart, requirements for motions and requests and responses to them are as specified in § 2.323.

(b) Requests for cross-examination by the parties. (1) In any oral hearing under this subpart, a party may file a motion with the presiding officer to permit cross-examination by the parties on particular admitted contentions or issues. The motion must be accompanied by a cross-examination plan containing the following information:

(i) A brief description of the issue or issues on which cross-examination will be conducted;

(ii) The objective to be achieved by cross-examination; and

(iii) The proposed line of questions that may logically lead to achieving the objective of the cross-examination.

(2) The cross-examination plan may be submitted only to the presiding officer and must be kept by the presiding officer in confidence until issuance of the initial decision on the issue being litigated. The presiding officer shall then provide each cross- examination plan to the Commission's Secretary for inclusion in the official record of the proceeding.

(3) The presiding officer shall allow cross-examination by the parties only if the presiding officer determines that cross-examination by the parties is necessary to ensure the development of an adequate record for decision.

§ 2.1205 Summary disposition.

[Top of File]

(a) Unless the presiding officer or the Commission directs otherwise, motions for summary disposition may be submitted to the presiding officer by any party no later than forty-five (45) days before the commencement of hearing. The motions must be in writing and must include a written explanation of the basis of the motion, and affidavits to support statements of fact. Motions for summary disposition must be served on the parties and the Secretary at the same time that they are submitted to the presiding officer.

(b) Any other party may serve an answer supporting or opposing the motion within twenty (20) days after service of the motion.

(c) The presiding officer shall issue a determination on each motion for summary disposition no later than fifteen (15) days before the date scheduled for commencement of hearing. In ruling on motions for summary disposition, the presiding officer shall apply the standards for summary disposition set forth in subpart G of this part.

§ 2.1206 Informal hearings.

[Top of File]

Hearings under this subpart will be oral hearings as described in § 2.1207, unless, within fifteen (15) days of the service of the order granting the request for hearing, the parties unanimously agree and file a joint motion requesting a hearing consisting of written submissions. A motion to hold a hearing consisting of written submissions will not be entertained unless there is unanimous consent of the parties.

§ 2.1207 Process and schedule for submissions and presentations in an oral hearing.

[Top of File]

(a) Unless otherwise limited by this subpart or by the presiding officer, participants in an oral hearing may submit and sponsor in the hearings:

(1) Initial written statements of position and written testimony with supporting affidavits on the admitted contentions. These materials must be filed on the dates set by the presiding officer.

(2) Written responses and rebuttal testimony with supporting affidavits directed to the initial statements and testimony of other participants. These materials must be filed within twenty (20) days of the service of the materials submitted under paragraph (a)(1) of this section unless the presiding officer directs otherwise.

(3)(i) Proposed questions for the presiding officer to consider for propounding to the persons sponsoring the testimony. Unless the presiding officer directs otherwise, these questions must be received by the presiding officer no later than twenty (20) days after the service of the materials submitted under paragraph (a)(1) of this section, unless that date is less than five (5) days before the scheduled commencement of the oral hearing, in which case the questions must be received by the presiding officer no later than five (5) days before the scheduled commencement of the hearing. Proposed questions need not be filed with any other party.

(ii) Proposed questions directed to rebuttal testimony for the presiding officer to consider for propounding to persons sponsoring the testimony. Unless the presiding officer directs otherwise, these questions must be received by the presiding officer no later than seven (7) days after the service of the rebuttal testimony submitted under paragraph (a)(2) of this section, unless that date is less than five (5) days before the scheduled commencement of the oral hearing, in which case the questions must be received by the presiding officer no later than five (5) days before the scheduled commencement of the hearing. Proposed questions directed to rebuttal need not be filed with any other party.

(iii) Questions submitted under paragraphs (a)(3)(i) and (ii) of this section may be propounded at the discretion of the presiding officer. All questions must be kept by the presiding officer in confidence until they are either propounded by the presiding officer, or until issuance of the initial decision on the issue being litigated. The presiding officer shall then provide all proposed questions to the Commission's Secretary for inclusion in the official record of the proceeding.

(b) Oral hearing procedures. (1) The oral hearing must be transcribed.

(2) Written testimony will be received into evidence in exhibit form.

(3) Participants may designate and present their own witnesses to the presiding officer.

(4) Testimony for the NRC staff will be presented only by persons designated by the Executive Director for Operations or his delegee for that purpose.

(5) The presiding officer may accept written testimony from a person unable to appear at the hearing, and may request that person to respond in writing to questions.

(6) Participants and witnesses will be questioned orally or in writing and only by the presiding officer or the presiding officer's designee (e. g., a Special Assistant appointed under § 2.322). The presiding officer will examine the participants and witnesses using questions prepared by the presiding officer or the presiding officer's designee, questions submitted by the participants at the discretion of the presiding officer, or a combination of both. Questions may be addressed to individuals or to panels of participants or witnesses. No party may submit proposed questions to the presiding officer at the hearing, except upon request by, and in the sole discretion of, the presiding officer.

§ 2.1208 Process and schedule for a hearing consisting of written presentations.

[Top of File]

(a) Unless otherwise limited by this subpart or by the presiding officer, participants in a hearing consisting of written presentations may submit:

(1) Initial written statements of position and written testimony with supporting affidavits on the admitted contentions. These materials must be filed on the dates set by the presiding officer;

(2) Written responses, rebuttal testimony with supporting affidavits directed to the initial statements and testimony of witnesses and other participants, and proposed written questions for the presiding officer to consider for submission to the persons sponsoring testimony under paragraph (a)(1) of this section. These materials must be filed within twenty (20) days of the service of the materials submitted under paragraph (a)(1) of this section unless the presiding officer directs otherwise;

(3) Written questions on the written responses and rebuttal testimony submitted under paragraph (a)(2) of this section, which the presiding officer may, in his or her discretion, require the persons offering the written responses and rebuttal testimony to provide responses. These questions must be filed within seven (7) days of service of the materials submitted under paragraph (a)(2) of this section unless the presiding officer directs otherwise; and

(4) Written concluding statements of position on the contentions. These statements shall be filed within twenty (20) days of the service of written responses to the presiding officer's questions to the participants or, in the absence of questions from the presiding officer, within twenty (20) days of the service of the materials submitted under paragraph (a)(2) of this section unless the presiding officer directs otherwise.

(b) The presiding officer may formulate and submit written questions to the participants that he or she considers appropriate to develop an adequate record.

§ 2.1209 Findings of fact and conclusions of law.

[Top of File]

Each party shall file written post-hearing proposed findings of fact and conclusions of law on the contentions addressed in an oral hearing under § 2.1207 or a written hearing under § 2.1208 within thirty (30) days of the close of the hearing or at such other time as the presiding officer directs.

§ 2.1210 Initial decision and its effect.

[Top of File]

(a) Unless the Commission directs that the record be certified to it in accordance with paragraph (b) of this section, the presiding officer shall render an initial decision after completion of an informal hearing under this subpart. That initial decision constitutes the final action of the Commission on the contested matter forty (40) days after the date of issuance, unless:

(1) Any party files a petition for Commission review in accordance with § 2.1212;

(2) The Commission, in its discretion, determines that the presiding officer's initial decision is inconsistent with the staff's action as described in the notice required by § 2.1202(a) and that the inconsistency warrants Commission review, in which case the Commission will review the initial decision; or

(3) The Commission takes review of the decision sua sponte.

(b) The Commission may direct that the presiding officer certify the record to it without an initial decision and prepare a final decision if the Commission finds that due and timely execution of its functions warrants certification.

(c) An initial decision must be in writing and must be based only upon information in the record or facts officially noticed. The record must include all information submitted in the proceeding with respect to which all parties have been given reasonable prior notice and an opportunity to comment as provided in §§ 2.1207 or 2.1208. The initial decision must include:

(1) Findings, conclusions, and rulings, with the reasons or basis for them, on all material issues of fact or law admitted as part of the contentions in the proceeding;

(2) The appropriate ruling, order, or grant or denial of relief with its effective date;

(3) The action the NRC staff shall take upon transmittal of the decision to the NRC staff under paragraph (e) of this section, if the initial decision is inconsistent with the NRC staff action as described in the notice required by § 2.1202(a); and

(4) The time within which a petition for Commission review may be filed, the time within which any answers to a petition for review may be filed, and the date when the decision becomes final in the absence of a petition for Commission review or Commission sua sponte review.

(d) Pending review and final decision by the Commission, an initial decision resolving all issues before the presiding officer is immediately effective upon issuance except:

(1) As provided in any order issued in accordance with § 2.1211 that stays the effectiveness of an initial decision; or

(2) As otherwise provided by this part (*e.g.*, § 2.340) or by the Commission in special circumstances.

(e) Once an initial decision becomes final, the Secretary shall transmit the decision to the NRC staff for action in accordance with the decision.

§ 2.1212 Petitions for Commission review of initial decisions.

[Top of File]

Parties may file petitions for review of an initial decision under this subpart in accordance with the procedures set out in § 2.341. Unless otherwise authorized by law, a party to an NRC proceeding must file a petition for Commission review before seeking judicial review of an agency action.

§ 2.1213 Application for a stay.

[Top of File]

(a) Any application for a stay of the effectiveness of the NRC staff's action on a matter involved in a hearing under this subpart must be filed with the presiding officer within five (5) days of the issuance of the notice of the NRC staff's action under § 2.1202(a) and must be filed and considered in accordance with paragraphs (b), (c) and (d) of this section.

(b) An application for a stay of the NRC staff's action may not be longer than ten (10) pages, exclusive of affidavits, and must contain:

(1) A concise summary of the action which is requested to be stayed; and

(2) A concise statement of the grounds for a stay, with reference to the factors specified in paragraph (d) of this section.

(c) Within ten (10) days after service of an application for a stay of the NRC staff's action under this section, any party and/or the NRC staff may file an answer supporting or opposing the granting of a stay. Answers may not be longer than ten (10) pages, exclusive of affidavits, and must concisely address the matters in paragraph (b) of this section as appropriate. Further replies to answers will not be entertained.

(d) In determining whether to grant or deny an application for a stay of the NRC staff's action, the following will be considered:

(1) Whether the requestor will be irreparably injured unless a stay is granted;

(2) Whether the requestor has made a strong showing that it is likely to prevail on the merits;

(3) Whether the granting of a stay would harm other participants; and

(4) Where the public interest lies.

(e) Any application for a stay of the effectiveness of the presiding officer's initial decision or action under this subpart shall be filed with the Commission in accordance with § 2.342.

Subpart M--Procedures for Hearings on License Transfer Applications

[Top of File]

Source: 63 FR 66730, Dec. 3, 1998, unless otherwise noted.

§ 2.1300 Scope of subpart M.

The provisions of this subpart, together with subpart C of this part, govern all adjudicatory proceedings on an application for the direct or indirect transfer of control of an NRC license when the transfer requires prior approval of the NRC under the Commission's regulations, governing statutes, or pursuant to a license condition. This subpart provides the only mechanism for requesting hearings on license transfer requests, unless contrary case specific orders are issued by the Commission.

[69 FR 2270, Jan. 14, 2004]

§ 2.1301 Public notice of receipt of a license transfer application.

[Top of File]

(a) The Commission will notice the receipt of each application for direct or indirect transfer of a specific NRC license by placing a copy of the application at the NRC Web site, *http://www.nrc.gov*.

(b) The Commission will also publish in the Federal Register a notice of receipt of an application for approval of a license transfer involving 10 CFR part 50 and part 52 licenses, major fuel cycle facility licenses issued under part 70, or part 72 licenses. This notice constitutes the notice required by § 2.105 with respect to all matters related to the application requiring NRC approval.

(c) Periodic lists of applications received may be obtained upon request addressed to the NRC Public Document Room, US Nuclear Regulatory Commission, Washington, DC 20555-0001.

[63 FR 66730, Dec. 3, 1998, as amended at 64 FR 48949, Sept. 9, 1999]

§ 2.1302 Notice of withdrawal of an application.

[Top of File]

The Commission will notice the withdrawal of an application by publishing the notice of withdrawal in the same manner as the notice of receipt of the application was published under § 2.1301.

§ 2.1303 Availability of documents.

[Top of File]

Unless exempt from disclosure under part 9 of this chapter, the following documents pertaining to each application for a license transfer requiring Commission approval will be placed at the NRC Web site, *http://www.nrc.gov,* when available:

(a) The license transfer application and any associated requests;

(b) Commission correspondence with the applicant or licensee related to the application;

(c) Federal Register notices;

(d) The NRC staff Safety Evaluation Report (SER).

(e) Any NRC staff order which acts on the license transfer application; and

(f) If a hearing is held, the hearing record and decision.

[63 FR 66730, Dec. 3, 1998, as amended at 64 FR 48949, Sept. 9, 1999]

§ 2.1304 Hearing procedures.

[Top of File]

The procedures in this subpart will constitute the exclusive basis for hearings on license transfer applications for all NRC specific licenses.

§ 2.1305 Written comments.

[Top of File]

(a) As an alternative to requests for hearings and petitions to intervene, persons may submit written comments regarding license transfer applications. The Commission will consider and, if appropriate, respond to these comments, but these comments do not otherwise constitute part of the decisional record.

(b) These comments should be submitted within 30 days after public notice of receipt of the application and addressed to the Secretary, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff.

(c) The Commission will provide the applicant with a copy of the comments. Any response the applicant chooses to make to the comments must be submitted within 10 days of service of the comments on the applicant. Such responses do not constitute part of the decisional

record.

§ 2.1308 Oral hearings.

[Top of File]

Hearings under this subpart will be oral hearings, unless, within 15 days of the service of the notice or order granting the hearing, the parties unanimously agree and file a joint motion requesting a hearing consisting of written comments. No motion to hold a hearing consisting of written comments will be entertained absent consent of all the parties.

[69 FR 2270, Jan. 14, 2004]

§ 2.1309 Notice of oral hearing.

[Top of File]

(a) A notice of oral hearing will--

(1) State the time, place, and issues to be considered;

(2) Provide names and addresses of participants,

(3) Specify the time limit for participants and others to indicate whether they wish to present views;

(4) Specify the schedule for the filing of written testimony, statements of position, proposed questions for the Presiding Officer to consider, and rebuttal testimony consistent with the schedule provisions of § 2.1321.

(5) Specify that the oral hearing shall commence within 15 days of the date for submittal of rebuttal testimony unless otherwise ordered;

(6) State any other instructions the Commission deems appropriate;

(7) If so determined by the NRC staff or otherwise directed by the Commission, direct that the staff participate as a party with respect to some or all issues.

(b) If the Commission is not the Presiding Officer, the notice of oral hearing will also state:

(1) When the jurisdiction of the Presiding Officer commences and terminates;

(2) The powers of the Presiding Officer;

(3) Instructions to the Presiding Officer to certify promptly the completed hearing record to the Commission without a recommended or preliminary decision.

§ 2.1310 Notice of hearing consisting of written comments.

[Top of File]

A notice of hearing consisting of written comments will:

(a) State the issues to be considered;

(b) Provide the names and addresses of participants;

(c) Specify the schedule for the filing of written testimony, statements of position, proposed questions for the Presiding Officer to consider for submission to the other parties, and rebuttal testimony, consistent with the schedule provisions of § 2.1321.

(d) State any other instructions the Commission deems appropriate.

§ 2.1311 Conditions in a notice or order.

[Top of File]

(a) A notice or order granting a hearing or permitting intervention shall--

(1) Restrict irrelevant or duplicative testimony; and

(2) Require common interests to be represented by a single participant.

(b) If a participant's interests do not extend to all the issues in the hearing, the notice or order may limit her/his participation accordingly.

§ 2.1315 Generic determination regarding license amendments to reflect transfers.

[Top of File]

(a) Unless otherwise determined by the Commission with regard to a specific application, the Commission has determined that any amendment to the license of a utilization facility or the license of an Independent Spent Fuel Storage Installation which does no more than conform the license to reflect the transfer action, involves respectively, "no significant hazards consideration," or "no genuine issue as to whether the health and safety of the public will be significantly affected."

(b) Where administrative license amendments are necessary to reflect an approved transfer, such amendments will be included in the order that approves the transfer. Any challenge to the administrative license amendment is limited to the question of whether the license amendment accurately reflects the approved transfer.

[69 FR 2270, Jan. 14, 2004]

§ 2.1316 Authority and role of NRC staff.

[Top of File]

(a) During the pendency of any hearing under this subpart, consistent with the NRC staff's findings in its Safety Evaluation Report (SER), the staff is expected to promptly issue approval or denial of license transfer requests. Notice of such action shall be promptly transmitted to the Presiding Officer and parties to the proceeding.

(b) Except as otherwise directed in accordance with § 2.1309(a)(7), the NRC staff is not required to be a party to proceedings under this subpart but will offer into evidence its SER associated with the transfer application and provide one or more sponsoring witnesses.

(c) If the NRC staff desires to participate as a party, the staff shall notify the Presiding Officer and the parties and shall thereupon be deemed to be a party with all the rights and responsibilities of a party.

§ 2.1319 Presiding Officer.

[Top of File]

(a) The Commission will ordinarily be the Presiding Officer at a hearing under this part. However, the Commission may provide in a hearing notice that one or more Commissioners, or any other person permitted by law, will preside.

(b) A participant may submit a written motion for the disqualification of any person presiding. The motion shall be supported by an affidavit setting forth the alleged grounds for disqualification. If the Presiding Officer does not grant the motion or the person does not disqualify himself and the Presiding Officer or such other person is not the Commission or a Commissioner, the Commission will decide the matter.

(c) If any person presiding deems himself or herself disqualified, he or she shall withdraw by notice on the record after notifying the Commission.

(d) If a Presiding Officer becomes unavailable, the Commission will designate a replacement.

(e) Any motion concerning the designation of a replacement Presiding Officer shall be made within 5 days after the designation.

(f) Unless otherwise ordered by the Commission, the jurisdiction of a Presiding Officer other than the Commission commences as designated in the hearing notice and terminates upon certification of the hearing record to the Commission, or when the Presiding Officer is disqualified.

§ 2.1320 Responsibility and power of the Presiding Officer in an oral hearing.

[Top of File]

(a) The Presiding Officer in any oral hearing shall conduct a fair hearing, develop a record that will contribute to informed decisionmaking, and, within the framework of the Commission's orders, have the power necessary to achieve these ends, including the power to:

(1) Take action to avoid unnecessary delay and maintain order;

(2) Dispose of procedural requests;

(3) Question participants and witnesses, and entertain suggestions as to questions which may be asked of participants and witnesses.

(4) Order consolidation of participants;

(5) Establish the order of presentation;

(6) Hold conferences before or during the hearing;

(7) Establish time limits;

(8) Limit the number of witnesses; and

(9) Strike or reject duplicative, unreliable, immaterial, or irrelevant presentations.

(b) Where the Commission itself does not preside:

(1) The Presiding Officer may certify questions or refer rulings to the Commission for decision;

(2) Any hearing order may be modified by the Commission; and

(3) The Presiding Officer will certify the completed hearing record to the Commission, which may then issue its decision on the hearing or provide that additional testimony be presented.

§ 2.1321 Participation and schedule for submission in a hearing consisting of written comments.

[Top of File]

Unless otherwise limited by this subpart or by the Commission, participants in a hearing consisting of written comments may submit:

(a) Initial written statements of position and written testimony with supporting affidavits on the issues. These materials must be filed on the date set by the Commission or the presiding officer.

(b) Written responses, rebuttal testimony with supporting affidavits directed to the initial statements and testimony of other participants, and proposed written questions for the Presiding Officer to consider for submittal to persons sponsoring testimony submitted under paragraph (a) of this section. These materials shall to filed within 20 days of the filing of the materials submitted under paragraph (a) of this section, unless the Commission or Presiding Officer directs otherwise. Proposed written questions directed to rebuttal testimony for the Presiding Officer to consider for submittal to persons offering such testimony shall be filed within 7 days of the filing of the rebuttal testimony.

(c) Written concluding statements of position on the issues. These materials shall be filed within 20 days of the filing of the materials submitted under paragraph (b) of this section, unless the Commission or the Presiding Officer directs otherwise.

[69 FR 2271, Jan. 14, 2004]

§ 2.1322 Participation and schedule for submissions in an oral hearing.

[Top of File]

(a) Unless otherwise limited by this subpart or by the Commission, participants in an oral hearing may submit and sponsor in the hearings:

(1) Initial written statements of position and written testimony with supporting affidavits on the issues. These materials must be filed on the date set by the Commission or the presiding officer.

(2)(i) Written responses and rebuttal testimony with supporting affidavits directed to the initial statements and testimony of other participants;

(ii) Proposed questions for the Presiding Officer to consider for propounding to persons sponsoring testimony.

(3) These materials must be filed within 20 days of the filing of the materials submitted under paragraph (a)(1) of this section, unless the Commission or Presiding Officer directs otherwise.

(4) Proposed questions directed to rebuttal testimony for the Presiding Officer to consider for propounding to persons offering such testimony shall be filed within 7 days of the filing of the rebuttal testimony.

(b) The oral hearing should commence within 65 days of the date of the Commission's notice granting a hearing unless the Commission or Presiding Officer directs otherwise. Ordinarily, questioning in the oral hearing will be conducted by the Presiding Officer, using either the Presiding Officer's questions or questions submitted by the participants or a combination of both.

(c) Written post-hearing statements of position on the issues addressed in the oral hearing may be submitted within 20 days of the close of the oral hearing.

(d) The Commission, on its own motion, or in response to a request from a Presiding Officer other than the Commission, may use additional procedures, such as direct and cross-examination, or may convene a formal hearing under subpart G of this part on specific and substantial disputes of fact, necessary for the Commission's decision, that cannot be resolved with sufficient accuracy except in a formal hearing. The staff will be a party in any such formal hearing. Neither the Commission nor the Presiding Officer will entertain motions from the parties that request such special procedures or formal hearings.

[69 FR 2271, Jan. 14, 2004]

§ 2.1323 Presentation of testimony in an oral hearing.

[Top of File]

(a) All direct testimony in an oral hearing shall be filed no later than 15 days before the hearing or as otherwise ordered or allowed pursuant to the provisions of § 2.1322.

(b) Written testimony will be received into evidence in exhibit form.

(c) Participants may designate and present their own witnesses to the Presiding Officer.

(d) Testimony for the NRC staff will be presented only by persons designated for that purpose by either the Executive Director for Operations or a delegee of the Executive Director for Operations.

(e) Participants and witnesses will be questioned orally or in writing and only by the Presiding Officer. Questions may be addressed to individuals or to panels of participants or witnesses.

(f) The Presiding Officer may accept written testimony from a person unable to appear at the hearing, and may request him or her to respond to questions.

(g) No subpoenas will be granted at the request of participants for attendance and testimony of participants or witnesses or the production of evidence.

[69 FR 2271, Jan. 14, 2004]

§ 2.1324 Appearance in an oral hearing.

[Top of File]

(a) A participant may appear in a hearing on her or his own behalf or be represented by an authorized representative.

(b) A person appearing shall file a written notice stating her or his name, address and telephone number, and if an authorized representative, the basis of her or his eligibility and the name and address of the participant on whose behalf she or he appears.

(c) A person may be excluded from a hearing for disorderly, dilatory or contemptuous conduct, provided he or she is informed of the grounds and given an opportunity to respond.

§ 2.1325 Motions and requests.

[Top of File]

(a) Motions and requests shall be addressed to the Presiding Officer, and, if written, also filed with the Secretary and served on other participants.

(b) Other participants may respond to the motion or request. Responses to written motions or requests shall be filed within 5 days after service unless the Commission or Presiding Officer directs otherwise.

(c) The Presiding Officer may entertain motions for extension of time and changes in schedule in accordance with paragraphs (a) and (b) of this section.

(d) When the Commission does not preside, in response to a motion or request, the Presiding Officer may refer a ruling or certify a question to the Commission for decision and notify the participants.

(e) Unless otherwise ordered by the Commission, a motion or request, or the certification of a question or referral of a ruling, shall not stay or extend any aspect of the hearing.

§ 2.1327 Application for a stay of the effectiveness of NRC staff action on license transfer.

[Top of File]

(a) Any application for a stay of the effectiveness of the NRC staff's order on the license transfer application shall be filed with the Commission within 5 days of the issuance of the notice of staff action pursuant to § 2.1316(a).

(b) An application for a stay must be no longer than 10 pages, exclusive of affidavits, and must contain:

(1) A concise summary of the action which is requested to be stayed; and

(2) A concise statement of the grounds for a stay, with reference to the factors specified in paragraph (d) of this section.

(c) Within 10 days after service of an application for a stay under this section, any participant may file an answer supporting or opposing the granting of a stay. Answers must be no longer than 10 pages, exclusive of affidavits, and should concisely address the matters in paragraph (b) of this section, as appropriate. No further replies to answers will be entertained.

(d) In determining whether to grant or deny an application for a stay, the Commission will consider:

(1) Whether the requestor will be irreparably injured unless a stay is granted;

(2) Whether the requestor has made a strong showing that it is likely to prevail on the merits;

(3) Whether the granting of a stay would harm other participants; and

(4) Where the public interest lies.

§ 2.1331 Commission action.

[Top of File]

(a) Upon completion of a hearing, the Commission will issue a written opinion including its decision on the license transfer application and the reasons for the decision.

(b) The decision on issues designated for hearing under § 2.309 will be based on the record developed at hearing.

[69 FR 2271, Jan. 14, 2004]

Subpart N--Expedited Proceedings with Oral Hearings

[Top of File]

Source: 69 FR 2271, Jan. 14, 2004, unless otherwise noted.

§ 2.1400 Purpose and scope of subpart N.

The purpose of this subpart is to provide simplified procedures for the expeditious resolution of disputes among parties in an informal hearing process. The provisions of this subpart, together with subpart C of this part, govern all adjudicatory proceedings conducted under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, and 10 CFR part 2 except for proceedings on the licensing of the construction and operation of a uranium enrichment facility, proceedings on an initial application for authorization to construct a high-level radioactive waste repository at a geologic repository operations area noticed under §§ 2.101(f)(8) or 2.105(a)(5), proceedings on an initial application for authorization to receive and possess high-level radioactive waste at a geologic repository operations area, proceedings on an initial application for a license to receive and possess high-level radioactive waste at a geologic repository operations area, proceedings on enforcement matters unless all parties otherwise agree and request the application of subpart N procedures, and proceedings for the direct or indirect control of an NRC license when the transfer requires prior approval of the NRC under the Commission's regulations, governing statutes, or pursuant to a license condition.

§ 2.1401 Definitions.

[Top of File]

The definitions of terms in § 2.4 apply to this subpart unless a different definition is provided in this subpart.

§ 2.1402 General procedures and limitations; requests for other procedures.

[Top of File]

(a) Generally-applicable procedures. For proceedings conducted under this subpart:

(1) Except where provided otherwise in this subpart or specifically requested by the presiding officer or the Commission, written pleadings and briefs (regardless of whether they are in the form of a letter, a formal legal submission, or otherwise) are not permitted;

(2) Requests to schedule a conference to consider oral motions may be in writing and served on the Presiding officer and the parties;

(3) Motions for summary disposition before the hearing has concluded and motions for reconsideration to the presiding officer or the Commission are not permitted;

(4) All motions must be presented and argued orally;

(5) The presiding officer will reflect all rulings on motions and other requests from the parties in a written decision. A verbatim transcript of oral rulings satisfies this requirement;

(6) Except for the information disclosure requirements set forth in subpart C of this part, requests for discovery will not be entertained; and

(7) The presiding officer may issue written orders and rulings necessary for the orderly and effective conduct of the proceeding;

(b) Other procedures. If it becomes apparent at any time before a hearing is held that a proceeding selected for adjudication under this subpart is not appropriate for application of this subpart, the presiding officer or the Commission may, on its own motion or at the request of a party, order the proceeding to continue under another appropriate subpart. If a proceeding under this subpart is discontinued because the proceeding is not appropriate for application of this subpart, the presiding officer may issue written orders necessary for the orderly continuation of the hearing process under another subpart.

(c) Request for cross-examination. A party may present an oral motion to the presiding officer to permit cross-examination by the parties on particular admitted contentions or issues. The presiding officer may allow cross-examination by the parties if he or she determines that cross-examination by the parties is necessary for the development of an adequate record for decision.

§ 2.1403 Authority and role of the NRC staff.

[Top of File]

(a) During the pendency of any hearing under this subpart, consistent with the NRC staff's findings in its own review of the application or matter which is the subject of the hearing and as authorized by law, the NRC staff is expected to issue its approval or denial of the application promptly, or take other appropriate action on the matter which is the subject of the hearing. When the NRC staff takes its action, it shall notify the presiding officer and the parties to the proceeding of its action. The NRC staff's action on the matter is effective upon issuance, except in matters involving:

(1) An application to construct and/or operate a production or utilization facility;

(2) An application for the construction and operation of an independent spent fuel storage installation located at a site other than a reactor site or a monitored retrievable storage facility under 10 CFR part 72; or

(3) Production or utilization facility licensing actions that involve significant hazards considerations as defined in 10 CFR 50.92.

(b)(1) The NRC staff is not required to be a party to proceedings under this subpart, except where:

(i) The proceeding involves an application denied by the NRC staff or an enforcement action proposed by the staff; or

(ii) The presiding officer determines that the resolution of any issue in the proceeding would be aided materially by the NRC staff's participation in the proceeding as a party and orders the staff to participate as a party for the identified issue. In the event that the presiding officer determines that the NRC staff's participation is necessary, the presiding officer shall issue an order identifying the issue(s) on which the staff is to participate as well as setting forth the basis for the determination that staff participation will materially aid in resolution of the issue(s).

(2) Within fifteen (15) days of the issuance of the order granting requests for hearing/petitions to intervene and admitting contentions, the NRC staff shall notify the presiding officer and the parties whether it desires to participate as a party, and identify the contentions on which it wishes to participate as a party. If the NRC staff desires to be a party thereafter, the NRC staff shall notify the presiding officer and the parties, identify the contentions on which it wishes to participate as a party, and make the disclosures required by § 2.336(b)(3) through (5) unless accompanied by an affidavit explaining why the disclosures cannot be provided to the parties with the notice.

(3) Once the NRC staff chooses to participate as a party, it shall have all the rights and responsibilities of a party with respect to the admitted contention/matter in controversy on which the staff chooses to participate.

§ 2.1404 Prehearing conference.

[Top of File]

(a) No later than forty (40) days after the order granting requests for hearing/petitions to intervene, the presiding officer shall conduct a prehearing conference. At the discretion of the presiding officer, the prehearing conference may be held in person or by telephone or through the use of video conference technology.

(b) At the prehearing conference, each party shall provide the presiding officer and the parties participating in the conference with a statement identifying each witness the party plans to present at the hearing and a written summary of the oral and written testimony of each proposed witness. If the prehearing conference is not held in person, each party shall forward the summaries of the party's witnesses' testimony to the presiding officer and the other parties by such means that will ensure the receipt of the summaries by the commencement of the prehearing conference.

(c) At the prehearing conference, the parties shall describe the results of their efforts to settle their disputes or narrow the contentions that remain for hearing, provide an agreed statement of facts, if any, identify witnesses that they propose to present at hearing, provide questions or question areas that they would propose to have the presiding officer cover with the witnesses at the hearing, and discuss other pertinent matters. At the conclusion of the conference, the presiding officer will issue an order specifying the issues to be addressed at the hearing and setting forth any agreements reached by the parties. The order must include the scheduled date for any hearing that remains to be held, and address any other matters as appropriate.

§ 2.1405 Hearing.

[Top of File]

a) No later than twenty (20) days after the conclusion of the prehearing conference, the presiding officer shall hold a hearing on any contention that remains in dispute. At the beginning of the hearing, the presiding officer shall enter into the record all agreements reached by the parties before the hearing.

(b) A hearing will be recorded stenographically or by other means, under the supervision of the presiding officer. A transcript will be prepared from the recording that will be the sole official transcript of the hearing. The transcript will be prepared by an official reporter who may be designated by the Commission or may be a regular employee of the Commission. Except as limited by section 181 of the Act or order of the Commission, the transcript will be available for inspection in the agency's public records system. Copies of transcripts are available to the parties and to the public from the official reporter on payment of the charges fixed therefor. If a hearing is recorded on videotape or other video medium, copies of the recording of each daily session of the hearing may be made available to the parties and to the public from the presiding officer upon payment of a charge fixed by the Chief Administrative Judge. Parties may purchase copies of the transcript from the reporter.

(c) Hearings will be open to the public, unless portions of the hearings involving proprietary or other protectable information are closed in accordance with the Commission's regulations.

(d) At the hearing, the presiding officer will not receive oral evidence that is irrelevant, immaterial, unreliable or unduly repetitious. Testimony will be under oath or affirmation.

(e) The presiding officer may question witnesses who testify at the hearing, but the parties may not do so.

(f) Each party may present oral argument and a final statement of position at the close of the hearing. Written post-hearing briefs and proposed findings are not permitted unless ordered by the presiding officer.

§ 2.1406 Initial decision--issuance and effectiveness.

[Top of File]

(a) Where practicable, the presiding officer will render a decision from the bench. In rendering a decision from the bench, the presiding officer shall state the issues in the proceeding and make clear its findings of fact and conclusions of law on each issue. The presiding officer's decision and order must be reduced to writing and transmitted to the parties as soon as practicable, but not later than twenty (20) days, after the hearing ends. If a decision is not rendered from the bench, a written decision and order will be issued not later than thirty (30) days after the hearing ends. Approval of the Chief Administrative Judge must be obtained for an extension of these time periods, and in no event may a written decision and order be issued later than sixty (60) days after the hearing ends without the express approval of the Commission.

(b) The presiding officer's written decision must be served on the parties and filed with the Commission when issued.

(c) The presiding officer's initial decision is effective and constitutes the final action of the Commission twenty (20) days after the date of issuance of the written decision unless any party appeals to the Commission in accordance with § 2.1407 or the Commission takes review of the decision sua sponte or the regulations in this part specify other requirements with regard to the effectiveness of decisions on certain

applications.

§ 2.1407 Appeal and Commission review of initial decision.

[Top of File]

(a)(1) Within fifteen (15) days after service of a written initial decision, a party may file a written appeal seeking the Commission's review on the grounds specified in paragraph (b) of this section. Unless otherwise authorized by law, a party must file an appeal with the Commission before seeking judicial review.

(2) An appeal under this section may not be longer than twenty (20) pages and must contain the following:

(i) A concise statement of the specific rulings and decisions that are being appealed;

(ii) A concise statement (including record citations) where the matters of fact or law raised in the appeal were previously raised before the presiding officer and, if they were not, why they could not have been raised;

(iii) A concise statement why, in the appellant's view, the decision or action is erroneous; and

(iv) A concise statement why the Commission should review the decision or action, with particular reference to the grounds specified in paragraph (b) of this section.

(3) Any other party to the proceeding may, within fifteen (15) days after service of the appeal, file an answer supporting or opposing the appeal. The answer may not be longer than twenty (20) pages and should concisely address the matters specified in paragraph (a)(2) of this section. The appellant does not have a right to reply. Unless it directs additional filings or oral arguments, the Commission will decide the appeal on the basis of the filings permitted by this paragraph.

(b) In considering the appeal, the Commission will give due weight to the existence of a substantial question with respect to the following considerations:

(1) A finding of material fact is clearly erroneous or in conflict with a finding as to the same fact in a different proceeding;

(2) A necessary legal conclusion is without governing precedent or is a departure from, or contrary to, established law;

(3) A substantial and important question of law, policy or discretion has been raised by the appeal;

(4) The conduct of the proceeding involved a prejudicial procedural error; or

(5) Any other consideration which the Commission may deem to be in the public interest.

(c) Once a decision becomes final agency action, the Secretary shall transmit the decision to the NRC staff for action in accordance with the decision.

Subpart O--Legislative Hearings

[Top of File]

Source: 69 FR 2273, Jan. 14, 2004, unless otherwise noted.

§ 2.1500 Purpose and scope.

The purpose of this subpart is to provide for simplified, legislative hearing procedures to be used, at the Commission's sole discretion, in:

(a) Any design certification rulemaking hearings under subpart B of part 52 of this chapter that the Commission may choose to conduct; and

(b) Developing a record to assist the Commission in resolving, under § 2.335(d), a petition filed under § 2.335(b).

§ 2.1501 Definitions.

[Top of File]

Demonstrative information means physical things, not constituting documentary information.

Documentary information means information, ordinarily contained in documents or electronic files, but may also include photographs and digital audio files.

§ 2.1502 Commission decision to hold legislative hearing.

[Top of File]

(a) The Commission may, in its discretion, hold a legislative hearing in either a design certification rulemaking under § 52.51(b) of this chapter, or a proceeding where a question has been certified to it under § 2.335(d).

(b) Notice of Commission decision--(1) Hearing in design certification rulemakings. If, at the time a proposed design certification rule is published in the Federal Register under § 52.51(a) of this chapter, the Commission decides that a legislative hearing should be held, the information required by paragraph (c) of this section must be included in the Federal Register notice for the proposed design certification rule. If, following the submission of written public comments submitted on the proposed design certification rule which are submitted in accordance with § 52.51(a) of this chapter, the Commission decides to conduct a legislative hearing, the Commission shall publish a notice in the Federal Register and on the NRC Web site indicating its determination to conduct a legislative hearing. The notice shall contain the information specified in paragraph (c) of this section, and specify whether the Commission or a presiding officer will conduct the legislative hearing.

(2) Hearings under § 2.335(d). If, following a certification of a question to the Commission by a Licensing Board under § 2.335(d), the Commission decides to hold a legislative hearing to assist it in resolving the certified question, the Commission shall issue an order containing the information required by paragraph (c) of this section. The Commission shall serve the order on all parties in the proceeding. In addition, if the Commission decides that persons and entities other than those identified in paragraph (c)(2) may request to participate in the legislative hearing, the Commission shall publish a notice of its determination to hold a legislative hearing in the Federal Register and on the NRC Web site. The notice shall contain the information specified in paragraph (c) of this section, and refer to the criteria in § 2.1504 which will be used in determining requests to participate in the legislative hearing.

(c) If the Commission decides to hold a legislative hearing, it shall, in accordance with paragraph (b) of this section:

(1) Identify with specificity the issues on which it wishes to compile a record;

(2) Identify, in a hearing associated with a question certified to the Commission under § 2.335(d), the parties and interested State(s), governmental bodies, and Federally-recognized Indian Tribe under § 2.315(c), who may participate in the legislative hearing;

(3) Identify persons and entities that may, in the discretion of the Commission, be invited to participate in the legislative hearing;

(4) Indicate whether other persons and entities may request, in accordance with § 2.1504, to participate in the legislative hearing, and the criteria that the Commission or presiding officer will use in determining whether to permit such participation;

(5) Indicate whether the Commission or a presiding officer will conduct the legislative hearing;

(6) Specify any special procedures to be used in the legislative hearing;

(7) Set the dates for submission of requests to participate in the legislative hearing, submission of written statements and demonstrative and documentary information, and commencement of the oral hearing; and

(8) Specify the location where the oral hearing is to be held. Ordinarily, oral hearings will be held in the Washington, DC metropolitan area.

§ 2.1503 Authority of presiding officer.

[Top of File]

If the Commission appoints a presiding officer to conduct the legislative hearing, the presiding officer shall be responsible for expeditious development of a sufficient record on the Commission-identified issues, consistent with the direction provided by the Commission under § 2.1502(c). The presiding officer has the authority otherwise accorded to it under §§ 2.319(a), (c), (e), (g), (h), and (i), 2.324, and 2.333 to control the course of the proceeding, and may exercise any other authority granted to it by the Commission in accordance with § 2.1502(c)(6).

§ 2.1504 Request to participate in legislative hearing.

[Top of File]

(a) Any person or entity who wishes to participate in a legislative hearing noticed under either § 2.1502(b)(1) or (b)(2) shall submit a request to participate by the date specified in the notice. The request must address:

(1) A summary of the person's position on the subject matter of the legislative hearing; and

(2) The specific information, expertise or experience that the person possesses with respect to the subject matter of the legislative hearing.

(b) The Commission or presiding officer shall, within ten (10) days of the date specified for submission of requests to participate, determine

whether the person or entity has met the criteria specified by the Commission under § 2.1502(c)(4) for determining requests to participate in the legislative hearing, and issue an order to that person or entity informing them of the presiding officer's decision. A presiding officer's determinations in this regard are final and not subject to any motion for reconsideration or appeal to the Commission; and the Commission's determination in this regard are final and are not subject to a motion for reconsideration.

§ 2.1505 Role of the NRC staff.

[Top of File]

The NRC staff shall be available to answer any Commission or presiding officer's questions on staff-prepared documents, provide additional information or documentation that may be available to the staff, and provide other assistance that the Commission or presiding officer may request without requiring the NRC staff to assume the role of an advocate. The NRC staff may request to participate in the legislative hearing by providing notice to the Commission or presiding officer, as applicable, within the time period established for submitting a request to participate; or if no notice is provided under § 2.1502(b)(2), within ten (10) days of the Commission's order announcing its determination to conduct a legislative hearing.

§ 2.1506 Written statements and submission of information.

[Top of File]

All participants shall file written statements on the Commission-identified issues, and may submit documentary and demonstrative information. Written statements, copies of documentary information, and a list and short description of any demonstrative information to be submitted must be received by the NRC (and in a hearing on issues stemming from a § 2.335(b) petition, by the parties in the proceeding in which the petition was filed) no later than ten (10) days before the commencement of the oral hearing.

§ 2.1507 Oral hearing.

[Top of File]

(a) Not less than five (5) days before the commencement of the oral hearing, the presiding officer shall issue an order setting forth the grouping and order of appearance of the witnesses at the oral hearing. The order shall be filed upon all participants by email or facsimile transmission if possible, otherwise by overnight mail.

(b) The Commission or presiding officer may question witnesses. Neither the Commission nor the presiding officer will ordinarily permit participants to submit recommended questions for the Commission or presiding officer to propound to witnesses. However, if the Commission or presiding officer believe that the conduct of the oral hearing will be expedited and that consideration of such proposed questions will assist in developing a more focused hearing record, the Commission or presiding officer may, in its discretion, permit the participants to submit recommended questions for the Commission or presiding officer's consideration.

(c) The Commission or presiding officer may request, or upon request of a participant may, in the presiding officer's discretion, permit the submission of additional information following the close of the oral hearing. Such information must be submitted no later than five (5) days after the close of the oral hearing and must be served at the same time upon all participants at the oral hearing.

§ 2.1508 Recommendation of presiding officer.

[Top of File]

(a) If the Commission is not acting as a presiding officer, the presiding officer shall, within thirty (30) days following the close of the legislative hearing record, certify the record to the Commission on each of the issues identified by the Commission.

(b) The presiding officer's certification for each Commission-identified issue shall contain:

(1) A transcript of the oral phase of the legislative hearing;

(2) A list of all participants;

(3) A list of all witnesses at the oral hearing, and their affiliation with a participant;

(4) A list, and copies of, all documentary information submitted by the participants with ADAMS accession numbers;

(5) All demonstrative information submitted by the participants;

(6) Any written answers submitted by the NRC staff in response to questions posed by the presiding officer with ADAMS accession numbers;

(7) A certification that all documentary information has been entered into ADAMS, and have been placed on the NRC Web site unless otherwise protected from public disclosure;

(8) A certification by the presiding officer that the record contains sufficient information for the Commission to make a reasoned determination on the Commission-identified issue; and

(9) At the option of the presiding officer, a summary of the information in the record and a proposed resolution of the Commission-identified issue with a supporting basis.

§ 2.1509 Ex parte communications and separation of functions.

[Top of File]

Section 2.347 applies in a legislative hearing. Section 2.348 applies in a legislative hearing only where the hearing addresses an issue certified to the Commission under § 2.335(d), and then only with respect to the underlying contested matter.

Appendix A to Part 2--[Reserved]

[Top of File]

[69 FR 2274, Jan. 14, 2004]

Appendix B to Part 2--Model Milestones To Be Used By a Presiding Officer as a Guideline in Developing a Hearing Schedule for the Conduct of an Adjudicatory Proceeding in Accordance With 10 CFR 2.332

[Top of File]

I. Model Milestones for a Hearing on an Enforcement Action Conducted Under 10 CFR Part 2, Subpart G
II. Model Milestones for Hearings Conducted Under 10 CFR Part 2, Subpart L
III. Model Milestones for a Hearing on a Transfer of a License Conducted Under 10 CFR Part 2, Subpart M
IV. Model Milestones for a Hearing on an Enforcement Action Conducted Under 10 CFR Part 2, Subpart N

I. Model Milestones for a Hearing on an Enforcement Action Conducted Under 10 CFR Part 2, Subpart G

These model milestones would apply to enforcement proceedings conducted under 10 CFR Part 2, Subpart G. As required by 10 CFR 2.332 and 2.334, the presiding officer establishes, by order, a schedule for the conduct of the proceeding. In establishing a schedule, the presiding officer should use these milestones as a starting point, make appropriate modifications to the milestones, and set detailed schedules (e.g., for filings) based upon all relevant information. Such information would include, but not be limited to, the complexity of the issues, any other relevant consideration that a party brings to the attention of the presiding officer, and the NRC's interest in providing a fair and expeditious resolution of the issues to be adjudicated in the proceeding. The model milestones are based on the Commission's Rules of Practice in 10 CFR Part 2, Subparts B, C, and G.

The model milestones are based upon the following assumptions: (i) the issues to be litigated will involve both disputes over fact and issues of compliance with the Commission's regulations and requirements; and (ii) no petitions to intervene are filed pursuant to 10 CFR 2.309(a)–(b). The model milestones reflect electronic filing and service in accordance with 10 CFR 2.305. In some cases, preparation of direct testimony and motions for summary disposition can proceed once initial mandatory disclosures have been made. The time periods set forth in the model milestones reflect these assumptions.

Model Milestones
[10 CFR Part 2, Subpart G]

• Within 20 days of date of enforcement order:	Person subject to order files answer; if order immediately effective, motion to set aside immediate effectiveness due; requests for hearing due.
• Within 100 days of enforcement order:	Presiding officer issues order on hearing request by person who is subject of enforcement order.
• Within 25 days of presiding officer decision granting hearing:	Presiding officer sets initial schedule for the proceeding.
• Within 145 days of presiding officer decision granting hearing:	Discovery complete.
• Within 155 days of presiding officer decision granting hearing:	Motions for summary disposition due.
• Within 235 days of presiding officer decision granting hearing:	Presiding officer decisions on motions for summary disposition.

• Within 245 days of presiding officer decision granting hearing:	Prehearing conference (optional); presiding officer sets schedule for remainder of proceeding.
• Within 275 days of presiding officer decision granting hearing:	Written testimony filed.
• Within 90 days of end of evidentiary hearing and closing of record:	Presiding officer issues initial decision.

II. Model Milestones for Hearings Conducted Under 10 CFR Part 2, Subpart L

These model milestones would apply to proceedings conducted under 10 CFR Part 2, Subpart L, including those on applications for combined licenses (COLs), renewed licenses, and license amendments. While such proceedings differ insofar as the scope and complexity of the NRC staff reviews for the requested actions may vary, such differences will be reflected in the staff's schedule for issuing its review documents in a particular type of action. Because the milestones are keyed to the staff's review schedule, separate milestones are not identified for proceedings on the different types of actions.

As required by 10 CFR 2.332 and 2.334, the presiding officer establishes, by order, a schedule for the conduct of each proceeding. In establishing a schedule, the presiding officer should use these milestones as a starting point, make appropriate modifications to the milestones, and set detailed schedules (e.g., for filings) based upon all relevant information. Such information would include, but not be limited to, the number of contentions admitted, the complexity of the issues, the NRC staff's schedule for completion of its safety and environmental evaluations, any other relevant consideration that a party brings to the attention of the presiding officer, and the NRC's interest in providing a fair and expeditious resolution of the issues sought to be admitted for adjudication in the proceeding. The model milestones are based on the Commission's Rules of Practice in 10 CFR Part 2, Subparts B, C, and L.

The model milestones include only the most significant events in the proceeding and are based upon the following assumptions: (i) the issues to be litigated will involve both disputes over fact and issues of compliance with the Commission's regulations and requirements; (ii) an oral hearing under 10 CFR 2.1207 will be held rather than a written hearing under 10 CFR 2.1208; and (iii) the final Safety Evaluation Report (SER) and final environmental document will be issued simultaneously. The model milestones reflect electronic filing and service in accordance with 10 CFR 2.305.

Model Milestones
[10 CFR Part 2, Subpart L]

• Within 140 of publication days of notice in Federal Register:	Presiding officer decision on intervention petitions and admission of contentions.
• Within 55 days of presiding officer decision granting intervention and admitting contentions:	Presiding officer to set initial schedule for proceeding, based on staff schedule for issuing draft and final SERs and any necessary NEPA document.
• Within 30 days of issuance of SER and any necessary NEPA document:	Presiding officer decision on admission of proposed late-filed contentions and motions for summary disposition; presiding officer sets schedule for remainder of proceeding. Evidentiary hearing begins.
• Within 14 days after presiding officer decision on amended/late-filed contentions:	All parties complete updates of mandatory disclosures.
• Within 115 days of issuance of SER and NEPA document:	Motions for summary disposition due.
• Within 155 days of issuance of SER and NEPA document:	Written direct testimony filed. Evidentiary hearing begins.
• Within 175 days of issuance of SER and NEPA document:	Evidentiary hearing begins.
• Within 90 days of end of evidentiary hearing and closing of record:	Presiding officer issues initial decision.

III. Model Milestones for a Hearing on a Transfer of a License Conducted Under 10 CFR Part 2, Subpart M

These model milestones would apply to proceedings conducted under 10 CFR Part 2, Subpart M on applications for license transfer. As required by 10 CFR 2.332 and 2.334, the presiding officer establishes, by order, a schedule for the conduct of each proceeding. In establishing a schedule, the presiding officer should use these milestones as a starting point, make appropriate modifications to the milestones, and set detailed schedules (e.g., for filings) based upon all relevant information. Such information would include, but not be limited to, the number of contentions admitted, the complexity of the issues, the NRC staff's schedule for completion of its safety and environmental evaluations, any other relevant consideration that a party brings to the attention of the presiding officer, and the NRC's

interest in providing a fair and expeditious resolution of the issues sought to be admitted for adjudication in the proceeding. The model milestones are based on the Commission's Rules of Practice in 10 CFR Part 2, Subparts B, C and M.

The model milestones include only the most significant events in the proceeding, and are based upon the following assumptions: (i) The issues to be litigated will involve both disputes over fact and issues of compliance with the Commission's regulations and requirements; (ii) the parties do not file a joint request under 10 CFR 2.1308 for a hearing consisting of written comments; (iii) the final Safety Evaluation Report (SER) is not necessary to resolve the issues to be litigated; (iv) the Commission itself does not serve as the presiding officer; and (v) the Commission does not order further taking of testimony after the presiding officer certifies the record to the Commission under 10 CFR 2.1319(f). The model milestones reflect electronic filing and service in accordance with 10 CFR 2.305.

Model Milestones
[10 CFR Part 2, Subpart M]

• Within 100 days of publication of Federal Register notice of opportunity for hearing:	Presiding officer decision on intervention petitions and admission of contentions.
• Within 30 days of order granting hearing petitions:	NRC staff and other parties complete mandatory disclosures.
• Within 12 days of completion of mandatory disclosures:	Presiding Officer issues scheduling order to address, inter alia, scheduling of oral hearing, filing of written statements of position, direct testimony, and rebuttal testimony.
• Within 45 days of scheduling order:	Oral hearing commences.
• Within 25 days after hearing ends:	Presiding officer certifies hearing record to the Commission.

IV. Model Milestones for a Hearing on an Enforcement Action Conducted Under 10 CFR Part 2, Subpart N

These model milestones would apply to enforcement proceedings conducted under 10 CFR Part 2, Subpart N. As required by 10 CFR 2.332 and 2.334, the presiding officer establishes, by order, a schedule for the conduct of each proceeding. In establishing a schedule, the presiding officer should use these milestones as a starting point, make appropriate modifications to the milestones, and set detailed schedules based upon all relevant information. The model milestones are based on the Commission's Rules of Practice in 10 CFR Part 2, Subparts B, C, and N.

The model milestones are based upon the following assumptions: (i) The issues to be litigated will involve both disputes over fact and issues of compliance with the Commission's regulations and requirements; and (ii) no petitions to intervene are filed pursuant to 10 CFR 2.309(a)–(b). The model milestones reflect electronic filing and service in accordance with 10 CFR 2.305. The only discovery provided is the mandatory disclosure made by each party pursuant to 10 CFR 2.336.

Model Milestones
[10 CFR Part 2, Subpart N]

• Within 20 of date of enforcement order:	Person subject to order files answer; if order immediately effective, motion to set aside immediate effectiveness due; requests for hearing due, including joint motion to use Subpart N procedures.
• Within 50 days of date of enforcement order:	Presiding officer decision on requests for hearing and confirms use of Subpart N procedures (note: if presiding officer concludes that Subpart N procedures should not be used, the Model Milestone for Enforcement Actions under Subpart G are applicable).
• Within 30 days of presiding officer decision granting hearing:	Mandatory disclosures complete.
• Within 40 days of presiding officer decision granting hearing:	Prehearing conference to specify issues for hearing and set schedules for remaining course of proceeding.
• Within 60 days of presiding officer decision granting hearing:	Evidentiary hearing begins.
• Within 30 days of end of evidentiary hearing and closing of record:	Presiding officer issues initial decision.

[70 FR 20462, Apr. 20, 2005]

Appendix C to Part 2--[Reserved]

[Top of File]

Appendix D to Part 2--Schedule for the Proceeding on Consideration of Construction Authorization for a High-Level Waste Geologic Repository

[Top of File]

Day	Regulation (10 CFR)	Action
0	2.101(f)(8), 2.105(a)(5)	*Federal Register* Notice of Hearing.
30	2.309(b)(2)	Petition to intervene/request for hearing, w/contentions.
30	2.309(b)(2)	Petition for status as interested government participant.
55	2.315(c)	Answers to intervention & interested government participant Petitions.
62	2.309(h)(1)	Petitioner's response to answers.
70	2.1021	First Prehearing conference.
100	2.309(h)(2)	First Prehearing Conference Order identifing participants in proceeding, admitted contentions, and setting discovery and other schedules.
110	2.1021	Appeals from First Prehearing Conference Order.
120		Briefs in opposition to appeals.
150	2.1021, 2.329	Commission ruling on appeals for First Prehearing Conference Order.
548		NRC staff issues SER.
578	2.1022	Second Prehearing Conference.
608	2.1021, 2.1022	Discovery complete; Second Prehearing Conference Order finalizes issues for hearing and sets schedule for prefiled testimony and hearing.
618	2.1015(b)	Appeals from Second Prehearing Conference Order.
628	2.1015(b), *c.f.* 2.710(a)	Briefs in opposition to appeals; last date for filing motions for summary disposition.
648	*c.f.* 2.710(a)	Late date for responses to summary disposition motions.
658	2.710(a)	Commission ruling on appeals from Second Prehearing Conference Order; last date for party opposing summary disposition motion to file response to new facts and arguments in any response supporting summary disposition motion.
698	2.1015(b)	Decision on summary disposition motions (may be determination to dismiss or to hold in abeyance).
720	*c.f.* 2.710(a)	Evidentiary hearing begins.
810		Evidentiary hearing ends.
840	2.712(a)(1)	Applicant's proposed findings.
850	2.712(a)(2)	Other parties' proposed findings.
855	2.712(a)(3)	Applicant's reply to other parties' proposed findings.
955	2.713	Initial decision.
965	2.342(a), 2.345(a), 2.1015(c)(1)	Stay motion. Petition for reconsideration, notice of appeal.
975	2.342(d), 2.345(b)	Other parties' response to stay motion and Petitions for reconsideration.
985		Commission ruling on stay motion.
995	2.1015(c)(2)	Appellant's briefs.
1015	2.1015(c)(3)	Appellee's briefs.
1055	2.1023 Supp. Info	Completion of NMSS and Commission supervisory review; issuance of construction authorization; NWPA 3-year period tolled.
1125		Commission decision

[56 FR 7798, Feb. 26, 1991; 56 FR 14151, Apr. 5, 1991; 69 FR 2275, Jan. 14, 2004; 69 FR 25997, May 11, 2004]

PART 4--NONDISCRIMINATION IN FEDERALLY ASSISTED PROGRAMS OR ACTIVITIES RECEIVING FEDERAL FINANCIAL ASSISTANCE FROM THE COMMISSION

[Top of File]

General Provisions

[Top of File]

§ 4.1 Purpose and scope.

The regulations in this part implement:

(a) The provisions of title VI of the Civil Rights Act of 1964, Pub. L. 88-352; (78 Stat. 241; 42 U.S.C. 2000a note), and title IV of the Energy Reorganization Act of 1974, Pub. L. 93-438, (88 Stat. 1233; 42 U.S.C. 5801 note), which relate to nondiscrimination with respect to race, color, national origin or sex in any program or activity receiving Federal financial assistance from NRC;

(b) The provisions of section 504 of the Rehabilitation Act of 1973, as amended, Pub. L. 93-112 (87 Stat. 355; 29 U.S.C. 701 note), Pub. L. 95-602 (92 Stat. 2955; 29 U.S.C. 701 note), which relates to nondiscrimination with respect to the handicapped in any program or activity receiving Federal financial assistance; and

(c) The provisions of the Age Discrimination Act of 1975, as amended Pub. L. 94-135 (89 Stat. 713; 42 U.S.C. 3001 note), Pub. L. 95-478 (92 Stat. 1513; 42 U.S.C. 3001 note), which relates to nondiscrimination on the basis of age in any program or activity receiving Federal financial assistance.

[52 FR 25357, July 7, 1987]

§ 4.2 Subparts.

[Top of File]

Subpart A sets forth rules applicable to title VI of the Civil Rights Act of 1964 and title IV of the Energy Reorganization Act of 1974. (The Acts are collectively referred to in subpart A as "the Act".) Subpart B sets forth rules applicable specifically to matters pertaining to section 504 of the Rehabilitation Act of 1973, as amended. Subpart C sets forth rules pertaining to the provisions of the Age Discrimination Act of 1975, as amended, Pub. L. 94-135 (89 Stat. 713; 42 U.S.C. 3001 note), Pub. L. 95-478 (92 Stat. 1513; 42 U.S.C. 3001 note), which relates to nondiscrimination on the basis of age in any program or activity receiving Federal financial assistance.

[52 FR 25358, July 7, 1987]

§ 4.3 Application of this part.

[Top of File]

This part applies to any program for which Federal financial assistance is authorized under a law administered by NRC. The types of Federal financial assistance to which this part applies are listed in appendix A of this part; appendix A may be revised from time to time by notice published in the Federal Regoster. This part applies to money paid, property transferred, or other Federal assistance extended, by way of grant, entitlement, cooperative agreement, loan, contract, or other agreement by NRC, or an authorized contractor or subcontractor of NRC, the terms of which require compliance with this part. If any statutes implemented by this part are otherwise applicable, the failure to list a type of Federal financial assistance in appendix A does not mean a program or activity is not covered by this part. This part does not apply to--

(a) Contracts of insurance or guaranty; or

(b) Procurement contracts; or

(c) Employment practices under any program or activity except as provided in §§ 4.13, 4.122 and 4.302.

[52 FR 25358, July 7, 1987; 68 FR 51344, Aug. 26, 2003]

§ 4.4 Definitions.

[Top of File]

(a) *Applicant* means one who submits an application, request, or plan required to be approved by NRC, or by a primary recipient, as a

condition to eligibility for Federal financial assistance; "application" means such an application, request, or plan.

(b) *Commission* means the Commission of five members or a quorum thereof sitting as a body; "NRC" means the Nuclear Regulatory Commission and its duly authorized representatives.

(c) *Facility* includes all or any portion of structures, equipment, or other real or personal property or interests therein, and the provisions of facilities includes the construction, expansion, renovation, remodeling, alteration or acquisition of facilities.

(d) *Federal financial assistance* means any grant, entitlement, loan, cooperative agreement, contract (other than a procurement contract or a contract of insurance or guaranty), or any other arrangement by which NRC provides or otherwise makes available assistance in the form of--

(1) Funds;

(2) Services of Federal personnel or other personnel at Federal expense; or

(3) Real and personal property or any interest in or use of property, including--

(i) Transfers or leases of property for less than fair market value or for reduced consideration;

(ii) Proceeds from a subsequent transfer or lease of property if the Federal share of its fair market value is not returned to the Federal Government; and the

(iii) Sale and lease of, and the permission to use (other than on casual or transient basis) Federal property or any interest in such property without consideration or at a nominal consideration, or at a consideration which is reduced for the purpose of assisting the recipient, or in recognition of the public interest to be served by such sale or lease to the recipient.

(e) *Administrative Law Judge* means an individual appointed pursuant to section 11 of the Administrative Procedure Act to conduct proceedings subject to this part.

(f) *Primary recipient* means any recipient which is authorized or required to extend Federal financial assistance to another recipient.

(g) *Program or activity* and *program* mean all of the operations of any entity described in paragraphs (g)(1) through (4) of this section, any part of which is extended Federal financial assistance:

(1)(i) A department, agency, special purpose district, or other instrumentality of a State or of a local government; or

(ii) A local educational agency (as defined in 20 U.S.C. 8801), system of vocational education, or other school system;

(2)(i) A college, university or other postsecondary institution, or a public system of higher education; or

(ii) A local educational agency (as defined in 20 U.S.C. 7801), system of vocational education, or other school system;

(3)(i) An entire corporation, partnership, or other private organization, or an entire sole proprietorship--

(A) If assistance is extended to such corporation, partnership, private organization, or sole proprietorship as a whole; or

(B) Which is principally engaged in the business of providing education, health care, housing, social services, or parks and recreation; or

(ii) The entire plant or other comparable, geographically separate facility to which Federal financial assistance is extended, in the case of any other corporation, partnership, private organization, or sole proprietorship; or

(4) Any other entity which is established by two or more of the entities described in paragraph (g)(1), (2), or (3) of this section.

(h) *Recipient* means any State, political subdivision of any State, or instrumentality of any State or political subdivision, any public or private agency, institution, or organization, or other entity, or any individual, in any State, to whom Federal financial assistance is extended, directly or through another recipient, including any successor, assignee, or transferee thereof, but such term does not include any ultimate beneficiary.

(i) *Responsible NRC official* means the Director of the Office of Small Business and Civil Rights or any other officer to whom the Executive Director for Operations has delegated the authority to act.

(j) *United States* means the States of the United States, the District of Columbia, Puerto Rico, the Virgin Islands, American Samoa, Guam, Wake Island, and the territories and possessions of the United States, and the term "State" means any one of the foregoing.

[29 FR 19277, Dec. 31, 1964, as amended at 45 FR 14535, Mar. 6, 1980; 45 FR 18905, Mar. 24, 1980. Redesignated and amended at 52 FR 25358, July 7, 1987; 63 FR 15742, Apr. 1, 1998; 68 FR 51344, Aug. 26, 2003; 68 FR 75389, Dec. 31, 2003]

§ 4.5 Communications and reports.

[Top of File]

Except as otherwise indicated, communications and reports relating to this part may be sent to the NRC by mail addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[63 FR 15742, Apr. 1, 1998 as amended at 68 FR 58799, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 4.6 Maintenance of records.

[Top of File]

Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[53 FR 19244, May 27, 1988]

§ 4.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0053.

(b) The approved information collection requirements contained in this part appear in §§ 4.32, 4.34, 4.125, 4.127, 4.231, 4.232, 4.322, and 4.324.

[62 FR 52184, Oct. 6, 1997]

Subpart A—Regulations Implementing Title VI of the Civil Rights Act of 1964 and Title IV of the Energy Reorganization Act of 1974

[Top of File]

Discrimination Prohibited

§ 4.11 General prohibition.

No person in the United States shall, on the ground of sex, race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program to which this subpart applies.

[29 FR 19277, Dec. 31, 1964, as amended at 40 FR 8778, Mar. 3, 1975]

§ 4.12 Specific discriminatory actions prohibited.

[Top of File]

(a) A recipient to which this subpart applies may not, directly or through contractual or other arrangements, on the ground of sex, race, color, or national origin:

(1) Deny an individual any service, financial aid, or other benefit provided under the program;

(2) Provide any service, financial aid, or other benefit to an individual which is different, or is provided in a different manner, from that provided to others under the program;

(3) Subject an individual to segregation or separate treatment in any matter related to his receipt of any service, financial aid, or other benefit under the program;

(4) Restrict an individual in any way in the enjoyment of any advantage or privilege enjoyed by others receiving any service, financial aid, or other benefit under the program;

(5) Treat an individual differently from others in determining whether he satisfies any admission, enrollment, quota, eligibilty, membership or other requirement or condition which individuals must meet in order to be provided any service, financial aid, or other benefit provided under the program;

(6) Deny an individual an opportunity to participate in the program through the provision of services or otherwise or afford him an opportunity to do so which is different from that afforded others under the program (including the opportunity to participate in the program as an employee but only to the extent set forth in § 4.13).

(b) A recipient in determining the types of services, financial aid, or other benefits, or facilities which will be provided under any such program, or the class of individuals to whom, or the situations in which, such services, financial aid, other benefits, or facilities will be provided under any such program, or the class of individuals to be afforded an opportunity to participate in any such program, may not, directly or through contractual or other arrangements, utilize criteria or methods of administration which have the effect of subjecting individuals to discrimination because of their sex, race, color, or national origin, or have the effect of defeating or substantially impairing accomplishment of the objectives of the program as respects individuals of a particular sex, race, color, or national origin.

(c) In determining the site or location of facilities, a recipient or applicant may not make selections with the purpose or effect of excluding individuals from, denying them the benefits of, or subjecting them to discrimination under any program to which this subpart applies, on the grounds of sex, race, color, or national origin; or with the purpose or effect of defeating or substantially impairing the accomplishment of the objectives of the Act or this subpart.

(d) As used in this section the services, financial aid, or other benefits provided under a program receiving Federal financial assistance shall be deemed to include any services, financial aid, or other benefit provided in or through a facility provided with the aid of Federal financial assistance.

(e) The enumeration of specific forms of prohibited discrimination in this section and § 4.13 does not limit the generality of the prohibition in § 4.11.

(f) This subpart does not prohibit the consideration of sex, race, color, or national origin if the purpose and effect are to remove or overcome the consequences of practices or impediments which have restricted the availability of, or participation in, the program or activity receiving Federal financial assistance, on the grounds of sex, race, color or national origin. Where previous discriminatory practice or usage tends, on the grounds of sex, race, color, or national origin, to exclude individuals from participation in, to deny them the benefits of, or to subject them to discrimination under any program or activity to which this subpart applies, the applicant or recipient has an obligation to take reasonable action to remove or overcome the consequences of the prior discriminatory practice or usage, and to accomplish the purposes of the Act.

[29 FR 19277, Dec. 31, 1964, as amended at 38 FR 17927, July 5, 1973; 40 FR 8778 Mar. 3, 1975; 68 FR 51344, Aug. 26, 2003]

§ 4.13 Employment practices.

[Top of File]

(a) Where a primary objective of the Federal financial assistance to a program to which this subpart applies is to provide employment, a recipient may not, directly or through contractual or other arrangements, subject an individual to discrimination on the ground of sex, race, color, or national origin in its employment practices under such program (including recruitment or recruitment advertising, employment, layoff or termination, upgrading, demotion, or transfer, rates of pay or other forms of compensation, and use of facilities), including programs where a primary objective of the Federal financial assistance is (1) to assist such individuals through employment to meet expenses incident to the commencement or continuation of their education or training, or (2) to provide work experience which contributes to the education or training of such individuals. (Examples of such Federal financial assistance are nuclear training equipment grants, grants and loans of materials for training, and fellowships.) The requirements applicable to construction employment under any such program shall be those specified in or pursuant to part III of Executive Order 11246 or any Executive order which supersedes it.

(b) Where a primary objective of the Federal financial assistance is not to provide employment, but discrimination on the grounds of sex, race, color, or national origin in the employment practices of the recipient or other persons subject to this subpart tends, on the grounds of sex, race, color, or national origin, to exclude individuals from participation in, to deny them the benefits of, or to subject them to discrimination under any program to which this subpart applies, the provisions of paragraph (a) of this section shall apply to the employment practices of the recipient or other persons subject to this subpart to the extent necessary to assure equality of opportunity to, and nondiscriminatory treatment of, beneficiaries.

[38 FR 17927, July 5, 1973, as amended at 40 FR 8778, Mar. 3, 1975; 68 FR 51344, Aug. 26, 2003]

§ 4.14 Medical emergencies.

[Top of File]

A recipient shall not be deemed to have failed to comply with § 4.11 if immediate provision of a service or other benefit to an individual is necessary to prevent his death or serious impairment of his health, and such service or other benefit cannot be provided except by or through a medical institution which refuses or fails to comply with § 4.11.

Assurances Required

[Top of File]

§ 4.21 General requirements.

(a) Every grant, loan or contract to which this subpart applies, except an application to which § 4.22 applies, shall, as a condition to its approval by NRC, or by the appropriate NRC contractor or subcontractor, and the extension of any Federal financial assistance pursuant thereto, contain or be accompanied by an assurance that the program will be conducted in compliance with all requirements imposed by or pursuant to this subpart. In the case of a grant, loan, or contract involving Federal financial assistance to provide real property or structures thereon, the assurance shall obligate the recipient, or, in the case of a subsequent transfer, the transferee, for the period during which the real property or structures are used for a purpose for which the Federal financial assistance is extended, or for another purpose involving the provision of similar services or benefits. In the case of personal property the assurance shall obligate the recipient for the period during which he retains ownership or possession of the property. In all other cases the assurance shall obligate the recipient for the period during which Federal financial assistance is extended pursuant to the grant, loan or contract. The Commission will specify the form of the foregoing assurances and the extent to which like assurances will be required of subgrantees, contractors and subcontractors, successors in interest, and other participants. Any such assurance shall include provisions which give the United States a right to seek its judicial enforcement.

(b) In the case of real property, structures or improvements thereon, or interests therein, which was acquired with Federal financial assistance, or in the case where Federal financial assistance is provided in the form of a transfer of real property or interest therein from the Federal Government, the instrument effecting or recording the transfer shall contain a covenant running with the land assuring nondiscrimination for the period during which the real property is used for a purpose for which the Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. Where no transfer of property is involved, but property is improved with Federal financial assistance, the recipient shall agree to include such a covenant in any subsequent transfer of such property. Where the property is obtained from the Federal Government, such covenant may also include a condition coupled with a right to be reserved by the NRC to revert title to the property in the event of a breach of the covenant where, in the discretion of the NRC, such a condition and right of reverter is appropriate to the program and to the nature of the grant and the grantee. In such event if a transferee of real property proposes to mortgage or otherwise encumber the real property as security for financing construction of new, or improvement of existing, facilities on such property for the purposes for which the property was transferred, the NRC may agree, upon request of the transferee and if necessary to accomplish such financing, and upon such conditions as the NRC deems appropriate, to forbear the exercise of such right to revert title for so long as the lien of such mortgage or other encumbrance remains effective.

(c) Transfers of surplus property are subject to regulations issued by the Administrator of General Services (41 CFR 101 - 6.2).

[29 FR 19277, Dec. 31, 1964, as amended at 38 FR 17927, July 5, 1973; 68 FR 51345, Aug. 26, 2003; 68 FR 75389, Dec. 31, 2003]

§ 4.22 Continuing Federal financial assistance.

[Top of File]

Every application by a State or a State agency for continuing Federal financial assistance shall require the submission of and every grant, loan, or contract to or with a State or a State agency for continuing Federal financial assistance to which this subpart applies, shall, as a condition to its approval and the extension of any Federal financial assistance pursuant to the grant, loan or contract, contain or be accompanied by, a statement that the program is (or, in the case of a new program, will be) conducted in compliance with all requirements imposed by or pursuant to this subpart, and shall provide or be accompanied by provisions for such methods of administration for the program as are found by the responsible NRC official to give reasonable assurance that the recipient and all other recipients of Federal financial assistance under such program will comply with all requirements imposed by or pursuant to this subpart.

[38 FR 17928, July 5, 1973; 68 FR 51344, 51345, Aug. 26, 2003]

§ 4.24 Assurances from institutions.

[Top of File]

(a) In the case of a grant, loan or contract involving Federal financial assistance to an institution of higher education, the assurance required by § 4.21 shall extend to admission practices and to all other practices relating to the treatment of students.

(b) The assurance required with respect to an institution of higher education, hospital, or any other institution, insofar as the assurance relates to the institution's practices with respect to admission or other treatment of individuals as students, patients, or clients of the institution or to the opportunity to participate in the provision of services or other benefits to such individuals, shall be applicable to the entire institution.

[68 FR 51344, Aug. 26, 2003]

Compliance Information

[Top of File]

§ 4.31 Cooperation and assistance.

The responsible NRC official shall to the fullest extent practicable seek the cooperation of recipients in obtaining compliance with this subpart and shall provide assistance and guidance to recipients to help them comply voluntarily with this subpart.

§ 4.32 Compliance reports.

[Top of File]

(a) Each recipient shall keep records and submit to the responsible NRC official, timely, complete, and accurate compliance reports at the times and in the form and containing the information that the responsible NRC official may determine to be necessary to enable the official to ascertain whether the recipient has complied or is complying with this subpart.

(b) In the case in which a primary recipient extends Federal financial assistance to any other recipient, the other recipient shall also submit necessary compliance reports to the primary recipient to enable the primary recipient to carry out its obligations under this subpart.

(c) The primary recipient shall retain each record of information needed to complete a compliance report pursuant to paragraph (a) of this section for three years or as long as the primary recipient retains the status of primary recipient as defined in § 4.4, whichever is shorter.

[53 FR 19244, May 27, 1988; 68 FR 51345, Aug. 26, 2003]

§ 4.33 Access to sources of information.

[Top of File]

Each recipient shall permit access by the responsible NRC official during normal business hours to such of its books, records, accounts, and other sources of information, and its facilities as may be pertinent to ascertain compliance with this subpart. Where any information required of a recipient is in the exclusive possession of any other agency, institution or person and that agency, institution or person shall fail or refuse to furnish this information, the recipient shall so certify in its report and shall set forth what efforts it has made to obtain the information.

§ 4.34 Information to beneficiaries and participants.

[Top of File]

Each recipient shall make available to participants, beneficiaries, and other interested persons such information regarding the provisions of this subpart and its applicability to the program for which the recipient receives Federal financial assistance, and make such information available to them in such manner, as the responsible NRC official finds necessary to apprise such persons of the protections against discrimination assured them by the Act and this subpart.

[68 FR 51345, Aug. 26, 2003]

Conduct of Investigations

[Top of File]

§ 4.41 Periodic compliance reviews.

The responsible NRC official shall from time to time review the practices of recipients to determine whether they are complying with this subpart.

§ 4.42 Complaints.

[Top of File]

Any person who believes himself or any specific class of individuals to be subjected to discrimination prohibited by this subpart may by himself or by a representative file with the responsible NRC official a written complaint. A complaint must be filed not later than ninety (90) days from the date of the alleged discrimination, unless the time for filing is extended by the responsible NRC official. A complaint shall be signed by the complainant or his representative.

§ 4.43 Investigations.

[Top of File]

The responsible NRC official will make a prompt investigation whenever a compliance review, report, complaint, or any other information indicates a possible failure to comply with this subpart. The investigation should include, where appropriate, a review of the pertinent practices and policies of the recipient, the circumstances under which the possible noncompliance with this subpart occurred, and other factors relevant to a determination as to whether the recipient has failed to comply with this subpart.

§ 4.44 Resolution of matters.

[Top of File]

(a) If an investigation pursuant to § 4.43 indicates a failure to comply with this subpart, the responsible NRC official will so inform the recipient and the matter will be resolved by voluntary means whenever possible. If it has been determined that the matter cannot be resolved by voluntary means, action will be taken as provided for in §§ 4.46 through 4.49.

(b) If an investigation does not warrant action pursuant to paragraph (a) of this section, the responsible NRC official will so inform the recipient and the complainant, if any, in writing.

§ 4.45 Intimidatory or retaliatory acts prohibited.

[Top of File]

No recipient or other person shall intimidate, threaten, coerce, or discriminate against any individual for the purpose of interfering with any right or privilege secured by the Act or this subpart, or because he has made a complaint, testified, assisted, or participated in any manner in an investigation, proceeding, or hearing under this subpart. The identity of complainants shall be kept confidential, except to the extent necessary to carry out the purposes of this subpart including the conduct of any investigation, hearing, or judicial proceeding arising thereunder.

[29 FR 19277, Dec. 31, 1964, as amended at 40 FR 8778, Mar. 3, 1975]

Means of Effecting Compliance

[Top of File]

§ 4.46 Means available.

If there appears to be a failure or threatened failure to comply with any of the provisions of this subpart, and if the noncompliance or threatened concompliance cannot be corrected by informal means, compliance with this subpart may be effected by the suspension or termination of or refusal to grant or to continue Federal financial assistance or by any other means authorized by law. Such other means may include, but are not limited to: (a) A reference to the Department of Justice with a recommendation that appropriate proceedings be brought to enforce any rights of the United States under any law of the United States (including other titles of the Act), or any assurance or other contractual undertaking, and (b) any applicable proceeding under State or local law.

§ 4.47 Noncompliance with § 4.21.

[Top of File]

If an applicant fails or refuses to furnish an assurance required under § 4.21 or otherwise fails or refuses to comply with a requirement imposed by or pursuant to that section, Federal financial assistance may be refused in accordance with the procedures of § 4.48.

[45 FR 14535, Mar. 6, 1980]

§ 4.48 Termination of or refusal to grant or to continue Federal financial assistance.

[Top of File]

No order suspending, terminating, or refusing to grant or continue Federal financial assistance shall become effective until: (a) The responsible NRC official has advised the applicant or recipient of his failure to comply and has determined that compliance cannot be secured by voluntary means, (b) there has been an express finding on the record, after opportunity for hearing, of a failure by the applicant or recipient to comply with the requirement imposed by or pursuant to this subpart, (c) the action has been approved by the Commission pursuant to § 4.72, and (d) the expiration of thirty (30) days after the Commission has filed with the committee of the House and the committee of the Senate having legislative jurisdiction over the program involved, a full written report of the circumstances and the grounds for such action. Any action to suspend or terminate or to refuse to grant or to continue Federal financial assistance shall be limited to the particular political entity, or part thereof, or other applicant or recipient as to whom such finding has been made and shall be limited in its effect to the particular program, or part thereof, in which such noncompliance has been so found.

§ 4.49 Other means authorized by law.

[Top of File]

No action to effect compliance by any other means authorized by law shall be taken until: (a) The responsible NRC official has determined that compliance cannot be secured by voluntary means, (b) the recipient or other person has been notified of its failure to comply and of the action to be taken to effect compliance, and (c) the expiration of at least ten (10) days from the mailing of such notice to the recipient or other person. During this period of at least ten (10) days, additional efforts shall be made to persuade the recipient or other person to comply with this subpart and to take such corrective action as may be appropriate.

[38 FR 17928, July 5, 1973]

Opportunity for Hearing

[Top of File]

§ 4.51 Notice of opportunity for hearing.

(a) Whenever an opportunity for hearing is required by § 4.48, the responsible NRC official shall serve on the applicant or recipient, by registered or certified mail, return receipt requested, a notice of opportunity for hearing which will:

(1) Inform the applicant or recipient of his right within twenty (20) days of the date of the notice of opportunity for hearing, or such other period as may be specified in the notice, to request a hearing;

(2) Set forth the alleged item or items of noncompliance with this subpart;

(3) Specify the issues;

(4) State that compliance with this subpart may be effected by an order providing for the termination of or refusal to grant or to continue assistance, as appropriate; and

(5) Provide that the applicant or recipient may file a written answer to the notice of opportunity for hearing under oath or affirmation within twenty (20) days of its date, or such other period as may be specified in the notice.

(b) The applicant or recipient may respond to a notice of opportunity for hearing by filing a written answer under oath or affirmation. The answer shall specifically admit or deny each allegation, or, where the applicant or recipient does not have knowledge or information sufficient to form a belief, the answer may so state and the statements shall have the effect of a denial. Allegations of fact not denied shall be deemed to be admitted. The answer shall separately state and identify matters alleged as affirmative defenses and may also set forth the matters of fact and law on which the applicant or recipient relies. The answer may request a hearing.

(c) If the answer requests a hearing, the Commission will issue a notice of hearing specifying:

(1) The time, place, and nature thereof;

(2) The legal authority and jurisdiction under which the hearing is to be held; and

(3) The matters of fact and law asserted or to be considered. The time and place of hearing will be fixed with due regard for the convenience and necessity of the parties or their representatives and for the public interest. An answer to a notice of hearing is not required.

(d) An applicant or recipient may file an answer, and waive or fail to request a hearing, without waiving the requirement for findings of fact and conclusions of law or the right to seek Commission review in accordance with the provisions of §§ 4.71 through 4.74. At the time an answer is filed the applicant or recipient may also submit written information or argument for the record if he does not request a hearing.

(e) An answer or stipulation may consent to the entry of an order in substantially the form set forth in the notice of opportunity for hearing; such order may be entered by the responsible Commission official. The consent of the applicant or recipient to the entry of an order shall constitute a waiver by him of a right to: (1) A hearing under the Act and § 4.48, (2) findings of fact and conclusions of law, and (3) seek Commission review.

(f) The failure of an applicant or recipient to file an answer within the period prescribed, or, if he requests a hearing, his failure to appear therefor, shall constitute a waiver by him of a right to: (1) A hearing under the Act and § 4.48, (2) conclusions of law, and (3) seek Commission review. In the event of such waiver, the responsible NRC official may find the facts on the basis of the record available and enter an order in substantially the form set forth in the notice of opportunity for hearing.

(g) An order entered in accordance with paragraph (e) or (f) of this section shall constitute the final decision of the Commission, unless the Commission, on its own motion, within forty-five (45) days after entry of the order, issues its own decision, which shall then constitute the final decision of the Commission.

(h) A copy of an order entered by the responsible NRC official shall be mailed to the applicant or recipient and to the complainant, if any.

(i) Nothing in this section shall be deemed to place the burden of proof on the applicant or recipient.

[29 FR 19277, Dec. 31, 1964, as amended at 38 FR 17928, July 5, 1973; 40 FR 8778, Mar. 3, 1975; 68 FR 51345, Aug. 26, 2003]

Hearings and Findings

[Top of File]

§ 4.61 Presiding officer.

One or more members of the Commission or one or more administrative law judges appointed pursuant to section 3105 of title 5 of the United States Code shall: (a) Preside at a hearing and (b) make findings of fact and conclusions of law if an applicant or recipient waives a hearing and submits written information or argument for the record in accordance with § 4.51(d).

[35 FR 11459, July 17, 1970]

§ 4.62 Right to counsel.

[Top of File]

In all proceedings under §§ 4.51-4.81, the applicant or recipient and the responsible NRC official shall have the right to be represented by counsel. A notice of appearance shall be filed by counsel prior to participation in any such proceedings.

§ 4.63 Procedures, evidence, and record.

[Top of File]

(a) The hearing, decision, and any administrative review thereof shall be conducted in conformity with 5 U.S.C. 554-557 (sections 5-8 of the Administrative Procedure Act), and in accordance with such procedures as are proper (and not inconsistent with §§ 4.61 through 4.64) relating to the conduct of the hearing, giving of notices subsequent to those provided for in § 4.51, taking of testimony, exhibits, arguments and briefs, requests for finding, and other related matters. Both the responsible NRC official and the applicant or recipient shall be entitled to introduce all relevant evidence on the issues as stated in the notice of hearing or as determined by the presiding officer at the outset of or during the hearing.

(b) Technical rules of evidence shall not apply to hearings conducted pursuant to this subpart, but rules or principles designed to assure production of the most credible evidence available and to subject testimony to test by cross-examination shall be applied where reasonably necessary by the presiding officer. The presiding officer may exclude irrelevant, immaterial, or unduly repetitious evidence. All documents and other evidence offered or taken for the record shall be open to examination by the parties and opportunity shall be given to refute facts and arguments advanced on either side of the issues. A transcript shall be made of the oral evidence except to the extent the substance thereof is stipulated for the record.

(c) Each decision made after a hearing has been held shall be based on the hearing record, and written findings of fact and conclusions of law shall be made.

(d) If an applicant or recipient waives a hearing and submits written information or argument for the record in accordance with § 4.51(d), written findings of fact and conclusions of law shall be made.

[29 FR 19277, Dec. 31, 1964, as amended at 35 FR 11459, July 17, 1970; 38 FR 17928, July 5, 1973]

§ 4.64 Consolidated or joint hearings.

[Top of File]

In cases in which the same or related facts are asserted to constitute noncompliance with this subpart with respect to two or more Federal statutes, authorities, or other means by which Federal financial assistance is extended and to which this subpart applies or noncompliance with this subpart and the regulations of one or more other Federal departments or agencies issued under title VI of the Civil Rights Act of 1964, the Commission may, by agreement with such other departments or agencies, where applicable, provide for the conduct of consolidated or joint hearings, and for the application to such hearings of rules of procedure not inconsistent with this subpart. Final decisions in such cases, insofar as this regulation is concerned shall be made in accordance with § 4.72.

[29 FR 19277, Dec. 31, 1964, as amended at 40 FR 8778, Mar. 3, 1975; 68 FR 51345, Aug. 26, 2003]

Decisions and Notices

[Top of File]

§ 4.71 Initial decision or certification.

The officer designated:

(a) To preside at a hearing, or,

(b) To make findings of fact and conclusions of law if an applicant or recipient waives a hearing and submits written information or argument for the record in accordance with § 4.51(d), shall render an initial decision on the record, or, if the Commission so directs, shall certify the entire record to the Commission for decision, together with a recommended decision on the record. A copy of such initial decision, or of such certification and recommended decision, shall be mailed to the applicant or recipient.

§ 4.72 Exceptions and final decision.

[Top of File]

(a) The applicant or recipient, within thirty (30) days of the mailing of an initial decision or a recommended decision, may file with the Commission his exceptions to such decision, with his reasons therefor.

(b) In the absence of exceptions to an initial decision, the Commission may, on its own motion within forty-five (45) days after the mailing of such initial decision, serve on the applicant or recipient a notice that the Commission will review the decision.

(c) Upon the filing of exceptions to an initial decision or of a notice of review, the Commission shall review such initial decision and issue its own decision on the record with its reasons therefor.

(d) In the absence of either exceptions to an initial decision or of a notice of review, such initial decision shall constitute the final decision of the Commission.

(e) Upon the filing of exceptions to a recommended decision, the Commission shall review such recommended decision and issue its own decision on the record with its reasons therefor.

(f) In the absence of exceptions to a recommended decision, the Commission shall review such recommended decision and issue its own decision on the record with its reasons therefor.

§ 4.73 Rulings required.

[Top of File]

Each decision of a presiding officer or the Commission shall set forth the rulings on each finding, conclusion, or exception presented, and shall identify the requirement or requirements imposed by or pursuant to this subpart with which it is found that the applicant or recipient has failed to comply.

§ 4.74 Content of orders.

[Top of File]

The final decision may provide for suspension or termination of, or refusal to grant or continue Federal financial assistance, in whole or in part, to which this regulation applies, and may contain such terms, conditions, and other provisions as are consistent with and will effectuate the purposes of the Act and this subpart, including provisions designed to assure that no Federal financial assistance to which this regulation applies will thereafter be extended to the applicant or recipient determined by such decision to be in default in its performance of an assurance given by it pursuant to this subpart, or to have otherwise failed to comply with this subpart, unless and until it corrects its noncompliance and satisfies the NRC that it will fully comply with this subpart. A copy of the final decision shall be mailed to the applicant or recipient and the complainant, if any.

[68 FR 51345, Aug. 26, 2003]

§ 4.75 Post termination proceedings.

[Top of File]

(a) An applicant or recipient adversely affected by an order issued under § 4.74 shall be restored to full eligibility to receive Federal financial assistance if it satisfies the terms and conditions of that order for such eligibility or if it brings itself into compliance with this subpart and provides reasonable assurance that it will fully comply with this subpart.

(b) Any applicant or recipient adversely affected by an order entered pursuant to § 4.74 may at any time request the responsible NRC

official to restore fully its eligibility to receive Federal financial assistance. Any such request shall be supported by information showing that the applicant or recipient has met the requirements of paragraph (a) of this section. If the responsible NRC official determines that those requirements have been satisfied, he shall restore such eligibility.

(c) If the responsible NRC official denies any such request, the applicant or recipient may submit a request for a hearing in writing, specifying why it believes such official to have been in error. It shall thereupon be given an expeditious hearing, with the decision on the record, in accordance with rules of procedure issued by the responsible NRC official. The applicant or recipient will be restored to such eligibility if it proves at such a hearing that it satisfied the requirements of paragraph (a) of this section. While proceedings under this section are pending, the sanctions imposed by the order issued under § 4.74 shall remain in effect.

[38 FR 17928, July 5, 1973, as amended at 40 FR 8778, Mar. 3, 1975]

Judicial Review

[Top of File]

§ 4.81 Judicial review.

Action taken pursuant to section 602 of the Civil Rights Act of 1964 is subject to judicial review as provided in section 603 of that Act.

[40 FR 8778, Mar. 3, 1975]

Effect on Other Regulations; Forms and Instructions

[Top of File]

§ 4.91 Effect on other regulations.

All regulations, orders, or like directions heretofore issued by any officer of the NRC which impose requirements designed to prohibit any discrimination against individuals on the grounds of sex, race, color, or national origin under any program to which this subpart applies, and which authorize the suspension or termination of or refusal to grant or to continue Federal financial assistance to any applicant for or recipient of such assistance for failure to comply with such requirements, are hereby superseded to the extent that such discrimination is prohibited by this subpart, except that nothing in this subpart shall be deemed to relieve any person of any obligation assumed or imposed under any such superseded regulation, order, instruction, or like direction prior to the effective date of this subpart. Nothing in this subpart, however, shall be deemed to supersede any of the following (including future amendments thereof):

(a) Executive Orders 10925, 11114, and 11246 and regulations issued thereunder, or

(b) Executive Order 11063 and regulations issued thereunder and any other regulations or instructions insofar as such order, regulations or instructions prohibit discrimination on the grounds of sex, race, color, or national origin in any program or situation to which this subpart is inapplicable, or prohibit discrimination on any other ground.

[29 FR 19277, Dec. 31, 1964, as amended at 38 FR 17928, July 5, 1973; 40 FR 8778, Mar. 3, 1975; 68 FR 51345, Aug. 26, 2003]

§ 4.92 Forms and instructions.

[Top of File]

The responsible NRC official shall issue and promptly make available to interested persons forms and detailed instructions and procedures for effectuating this subpart as applied to programs to which this subpart applies and for which he is responsible.

§ 4.93 Supervision and coordination.

[Top of File]

The Commission may from time to time assign to officials of other departments or agencies of the Government, with the consent of the department or agency involved, responsibilities in connection with the effectuation of the purposes of title VI of the Civil Rights Act of 1964 and this subpart, other than responsibility for final decision as provided in § 4.72, including the achievement of effective coordination and maximum uniformity within the NRC and within the Executive Branch of the Government in the application of title VI of the Civil Rights Act and this subpart to similar programs and in similar situations. Any action taken, determination made, or requirement imposed by an official of another department or agency acting pursuant to an assignment of responsibility under this section shall have the same effect as though such action had been taken by the responsible NRC official.

[40 FR 8778, Mar. 3, 1975]

Subpart B--Regulations Implementing Section 504 of the Rehabilitation Act of 1973, as Amended

[Top of File]

Source: 45 FR 14535, Mar. 6, 1980, unless otherwise noted.

§ 4.101 Definitions.

As used in this subpart:

(a) *Handicapped person* means any person who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment. Such term does not include any individual who is an alcoholic or drug abuser whose current use of alcohol or drugs prevents such individual from performing the duties of the job in question or whose employment, by reason of such current alcohol or drug abuse, would constitute a direct threat to property or the safety of others.

(b) As used in paragraph (a) of this section, the phrase:

(1) *Physical or mental impairment* means: (i) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: Neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive, genitourinary; hemic and lymphatic; skin; and endocrine; or (ii) any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities. The term physical or mental impairment includes, but is not limited to, such diseases and conditions as orthopedic, visual, speech, and hearing impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, and emotional illness.

(2) *Major life activities* means functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking, breathing, learning, and working.

(3) *Has a record of such an impairment* means has a history of, or has been misclassified as having, a mental or physical impairment that substantially limits one or more major life activities.

(4) *Is regarded as having an impairment* means:

(i) Has a physical or mental impairment that does not substantially limit major life activities but is treated by a recipient as constituting such a limitation;

(ii) Has a physical or mental impairment that substantially limits major life activities only as a result of the attitudes of others toward such impairment; or

(iii) Does not have a physical or mental impairment but is treated by a recipient as having such an impairment.

(c) *Qualified handicapped person* means: (1) With respect to employment, a handicapped person who, with reasonable accommodation, can perform essential functions of the job in question and (2) with respect to services, a handicapped person who meets the essential eligibility requirements for the receipt of such services.

(d) *Section 504* means section 504 of the Rehabilitation Act of 1973, Pub. L. 93-112, as amended by the Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978, Pub. L. 95-602 (29 U.S.C. 794).

Discriminatory Practices

[Top of File]

§ 4.121 General prohibitions against discrimination.

(a) No qualified handicapped person, shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subject to discrimination under any program or activity that receives Federal financial assistance.

(b)(1) A recipient, in providing any aid, benefit, or service, may not, directly or through contractual, licensing, or other arrangements, on the basis of handicap:

(i) Deny a qualified handicapped person the opportunity to participate in or benefit from the aid, benefit, or service;

(ii) Afford a qualified handicapped person an opportunity to participate in or benefit from the aid, benefit, or service that is not equal to that afforded others;

(iii) Provide a qualified handicapped person with an aid, benefit, or service that is not as effective in affording equal opportunity to obtain the same result, to gain the same benefit, or to reach the same level of achievement as that provided to others;

(iv) Provide different or separate aid, benefits, or services to handicapped persons or to any class of handicapped persons than is provided to others unless such action is necessary to provide qualified handicapped persons with aid, benefits, or services that are as effective as those provided to others;

(v) Aid or perpetuate discrimination against a qualified handicapped person by providing significant assistance to any agency, organization, or person that discriminates on the basis of handicap in providing any aid, benefit, or service to beneficiaries of the recipient's program or activity;

(vi) Deny a qualified handicapped person the opportunity to participate as a member of planning or advisory boards; or

(vii) Otherwise limit a qualified handicapped person in the enjoyment of any right, privilege, advantage, or opportunity enjoyed by others receiving the aid, benefit, or service.

(2) A recipient may not deny a qualified handicapped person the opportunity to participate in aid, benefits, or services that are not separate or different, despite the existence of permissibly separate or different aid, benefits, or services.

(3) A recipient may not directly or through contractual or other arrangements, utilize criteria or methods of administration: (i) That have the effect of subjecting qualified handicapped persons to discrimination on the basis of handicap, (ii) that have the purpose or effect of defeating or substantially impairing accomplishment of the objectives of the recipient's program or activity with respect to handicapped persons, or (iii) that perpetuate the discrimination of another recipient if both recipients are subject to common administrative control or are agencies of the same State.

(4) A recipient may not, in determining the site or location of a facility, make selections: (i) That have the effect of excluding handicapped persons from, denying them the benefits of, or otherwise subjecting them to discrimination under any program or activity that receives Federal financial assistance or (ii) that have the purpose or effect of defeating or substantially impairing the accomplishment of the objectives of the program or activity with respect to handicapped persons.

(c) The exclusion of nonhandicapped persons from aid, benefits, or services limited by Federal statute or Executive Order to handicapped persons or the exclusion of a specific class of handicapped persons from aid, benefits, or services limited by Federal statute or Executive Order to a different class of handicapped persons is not prohibited by this subpart.

(d) Recipients shall administer programs or activities in the most integrated setting appropriate to the needs of qualified handicapped persons.

(e) Recipients shall take appropriate steps to ensure that communications with their applicants, employees, and beneficiaries are available to persons with impaired vision and hearing.

[68 FR 51345, Aug. 26, 2003]

§ 4.122 General prohibitions against employment discrimination.

[Top of File]

(a) No qualified handicapped person shall, on the basis of handicap, be subjected to discrimination in employment under any program or activity that receives Federal financial assistance.

(b) A recipient shall make all decisions concerning employment under any program or activity to which this subpart applies in a manner which ensures that discrimination on the basis of handicap does not occur and may not limit, segregate, or classify applicants or employees in any way that adversely affects their opportunities or status because of handicap.

(c) The prohibition against discrimination in employment applies to the following activities:

(1) Recruitment, advertising, and the processing of applications for employment;

(2) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff, and rehiring;

(3) Rates of pay or any other form of compensation and changes in compensation;

(4) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(5) Leaves of absence, sick leave, or any other leave;

(6) Fringe benefits available by virtue of employment, whether or not administered by the recipient;

(7) Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities and selection for leaves of absence to pursue training;

(8) Employer sponsored activities, including those that are social or recreational; and

(9) Any other term, condition, or privilege of employment.

(d) A recipient may not participate in a contractual or other relationship that has the effect of subjecting qualified handicapped applicants or employees to discrimination prohibited by this subpart. The relationships referred to in this paragraph include relationships with employment and referral agencies, with labor unions, with organizations providing or administering fringe benefits to employees of the recipient, and with organizations providing training and apprenticeships.

[68 FR 51345, Aug. 26, 2003]

§ 4.123 Reasonable accommodation.

[Top of File]

(a) A recipient shall make reasonable accommodation to the known physical or mental limitations of an otherwise qualified handicapped applicant or employee unless the recipient can demonstrate that the accommodation would impose an undue hardship on the operation of its program or activity.

(b) Reasonable accommodation may include: (1) Making facilities used by employees readily accessible to and usable by handicapped persons, and (2) job restructuring, part-time or modified work schedules, acquisition or modification of equipment or devices, the provision of readers or interpreters, and other similar actions. This list is neither all-inclusive nor meant to suggest that an employer must follow all the actions listed.

(c) In determining pursuant to paragraph (a) of this section whether an accommodation would impose an undue hardship on the operation of a recipient's program or activity, factors to be considered include:

(1) The overall size of the recipient's program or activity with respect to number of employees, number and type of facilities, and size of budget;

(2) The type of the recipient's operations, including the composition and structure of the recipient's workforce; and

(3) The nature and cost of the accommodation needed.

(d) A recipient may not deny any employment opportunity to a qualified handicapped employee or applicant if the basis for denial is the need to make reasonable accommodation to the physical or mental limitations of the employee or applicant.

[68 FR 51345, Aug. 26, 2003]

§ 4.124 Employment criteria.

[Top of File]

(a) A recipient may not make use of any employment test or other selection criterion that screens out or tends to screen out handicapped persons or any class of handicapped persons unless:

(1) The test score or other selection criterion as used by the recipient is shown to be job-related for the position in question; and

(2) Alternative job-related tests or criteria that do not screen out or tend to screen out as many handicapped persons are not available.

(b) A recipient shall select and administer tests concerning employment so as best to ensure that, when administered to an applicant or employee who has a handicap that impairs sensory, manual, or speaking skills, the test results accurately reflect the applicant's or employee's job skills, aptitude, or whatever other factor the test purports to measure, rather than reflecting the applicant's or employee's impaired sensory, manual, or speaking skills (except where those skills are the factors that the test purports to measure).

§ 4.125 Preemployment inquiries.

[Top of File]

(a) Except as provided in paragraphs (b) and (c) of this section, a recipient may not conduct a preemployment medical examination or may not make preemployment inquiry of an applicant as to whether the applicant is a handicapped person or as to the nature of severity of a handicap. A recipient may, however, make preemployment inquiry into an applicant's ability to perform job-related functions.

(b) When a recipient is taking remedial action to correct the effects of past discrimination, or when a recipient is taking voluntary action to overcome the effects of conditions that resulted in limited participation in its federally assisted program or activity, or when a recipient is taking affirmative action pursuant to section 503 of the Rehabilitation Act of 1973, the recipient may invite applicants for employment to indicate whether and to what extent they are handicapped: *Provided*, That:

(1) The recipient makes clear to the applicant that the information requested is intended for use solely in connection with its remedial action obligations or its voluntary or affirmative action efforts; and

(2) The recipient makes clear to the applicant that the information is being requested on a voluntary basis, that it will be kept confidential as provided in paragraph (d) of this section, that refusal to provide it will not subject the applicant to any adverse treatment, and that it will be used only in accordance with this subpart.

(c) Nothing in this section shall prohibit a recipient from conditioning an offer of employment on the results of a medical examination conducted prior to the employee's entrance on duty: *Provided*, That:

(1) All entering employees are subjected to such an examination regardless of handicap; and

(2) The results of such an examination are used only in accordance with the requirements of this subpart.

(d) Information obtained in accordance with this section as to the medical condition or history of the applicant must be collected on separate forms. The recipient shall retain each form as a record for three years from the date the applicant's employment ends, or, if not hired, from the date of application. Each form must be accorded confidentiality as a medical record, except that:

(1) Supervisors and managers may be informed regarding restrictions on the work or duties that may be assigned to handicapped persons and regarding necessary accommodations;

(2) First aid and safety personnel may be informed, where appropriate, if the condition associated with the handicap might require emergency treatment; and

(3) Government officials investigating compliance with the Rehabilitation Act of 1973 shall be provided relevant information upon request.

[45 FR 14535, Mar. 6, 1980, as amended at 53 FR 19244, May 27, 1988]

§ 4.126 General requirement concerning accessibility.

[Top of File]

No qualified handicapped person shall, because a recipient's facilities are inaccessible to or unusable by handicapped persons, be denied the benefits of, be excluded from participation in, or otherwise be subjected to discrimination under any program or activity that receives Federal financial assistance.

[68 FR 51345, Aug. 26, 2003]

§ 4.127 Existing facilities.

[Top of File]

(a) *Accessibility*. A recipient shall operate each program or activity so that when each part is viewed in its entirety it is readily accessible to and usable by handicapped persons. This paragraph does not necessarily require a recipient to make each of its existing facilities or every part of an existing facility accessible to and usable by handicapped persons.

(b) *Methods*. A recipient may comply with the requirements of paragraph (a) of this section through such means as redesign of equipment, reassignment of classes or other services to accessible buildings, assignment of aids to beneficiaries, home visits, delivery of health, welfare or other social services at alternate accessible sites, alteration of existing facilities and construction of new facilities in conformance with the requirements of § 4.128 or any other methods that result in making its program or activity accessible to and usable by handicapped persons. A recipient is not required to make structural changes in existing facilities where other methods are effective in achieving compliance with paragraph (a) of this section. In choosing among available methods for meeting the requirement of paragraph (a) of this section, a recipient shall give priority to those methods that serve handicapped persons in the most integrated setting appropriate.

(c) *Time period*. A recipient shall comply with the requirement of paragraph (a) of this section within 60 days of the effective date of this subpart except that where structural changes in facilities are necessary, the changes are to be made within three years of the effective date of this subpart, but in any event, as expeditiously as possible.

(d) *Transition plan*. In the event that structural changes to facilities are necessary to meet the requirement of paragraph (a) of this section, a recipient shall develop a transition plan setting forth the steps necessary to complete the changes. The plan is to be developed with the assistance of interested persons, including handicapped persons, or organizations representing handicapped persons, and the plan is to meet with the approval of the NRC. The recipient shall retain a copy of the transition plan as a record until any structural change to a facility is complete. A copy of the transition plan is to be made available for public inspection. At a minimum, the plan is to:

(1) Identify physical obstacles in the recipient's facilities that limit the accessibility and usability of its program or activity to handicapped persons;

(2) Describe in detail the methods that will be used to make the facilities accessible to and usable by handicapped persons;

(3) Specify the schedule for taking the steps necessary to achieve full accessibility under paragraph (a) of this section and, if the time period or the transition plan is longer than 1 year, identify steps that will be taken during each year of the transition period; and

(4) Indicate the person responsible for implementation of the plan.

(e) *Notice*. The recipient shall adopt and implement procedures to ensure that interested persons, including persons with impaired vision or hearing, can obtain information concerning the existence and location of services, activities, and facilities that are accessible to, and usable by, handicapped persons.

[45 FR 14535, Mar. 6, 1980, as amended at 53 FR 19244, May 27, 1988; 68 FR 51345, Aug. 26, 2003]

§ 4.128 New construction.

[Top of File]

(a) *Design, construction, and alteration*. New facilities shall be designed and constructed to be readily accessible to and usable by handicapped persons. Alterations to existing facilities shall, to the maximum extent feasible, be designed and constructed to be readily accessible to and usable by handicapped persons.

(b) *Conformance with Uniform Federal Accessibility Standards*. (1) Effective as of January 18, 1991, design, construction, or alteration of buildings in conformance with sections 3--8 of the Uniform Federal Accessibility Standards (USAF) (appendix A to 41 CFR subpart 101-19.6) shall be deemed to comply with the requirements of this section with respect to those buildings. Departures from particular technical and scoping requirements of UFAS by the use of other methods are permitted where substantially equivalent or greater access to and usability of the building is provided.

(2) For purposes of this section, section 4.1.6(1)(g) of UFAS shall be interpreted to exempt from the requirements of UFAS only mechanical rooms and other spaces that, because of their intended use, will not require accessibility to the public or beneficiaries or result in the employment or residence therein of persons with physical handicaps.

(3) This section does not require recipients to make building alterations that have little likelihood of being accomplished without removing or altering a load-bearing structural member.

[55 FR 52138, 52139, Dec. 19, 1990]

Enforcement

[Top of File]

§ 4.231 Responsibility of applicants and recipients.

(a) *Assurances*. An applicant for Federal financial assistance to which this subpart applies shall submit an assurance, on a form specified by the responsible NRC official, that the program or activity will be operated in compliance with the subpart. An applicant may incorporate these assurances by reference in subsequent applications to the NRC.

(b) *Duration of obligation*. The assurance will obligate the recipient for the period during which Federal financial assistance is extended.

(c) *Remedial action*. (1) If the responsible NRC official finds that a recipient has discriminated against persons on the basis of handicap in violation of section 504 or this subpart, the recipient shall take such remedial action as the responsible NRC official deems necessary to overcome the effect of the discrimination.

(2) Where a recipient is found to have discriminated against persons on the basis of handicap in violation of section 504 or this subpart and where another recipient exercises control over the recipient that has discriminated, the responsible NRC official, where appropriate, may require either or both recipients to take remedial action.

(3) The responsible NRC official may, where necessary to overcome the effects of discrimination in violation of section 504 or this subpart, require a recipient to take remedial action: (i) With respect to handicapped persons who are no longer participants in the recipient's program or activity but who were participants in the program when such discrimination occurred or (ii) with respect to handicapped persons who would have been participants in the program or activity had the discrimination not occurred.

(d) *Voluntary action*. A recipient may take steps, in addition to any action that is required by this subpart, to overcome the effects of conditions that resulted in limited participation in the recipient's program or activity by qualified handicapped persons.

(e) *Self-evaluation*. (1) A recipient shall as soon as practicable:

(i) Evaluate, with the assistance of interested persons, including handicapped persons or organizations representing handicapped persons, its current policies and practices and the effects thereof that do not or may not meet the requirements of this subpart;

(ii) Modify, after consultation with interested persons, including handicapped persons or organizations representing handicapped persons, any policies and practices that do not meet the requirements of this subpart; and

(iii) Take, after consultation with interested persons, including handicapped persons or organizations representing handicapped persons, appropriate remedial steps to eliminate the effects of any discrimination that resulted from adherence to those policies and practices.

(2) A recipient shall, for at least three years following completion of the evaluation required under paragraph (e)(1) of this section, maintain on file, make available for public inspection, and provide to the responsible NRC official upon request: (i) A list of the interested persons consulted, (ii) a description of areas examined and any problems identified, and (iii) a description of any modifications made and of any remedial steps taken.

(f) Designation of responsible employee. A recipient shall designate at least one person to coordinate its efforts to comply with this subpart.

[68 FR 51345, Aug. 26, 2003]

§ 4.232 Notice.

[Top of File]

(a) A recipient shall take appropriate initial and continuing steps to notify participants, beneficiaries, applicants, and employees, including those with impaired vision or hearing, and unions or professional organizations holding collective bargaining or professional agreements with the recipient that it does not discriminate on the basis of handicap in violation of section 504 and this subpart. The notification shall state, where appropriate, that the recipient does not discriminate in admission or access to, or treatment or employment in, its programs or activities. The notification shall also include an identification of the responsible employee designated pursuant to § 4.231(f). A present recipient shall make the initial notification required by this paragraph within 90 days of the effective date of this subpart. Methods of initial and continuing notification may include the posting of notices, publication in newspapers and magazines, placement of notices in recipients' publications, and distribution of memoranda or other written communications.

(b) If a recipient publishes or uses recruitment materials or publications containing general information that it makes available to participants, beneficiaries, applicants, or employees, if shall include in those materials or publications a statement of the policy described in paragraph (a) of this section. A recipient may meet the requirement of this paragraph either by including appropriate inserts in existing materials and publications or by revising and reprinting the materials and publications.

[68 FR 51345, Aug. 26, 2003]

§ 4.233 Enforcement procedures.

[Top of File]

The enforcement and hearing procedures set forth in §§ 4.41 through 4.75 of subpart A with respect to discrimination based on sex, race, color or national origin shall be used for the enforcement of the regulations in subpart B with respect to discrimination based on handicap.

Subpart C--Regulations Implementing the Age Discrimination Act of 1975, as Amended

[Top of File]

Source: 52 FR 25358, July 7, 1987, unless otherwise noted.

General

§ 4.301 Purpose and scope.

The purpose of this subpart is to set forth NRC policies and procedures under the Age Discrimination Act of 1975 which prohibits discrimination on the basis of age in programs or activities receiving Federal financial assistance.

§ 4.302 Application of this subpart.

[Top of File]

(a) The Age Discrimination Act of 1975 and these regulations apply to any program or activity receiving Federal financial assistance from NRC.

(b) The Age Discrimination Act of 1975 and these regulations do not apply to--

(1) An age distinction contained in that part of a Federal, State, or local statute or ordinance adopted by an elected, general purpose legislative body that--

(i) Provides any benefits or assistance to persons based on age; or

(ii) Establishes criteria for participation in age-related terms; or

(iii) Describes intended beneficiaries or target groups in age-related terms.

(2) Any employment practice of any employer, employment agency, labor organization, or any labor-management joint apprenticeship training program, except for any program or activity receiving Federal financial assistance for public service employment under the Comprehensive Employment and Training Act of 1974 (CETA) (29 U.S.C. 801 *et seq*.).

§ 4.303 Definitions.

[Top of File]

As used in this subpart:

(a) *Act* means the Age Discrimination Act of 1975, as amended, (title III of Pub. L. 94-135; 89 Stat. 713; 42 U.S.C. 3001 note).

(b) *Action* means any act, activity, policy, rule, standard, or method of administration; or the use of any policy, rule, standard, or method of administration.

(c) *Age* means how old a person is, or the number of elapsed years from the date of a person's birth.

(d) *Age distinction* means any action using age or an age-related term.

(e) *Age-related* term means a word or words which necessarily imply a particular age or range of ages (for example, "children," "adult," "older persons," but not "student").

(f) *Subrecipient* means any of the entities in the definition of "recipient" to which a recipient extends or passes on Federal financial assistance. A subrecipient is generally regarded as a recipient of Federal financial assistance and has all the duties of a recipient in these regulations.

Standards for Determining Age Discrimination

[Top of File]

§ 4.311 Rules against age discrimination.

The rules stated in this section are limited by the exceptions contained in §§ 4.313 and 4.314 of this subpart.

(a) *General rule*. No person in the United States shall, on the basis of age, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance.

(b) *Specific rules*. A recipient may not, in any program or activity receiving Federal financial assistance, directly or through contractual, licensing, or other arrangements use age distinctions or take any other actions which have the effect, on the basis of age, of--

(1) Excluding individuals from, denying them the benefits of, or subjecting them to discrimination under, a program or activity receiving Federal financial assistance, or

(2) Denying or limiting individuals in their opportunity to participate in any program or activity receiving Federal financial assistance.

(c) The specific forms of age discrimination listed in paragraph (b) of this section do not necessarily constitute a complete list.

§ 4.312 Definitions of "normal operation" and "statutory objective".

[Top of File]

For purposes of §§ 4.313 and 4.314, the terms "normal operation" and "statutory objective" have the following meaning:

(a) *Normal operation* means the operation of a program or activity without significant changes that would impair its ability to meet its objectives.

(b) *Statutory objective* means any purposes of a program or activity expressly stated in any Federal statute State statute, or local statute or ordinance adopted by an elected general purpose legislative body.

§ 4.313 Exceptions to the rules against age discrimination. Normal operation or statutory objective of any program or activity.

[Top of File]

A recipient is permitted to take an action, otherwise prohibited by § 4.311, if the action reasonably takes into account age as a factor necessary to the normal operation or the achievement of any statutory objective of a program or activity. An action reasonably takes into account age as a factor necessary to the normal operation or the achievement of any statutory objective of a program or activity, if--

(a) Age is used as a measure or approximation of one or more other characteristics; and

(b) The other characteristic(s) must be measured or approximated in order for the normal operation of the program or activity to continue, or to achieve any statutory objective of the program or activity; and

(c) The other characteristic(s) can be reasonably measured or approximated by the use of age; and

(d) The other characteristic(s) are impractical to measure directly on an individual basis.

[68 FR 51345, Aug. 26, 2003]

§ 4.314 Exceptions to the rule against age discrimination. Reasonable factors other than age.

[Top of File]

A recipient is permitted to take an action otherwise prohibited by § 4.311 which is based on a factor other than age, even though that action may have a disproportionate effect on persons of different ages. An action may be based on a factor other than age only if the factor bears a direct and substantial relationship to the normal operation of the program or activity or to the achievement of a statutory objective.

§ 4.315 Burden of proof.

[Top of File]

The burden of proving that an age distinction or other action falls within the exceptions outlined in §§ 4.313 and 4.314 is on the recipient of Federal financial assistance.

Duties of NRC Recipients

[Top of File]

§ 4.321 Assurance of compliance.

Each NRC recipient has primary responsibility to ensure that its programs or activities are in compliance with the Act and these regulations. Each recipient will sign an assurance of compliance that its programs or activities will be conducted in compliance with all the requirements imposed by the Act and these regulations. A recipient also has responsibility to maintain records, provide information, and to afford access to its records to NRC, to the extent required to determine whether it is in compliance with the Act and these regulations.

[68 FR 51345, Aug. 26, 2003]

§ 4.322 Written notice, technical assistance, and educational materials.

[Top of File]

(a) NRC will provide written notice to each recipient of its obligations under the Act and these regulations, including its obligation under paragraph (b) of this section.

(b) Where a recipient makes available Federal financial assistance from NRC to a subrecipient, the recipient shall provide the subrecipient written notice of the subrecipient's obligations under the Act and these regulations.

(c) NRC will provide technical assistance, where necessary, to recipients to aid them in complying with the Act and these regulations.

(d) NRC will make available educational materials which set forth the rights and obligations of recipients and beneficiaries under the Act and these regulations.

§ 4.324 Information requirements.

[Top of File]

Each recipient shall:

(a) Make available upon request to NRC information necessary to determine whether the recipient is complying with the Act and these regulations.

(b) Permit reasonable access by NRC to the recipient's books, records, accounts, facilities, and other sources of information to the extent necessary to determine whether the recipient is in compliance with the Act and these regulations.

Investigation, Conciliation, and Enforcement Procedures

[Top of File]

§ 4.331 Compliance reviews.

(a) NRC may conduct compliance reviews and preaward reviews of recipients or use other similar procedures that will permit it to investigate and correct violations of the Act and these regulations. NRC may conduct these reviews even in absence of a complaint against a recipient. The review may be as comprehensive as necessary to determine whether a violation of these regulations has occurred.

(b) If a compliance review or preaward review indicates a violation of the Act or these regulations, NRC will attempt to achieve voluntary compliance with the Act. If voluntary compliance cannot be achieved, NRC will arrange for enforcement as described in § 4.336.

§ 4.332 Complaints.

[Top of File]

(a) Any person, individually or as a member of a class or on behalf of others, may file a complaint with NRC, alleging discrimination prohibited by the Act or these regulations based on an action occurring on or after July 1, 1979. A complainant shall file a complaint within 180 days from the date the complainant first had knowledge of the alleged act of discrimination. However, for good cause shown, NRC may extend this time limit.

(b) NRC will attempt to facilitate the filing of complaints wherever possible, including taking the following measures:

(1) Accepting a complaint as sufficient for further processing that--

(i) Is made in writing;

(ii) Alleges a violation of the Act;

(iii) Identifies the parties involved and the date the complainant first had knowledge of the alleged violation;

(iv) Describes generally the action or practice complained of; and

(v) Is signed by the complainant.

(2) Freely permitting a complainant to add information to the complaint to meet the requirements of a sufficient complaint.

(3) Notifying the complainant and the recipient of their rights and obligations under the complaint procedure, including the right to have a representative at all stages of the complaint procedures.

(4) Notifying the complainant and the recipient (or their representatives) of their right to contact NRC for information and assistance regarding the complaint resolution process.

(c) Each recipient and complainant shall participate actively in efforts toward speedy resolution of the complaint.

(d) NRC will return to the complainant any complaint outside the jurisdiction of these regulations, and will state the reason(s) why it is outside the jurisdiction of these regulations.

§ 4.333 Mediation.

[Top of File]

(a) Referral of complaints for mediation. NRC will refer to a mediation agency designated by the Secretary of the Department of Health and Human Services all complaints that--

(1) Fall within the jurisdiction of the Act and these regulations; and

(2) Contain all information necessary for further processing.

(b) Both the complainant and the recipient shall participate in the mediation process to the extent necessary to reach an agreement or make an informed judgment that an agreement is not possible. There must be at least one meeting with the mediator before NRC will accept a judgment that an agreement is not possible. However, the recipient and the complainant need not meet with the mediator at the same time.

(c) If the complainant and the recipient reach an agreement, the mediator shall prepare a written statement of the agreement and have the complainant and recipient sign it. The mediator shall send a copy of the agreement to NRC. NRC will take no further action on the complaint unless the complainant or recipient fails to comply with the agreement.

(d) The mediator shall protect the confidentiality of all information obtained in the course of the mediation process. No mediator shall testify in any adjudicative proceeding, produce any document, or otherwise disclose any information obtained in the course of the mediation process without prior approval of the head of the agency appointing the mediator.

(e) NRC will use the mediation process for a maximum of 60 days after receiving a complaint. Mediation ends if--

(1) From the time NRC receives the complaint 60 days elapse; or

(2) Prior to the end of that 60-day period, the mediator determines an agreement is reached; or

(3) Prior to the end of that 60-day period, the mediator determines that an agreement cannot be reached.

(f) The mediator shall return unresolved complaints to NRC.

§ 4.334 Investigation.

[Top of File]

(a) *Informal investigation*. (1) NRC will investigate complaints that are unresolved after mediation or are reopened because of a violation of a mediation agreement.

(2) As part of the initial investigation, NRC will use informal fact-finding methods, including joint or separate discussions with the complaint and recipient to establish the facts and, if possible, settle the complaint on terms that are mutually agreeable to the parties. NRC may seek the assistance of any involved State agency.

(3) NRC will put any agreement in writing and have it signed by the parties and an authorized official at NRC.

(4) The settlement shall not affect the operation of any other enforcement effort of NRC, including compliance reviews and investigation of other complaints which may involve the recipient.

(5) Settlement of a complaint under this section will not constitute a finding of discrimination by the NRC against a recipient or an admission of discrimination by the recipient.

(b) *Formal investigation*. If NRC cannot resolve the complaint through informal investigation, it will begin to develop formal findings through further investigation of the complaint. If the investigation indicates a violation of these regulations, NRC will attempt to obtain voluntary compliance. If NRC cannot obtain voluntary compliance, it will begin enforcement as described in § 4.336.

[68 FR 51345, Aug. 26, 2003]

§ 4.335 Prohibition against intimidation or retaliation.

[Top of File]

A recipient may not engage in acts of intimidation or retaliation against any person who--

(a) Attempts to assert a right protected by the Act or these regulations; or

(b) Cooperates in any mediation, investigation, hearing, or other part of NRC's investigation, conciliation, and enforcement process.

§ 4.336 Compliance procedure.

[Top of File]

(a) NRC may enforce the Act and these regulations through--

(1) Termination of a recipient's Federal financial assistance from NRC under the program or activity involved where the recipient has violated the Act or these regulations. The determination of the recipient's violation may be made only after a recipient has had an opportunity for a hearing on the record before an administrative law judge. Therefore, cases that are settled in mediation, or prior to a hearing, will not involve termination of a recipient's Federal financial assistance from NRC.

(2) Any other means authorized by law including but not limited to--

(i) Referral to the Department of Justice for proceedings to enforce any rights of the United States or obligations of the recipients created by the Act or these regulations.

(ii) Use of any requirement of or referral to any Federal, State, or local government agency that will have the effect of correcting a violation of the Act or these regulations.

(b) NRC will limit any termination under § 4.336(a)(1) to the particular recipient and particular program or activity NRC finds in violation of Act or these regulations. NRC will not base any part of a termination on a finding with respect to any program or activity of the recipient that does not receive Federal financial assistance from NRC.

(c) NRC will take no action under paragraph (a) until--

(1) The Commission, or designee, has advised the recipient of its failure to comply with the Act or these regulations and has determined that voluntary compliance cannot be obtained.

(2) 30 days have elapsed after the Commission, or designee, has sent a written report of the circumstances and grounds of the action to the committees of the Congress having legislative jurisdiction over the program or activity involved. A report will be filed whenever any action is taken under paragraph (a) of this section.

(d) NRC also may defer granting new Federal financial assistance to a recipient when termination proceedings under § 4.336(a)(1) are initiated.

(1) New Federal financial assistance includes all assistance for which NRC requires an application or approval, including renewal or continuation of existing activities or authorization of new activities, during the deferral period. New Federal financial assistance does not include increases in funding as a result of change computation of formula awards or assistance approved prior to the beginning of termination proceedings under § 4.336(a)(1).

(2) NRC will not begin a deferral until the recipient has received a notice of an opportunity for a hearing under § 4.336(a)(1). NRC will not continue a deferral for more than 60 days unless a hearing has begun within that time or the time for beginning the hearings has been extended by mutual consent of the recipient and NRC. NRC will not continue a deferral for more than 30 days after the close of the hearing, unless the hearing results in a finding against the recipient.

[68 FR 51346, Aug. 26, 2003]

§ 4.337 Hearings, decisions, post-termination proceedings.

[Top of File]

Certain NRC procedural provisions applicable to title VI of the Civil Rights Act of 1964 apply to NRC enforcement of these regulations. They are §§ 4.61 through 4.64 and §§ 4.71 through 4.75.

§ 4.338 Remedial and affirmative action by recipients.

[Top of File]

(a) Where NRC finds a recipient has discriminated on the basis of age, the recipient shall take any remedial action that NRC may require to overcome the effects of the discrimination. If another recipient exercises control over the recipient that has discriminated, NRC may require both recipients to take remedial action.

(b) Even in the absence of a finding of discrimination, a recipient may take affirmative action to overcome the effects of conditions that resulted in limited participation in the recipient's program or activity on the basis of age.

(c) If a recipient, operating a program or activity that serves the elderly or children in addition to persons of other ages, provides special benefits to the elderly or to children, the provision of those benefits shall be presumed to be voluntary affirmative action provided that it does not have the effect of excluding otherwise eligible persons from participation in the program or activity.

[68 FR 51346, Aug. 26, 2003]

§ 4.339 Alternate funds disbursal procedure.

[Top of File]

(a) When NRC withholds funds from a recipient under these regulations, the Commission, or designee, may disburse the withheld funds directly to an alternate recipient, any public or nonprofit private organization or agency, or State or political subdivision of the State.

(b) Any alternative recipient will be required to demonstrate--

(1) The ability to comply with these regulations; and

(2) The ability to achieve the goals of the Federal statute authorizing the Federal financial assistance.

[68 FR 51346, Aug. 26, 2003]

§ 4.340 Exhaustion of administrative remedies.

[Top of File]

(a) A complainant may file a civil action following the exhaustion of administrative remedies under the Act. Administrative remedies are exhausted if--

(1) 180 days have elapsed since the complainant filed the complaint and NRC has made no finding with regard to the complaint; or

(2) NRC issues any finding in favor of the recipient.

(b) If NRC fails to make a finding within 180 days or issues a finding in favor of the recipient, NRC will--

(1) Promptly advise the complainant; and

(2) Advise the complainant of his or her right to bring a civil action under section 305(e) of the Act of injunctive relief that will effect the purposes of the Act; and

(3) Inform the complainant that--

(i) The complainant may bring a civil action only in a United States District Court for the district in which the recipient is found or transacts business;

(ii) A complainant prevailing in a civil action has the right to be awarded the costs of the action, including reasonable attorney's fees, but that the complainant must demand these costs in the complaint;

(iii) That before commencing the action, the complainant shall give 30 days notice by registered mail to the Commission, the Secretary of the Department of Health and Human Services, the Attorney General of the United States, and the recipient;

(iv) The notice must state the relief requested, the court in which the complainant is bringing the action, and whether or not attorney's fees are demanded in the event the complainant prevails; and

(v) The complainant may not bring an action if the same alleged violation of the Act by the same recipient is the subject of pending action in any court of the United States.

§ 4.341 Reports.

[Top of File]

The NRC shall submit to the Secretary of Health and Human Services, not later than December 31 of each year, a report which--

(a) Describes in detail the steps taken during the preceding fiscal year to carry out the Act; and

(b) Contains data on the frequency, type, and resolution of complaints and on any compliance reviews, sufficient to permit analysis of the agency's progress in reducing age discrimination in programs or activities receiving Federal financial assistance from NRC; and

(c) Contains data directly relevant to the extent of any pattern or practice of age discrimination which NRC has identified in any programs or activities receiving Federal financial assistance from NRC and to progress toward eliminating it; and

(d) Contains evaluative or interpretative information which NRC determines is useful in analyzing agency progress in reducing age discrimination in programs or activities receiving Federal financial assistance from NRC; and

(e) Contains whatever other data the Secretary of HHS may require.

[68 FR 51346, Aug. 26, 2003]

Subpart D--[Reserved]

[Top of File]

Subpart E--Enforcement of Nondiscrimination on the Basis of Handicap in Programs or Activities Conducted by the U.S. Nuclear Regulatory Commission

Source: 51 FR 22888, 22896, June 23, 1986, unless otherwise noted.

§ 4.501 Purpose.

This part effectuates section 119 of the Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978, which amended section 504 of the Rehabilitation Act of 1973 to prohibit discrimination on the basis of handicap in programs or activities conducted by Executive agencies or the United States Postal Service.

§ 4.502 Application.

[Top of File]

This part applies to all programs or activities conducted by the agency.

§ 4.503 Definitions.

[Top of File]

For purposes of this part, the term--

Assistant Attorney General means the Assistant Attorney General, Civil Rights Division, United States Department of Justice.

Auxiliary aids means services or devices that enable persons with impaired sensory, manual, or speaking skills to have an equal opportunity to participate in, and enjoy the benefits of, programs or activities conducted by the agency. For example, auxiliary aids useful for persons with impaired vision include readers, brailled materials, audio recordings, telecommunications devices and other similar services and devices. Auxiliary aids useful for persons with impaired hearing include telephone handset amplifiers, telephones compatible with hearing aids, telecommunication devices for deaf persons (TDD's), interpreters, notetakers, written materials, and other similar services and devices.

Complete complaint means a written statement that contains the complainant's name and address and describes the agency's alleged discriminatory action in sufficient detail to inform the agency of the nature and date of the alleged violation of section 504. It shall be signed by the complainant or by someone authorized to do so on his or her behalf. Complaints filed on behalf of classes or third parties shall describe or identify (by name, if possible) the alleged victims of discrimination.

Facility means all or any portion of buildings, structures, equipment, roads, walks, parking lots, rolling stock or other conveyances, or other real or personal property.

Handicapped person means any person who has a physical or mental impairment that substantially limits one or more major life activities, has a record of such an impairment, or is regarded as having such an impairment.

As used in this definition, the phrase:

(1) *Physical or mental impairment* includes--

(i) Any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: Neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive; genitourinary; hemic and lymphatic; skin; and endocrine; or

(ii) Any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities. The term "physical or mental impairment" includes, but is not limited to, such diseases and conditions as orthopedic, visual, speech, and hearing impairments, cerebral palsy, epilepsy, muscular dystrophy, multiple sclerosis, cancer, heart disease, diabetes, mental retardation, emotional illness, and drug addiction and alcoholism.

(2) *Major life activities* includes functions such as caring for one's self, performing manual tasks, walking, seeing, hearing, speaking,

breathing, learning, and working.

(3) *Has a record of such an impairment* means has a history of, or has been misclassified as having, a mental or physical impairment that substantially limits one or more major life activities.

(4) *Is regarded as having an impairment* means--

(i) Has a physical or mental impairment that does not substantially limit major life activities but is treated by the agency as constituting such a limitation;

(ii) Has a physical or mental impairment that substantially limits major life activities only as a result of the attitudes of others toward such impairment; or

(iii) Has none of the impairments defined in paragraph (1) of this definition but is treated by the agency as having such an impairment.

Historic preservation programs means programs conducted by the agency that have preservation of historic properties as a primary purpose.

Historic properties means those properties that are listed or eligible for listing in the National Register of Historic Places or properties designated as historic under a statute of the appropriate State or local government body.

Qualified handicapped person means--

(1) With respect to preschool, elementary, or secondary education services provided by the agency, a handicapped person who is a member of a class of persons otherwise entitled by statute, regulation, or agency policy to receive education services from the agency.

(2) With respect to any other agency program or activity under which a person is required to perform services or to achieve a level of accomplishment, a handicapped person who meets the essential eligibility requirements and who can achieve the purpose of the program or activity without modifications in the program or activity that the agency can demonstrate would result in a fundamental alteration in its nature;

(3) With respect to any other program or activity, a handicapped person who meets the essential eligibility requirements for participation in, or receipt of benefits from, that program or activity; and

(4) *Qualified handicapped person* is defined for purposes of employment in 29 CFR 1613.702(f), which is made applicable to this part by § 4.540.

Section 504 means section 504 of the Rehabilitation Act of 1973 (Pub. L. 93-112, 87 Stat. 394 (29 U.S.C. 794)), as amended by the Rehabilitation Act Amendments of 1974 (Pub. L. 93-516, 88 Stat. 1617), and the Rehabilitation, Comprehensive Services, and Developmental Disabilities Amendments of 1978 (Pub. L. 95-602, 92 Stat. 2955). As used in this part, section 504 applies only to programs or activities conducted by Executive agencies and not to federally assisted programs.

Substantial impairment means a significant loss of the integrity of finished materials, design quality, or special character resulting from a permanent alteration.

§§ 4.504--4.509 [Reserved]

[Top of File]

§ 4.510 Self-evaluation.

[Top of File]

(a) The agency shall, by August 24, 1987, evaluate its current policies and practices, and the effects thereof, that do not or may not meet the requirements of this part, and, to the extent modification of any such policies and practices is required, the agency shall proceed to make the necessary modifications.

(b) The agency shall provide an opportunity to interested persons, including handicapped persons or organizations representing handicapped persons, to participate in the self-evaluation process by submitting comments (both oral and written).

(c) The agency shall, until three years following the completion of the self-evaluation, maintain on file and make available for public inspection:

(1) A description of areas examined and any problems identified, and

(2) A description of any modifications made.

§ 4.511 Notice.

[Top of File]

The agency shall make available to employees, applicants, participants, beneficiaries, and other interested persons such information regarding the provisions of this part and its applicability to the programs or activities conducted by the agency, and make such information available to them in such manner as the head of the agency finds necessary to apprise such persons of the protections against discrimination assured them by section 504 and this regulation.

§§ 4.512--4.529 [Reserved]

[Top of File]

§ 4.530 General prohibitions against discrimination.

[Top of File]

(a) No qualified handicapped person shall, on the basis of handicap, be excluded from participation in, be denied the benefits of, or otherwise be subjected to discrimination under any program or activity conducted by the agency.

(b)(1) The agency, in providing any aid, benefit, or service, may not, directly or through contractual, licensing, or other arrangements, on the basis of handicap--

(i) Deny a qualified handicapped person the opportunity to participate in or benefit from the aid, benefit, or service;

(ii) Afford a qualified handicapped person an opportunity to participate in or benefit from the aid, benefit, or service that is not equal to that afforded others;

(iii) Provide a qualified handicapped person with an aid, benefit, or service that is not as effective in affording equal opportunity to obtain the same result, to gain the same benefit, or to reach the same level of achievement as that provided to others;

(iv) Provide different or separate aid, benefits, or services to handicapped persons or to any class of handicapped persons than is provided to others unless such action is necessary to provide qualified handicapped persons with aid, benefits, or services that are as effective as those provided to others;

(v) Deny a qualified handicapped person the opportunity to participate as a member of planning or advisory boards; or

(vi) Otherwise limit a qualified handicapped person in the enjoyment of any right, privilege, advantage, or opportunity enjoyed by others receiving the aid, benefit, or service.

(2) The agency may not deny a qualified handicapped person the opportunity to participate in programs or activities that are not separate or different, despite the existence of permissibly separate or different programs or activities.

(3) The agency may not, directly or through contractual or other arrangments, utilize criteria or methods of administration the purpose or effect of which would--

(i) Subject qualified handicapped persons to discrimination on the basis of handicap; or

(ii) Defeat or substantially impair accomplishment of the objectives of a program or activity with respect to handicapped persons.

(4) The agency may not, in determining the site or location of a facility, make selections the purpose or effect of which would--

(i) Exclude handicapped persons from, deny them the benefits of, or otherwise subject them to discrimination under any program or activity conducted by the agency; or

(ii) Defeat or substantially impair the accomplishment of the objectives of a program or activity with respect to handicapped persons.

(5) The agency, in the selection of procurement contractors, may not use criteria that subject qualified handicapped persons to discrimination on the basis of handicap.

(6) The agency may not administer a licensing or certification program in a manner that subjects qualified handicapped persons to discrimination on the basis of handicap, nor may the agency establish requirements for the programs or activities of licensees or certified entities that subject qualified handicapped persons to discrimination on the basis of handicap. However, the programs or activities of entities that are licensed or certified by the agency are not, themselves, covered by this part.

(c) The exclusion of nonhandicapped persons from the benefits of a program limited by Federal statute or Executive order to handicapped persons or the exclusion of a specific class of handicapped persons from a program limited by Federal statute or Executive order to a different class of handicapped persons is not prohibited by this part.

(d) The agency shall administer programs and activities in the most integrated setting appropriate to the needs of qualified handicapped persons.

§§ 4.531--4.539 [Reserved]

[Top of File]

§ 4.540 Employment.

[Top of File]

No qualified handicapped person shall, on the basis of handicap, be subjected to discrimination in employment under any program or activity conducted by the agency. The definitions, requirements, and procedures of section 501 of the Rehabilitation Act of 1973 (29 U.S.C. 791), as established by the Equal Employment Opportunity Commission in 29 CFR part 1613, shall apply to employment in federally conducted programs or activities.

§§ 4.541--4.548 [Reserved]

[Top of File]

§ 4.549 Program accessibility: Discrimination prohibited.

[Top of File]

Except as otherwise provided in § 4.550, no qualified handicapped person shall, because the agency's facilities are inaccessible to or unusable by handicapped persons, be denied the benefits of, be excluded from participation in, or otherwise be subjected to discrimination under any program or activity conducted by the agency.

§ 4.550 Program accessibility: Existing facilities.

[Top of File]

(a) *General.* The agency shall operate each program or activity so that the program or activity, when viewed in its entirety, is readily accessible to and usable by handicapped persons. This paragraph does not--

(1) Necessarily require the agency to make each of its existing facilities accessible to and usable by handicapped persons;

(2) In the case of historic preservation programs, require the agency to take any action that would result in a substantial impairment of significant historic features of an historic property; or

(3) Require the agency to take any action that it can demonstrate would result in a fundamental alteration in the nature of a program or activity or in undue financial and administrative burdens. In those circumstances where agency personnel believe that the proposed action would fundamentally alter the program or activity or would result in undue financial and administrative burdens, the agency has the burden of proving that compliance with § 4.550(a) would result in such alteration or burdens. The decision that compliance would result in such alteration or burdens must be made by the agency head or his or her designee after considering all agency resources available for use in the funding and operation of the conducted program or activity, and must be accompanied by a written statement of the reasons for reaching that conclusion. If an action would result in such an alteration or such burdens, the agency shall take any other action that would not result in such an alteration or such burdens but would nevertheless ensure that handicapped persons receive the benefits and services of the program or activity.

(b) *Methods* -- (1) *General*. The agency may comply with the requirements of this section through such means as redesign of equipment, reassignment of services to accessible buildings, assignment of aides to beneficiaries, home visits, delivery of services at alternate accessible sites, alteration of existing facilities and construction of new facilities, use of accessible rolling stock, or any other methods that result in making its programs or activities readily accessible to and usable by handicapped persons. The agency is not required to make structural changes in existing facilities where other methods are effective in achieving compliance with this section. The agency, in making alterations to existing buildings, shall meet accessibility requirements to the extent compelled by the Architectural Barriers Act of 1968, as amended (42 U.S.C. 4151 - 4157), and any regulations implementing it. In choosing among available methods for meeting the requirements of this section, the agency shall give priority to those methods that offer programs and activities to qualified handicapped persons in the most integrated setting appropriate.

(2) *Historic preservation programs*. In meeting the requirements of § 4.550(a) in historic preservation programs, the agency shall give priority to methods that provide physical access to handicapped persons. In cases where a physical alteration to an historic property is not required because of § 4.550(a)(2) or (a)(3), alternative methods of achieving program accessibility include--

(i) Using audio-visual materials and devices to depict those portions of an historic property that cannot otherwise be made accessible;

(ii) Assigning persons to guide handicapped persons into or through portions of historic properties that cannot otherwise be made

accessible; or

(iii) Adopting other innovative methods.

(c) *Time period for compliance*. The agency shall comply with the obligations established under this section by October 21, 1986, except that where structural changes in facilities are undertaken, such changes shall be made by August 22, 1989, but in any event as expeditiously as possible.

(d) *Transition plan*. In the event that structural changes to facilities will be undertaken to achieve program accessibility, the agency shall develop, by February 23, 1987 a transition plan setting forth the steps necessary to complete such changes. The agency shall provide an opportunity to interested persons, including handicapped persons or organizations representing handicapped persons, to participate in the development of the transition plan by submitting comments (both oral and written). A copy of the transition plan shall be made available for public inspection. The plan shall, at a minimum--

(1) Identify physical obstacles in the agency's facilities that limit the accessibility of its programs or activities to handicapped persons;

(2) Describe in detail the methods that will be used to make the facilities accessible;

(3) Specify the schedule for taking the steps necessary to achieve compliance with this section and, if the time period of the transition plan is longer than one year, identify steps that will be taken during each year of the transition period; and

(4) Indicate the official responsible for implementation of the plan.

§ 4.551 Program accessibility: New construction and alterations.

[Top of File]

Each building or part of a building that is constructed or altered by, on behalf of, or for the use of the agency shall be designed, constructed, or altered so as to be readily accessible to and usable by handicapped persons. The definitions, requirements, and standards of the Architectural Barriers Act (42 U.S.C. 4151-4157), as established in 41 CFR 101 - 19.600 to 101-19.607, apply to buildings covered by this section.

§§ 4.552--4.559 [Reserved]

[Top of File]

§ 4.560 Communications.

[Top of File]

(a) The agency shall take appropriate steps to ensure effective communication with applicants, participants, personnel of other Federal entities, and members of the public.

(1) The agency shall furnish appropriate auxiliary aids where necessary to afford a handicapped person an equal opportunity to participate in, and enjoy the benefits of, a program or activity conducted by the agency.

(i) In determining what type of auxiliary aid is necessary, the agency shall give primary consideration to the requests of the handicapped person.

(ii) The agency need not provide individually prescribed devices, readers for personal use or study, or other devices of a personal nature.

(2) Where the agency communicates with applicants and beneficiaries by telephone, telecommunication devices for deaf person (TDD's) or equally effective telecommunication systems shall be used.

(b) The agency shall ensure that interested persons, including persons with impaired vision or hearing, can obtain information as to the existence and location of accessible services, activities, and facilities.

(c) The agency shall provide signage at a primary entrance to each of its inaccessible facilities, directing users to a location at which they can obtain information about accessible facilities. The international symbol for accessibility shall be used at each primary entrance of an accessible facility.

(d) This section does not require the agency to take any action that it can demonstrate would result in a fundamental alteration in the nature of a program or activity or in undue financial and adminstrative burdens. In those circumstances where agency personnel believe that the proposed action would fundamentally alter the program or activity or would result in undue financial and administrative burdens, the agency has the burden of proving that compliance with § 4.560 would result in such alteration or burdens. The decision that compliance would result in such alteration or burdens must be made by the agency head or his or her designee after considering all agency resources available for use in the funding and operation of the conducted program or activity, and must be accompanied by a written statement of the reasons for reaching that conclusion. If an action required to comply with this section would result in such an alteration or such burdens,

the agency shall take any other action that would not result in such an alteration or such burdens but would nevertheless ensure that, to the maximum extent possible, handicapped persons receive the benefits and services of the program or activity.

§§ 4.561--4.569 [Reserved]

[Top of File]

§ 4.570 Compliance procedures.

[Top of File]

(a) Except as provided in paragraph (b) of this section, this section applies to all allegations of discrimination on the basis of handicap in programs or activities conducted by the agency.

(b) The agency shall process complaints alleging violations of section 504 with respect to employment according to the procedures established by the Equal Employment Opportunity Commission in 29 CFR part 1613 pursuant to section 501 of the Rehabilitation Act of 1973 (29 U.S.C. 791).

(c) The Civil Rights Program Manager, Office of Small Business and Civil Rights, shall be responsible for coordinating implementation of this section. Complaints should be sent to the NRC using an appropriate method listed in § 4.5.

(d) The agency shall accept and investigate all complete complaints for which it has jurisdiction. All complete complaints must be filed within 180 days of the alleged act of discrimination. The agency may extend this time period for good cause.

(e) If the agency receives a complaint over which it does not have jurisdiction, it shall promptly notify the complainant and shall make reasonable efforts to refer the complaint to the appropriate government entity.

(f) The agency shall notify the Architectural and Transportation Barriers Compliance Board upon receipt of any complaint alleging that a building or facility that is subject to the Architectural Barriers Act of 1968, as amended (42 U.S.C. 4151-4157), or section 502 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 792), is not readily accessible to and usable by handicapped persons.

(g) Within 180 days of the receipt of a complete complaint for which it has jurisdiction, the agency shall notify the complainant of the results of the investigation in a letter containing--

(1) Findings of fact and conclusions of law;

(2) A description of a remedy for each violation found; and

(3) A notice of the right to appeal.

(h) Appeals of the findings of fact and conclusions of law or remedies must be filed by the complainant within 90 days of receipt from the agency of the letter required by § 4.570(g). The agency may extend this time for good cause.

(i) Timely appeals shall be accepted and processed by the head of the agency.

(j) The head of the agency shall notify the complainant of the results of the appeal within 60 days of the receipt of the request. If the head of the agency determines that additional information is needed from the complainant, he or she shall have 60 days from the date of receipt of the additional information to make his or her determination on the appeal.

(k) The time limits cited in paragraphs (g) and (j) of this section may be extended with the permission of the Assistant Attorney General.

(l) The agency may delegate its authority for conducting complaint investigations to other Federal agencies, except that the authority for making the final determination may not be delegated to another agency.

[51 FR 22888, 22896, June 23, 1986; 68 FR 58799, Oct. 10, 2003]

§§ 4.571--4.999 [Reserved]

[Top of File]

Appendix A to Part 4--Federal Financial Assistance to Which This Part Applies[1]

[Top of File]

(a) *Conferences on regulatory programs*. Agreements for financial assistance to State officials, without full-cost recovery, for visits to NRC

facilities and offices or to other locations to confer on regulatory programs and related matters.

(b) *Orientation and instruction*. Agreements for assistance to State and local officials, without full-cost recovery, to receive orientation and on-the-job instruction at NRC facilities and offices.

(c) *Courses in fundamentals of radiation*. Agreements for the conduct of courses for State and local employees, without full-cost recovery, in fundamentals of radiation and radiation protection.

(d) *Participation in meetings and conferences*. Agreements for participation, without full-cost recovery, in meetings, conferences, workshops, and symposia to assist scientific, professional or educational institutions or groups.

(e) *Research Support*. Agreements for the financial support of basic and applied scientific research and for the exchange of scientific information.

[29 FR 19277, Dec. 31, 1964, as amended at 38 FR 17929, July 5, 1973; 40 FR 8778, Mar. 3, 1975; 45 FR 14539, Mar. 6, 1980; 52 FR 25361, July 7, 1987]

[1]Categories of assistance may be added to Appendix A from time to time by notice published in the Federal Register. This part shall be deemed to apply to all grants, loans or contracts entered into under any such category of assistance on or after the effective date of the inclusion of the category of assistance in Appendix A.

PART 5--NONDISCRIMINATION ON THE BASIS OF SEX IN EDUCATION PROGRAMS OR ACTIVITIES RECEIVING FEDERAL FINANCIAL ASSISTANCE

[Top of File]

Subpart A--Introduction

[Top of File]

§ 5.100 Purpose and effective date.

The purpose of these Title IX regulations is to effectuate Title IX of the Education Amendments of 1972, as amended (except sections 904 and 906 of those Amendments) (20 U.S.C. 1681, 1682, 1683, 1685, 1686, 1687, 1688), which is designed to eliminate (with certain exceptions) discrimination on the basis of sex in any education program or activity receiving Federal financial assistance, whether or not such program or activity is offered or sponsored by an educational institution as defined in these Title IX regulations. The effective date of these Title IX regulations shall be September 29, 2000.

§ 5.105 Definitions.

[Top of File]

As used in these Title IX regulations, the term:

Administratively separate unit means a school, department, or college of an educational institution (other than alocal educational agency) admission to which is independent of admission to any other component of such institution.

Admission means selection for part-time, full-time, special, associate, transfer, exchange, or any other enrollment, membership, or matriculation in or at an education program or activity operated by a recipient.

Applicant means one who submits an application, request, or plan required to be approved by an official of the Federal agency that awards Federal financial assistance, or by a recipient, as a condition to becoming a recipient.

Designated agency official means Program Manager, Civil Rights Program.

Educational institution means a local educational agency (LEA) as defined by 20 U.S.C. 8801(18), a preschool, a private elementary or secondary school, or an applicant or recipient that is an institution of graduate higher education, an institution of undergraduate higher education, an institution of professional education, or an institution of vocational education, as defined in this section.

Federal financial assistance means any of the following, when authorized or extended under a law administered by the Federal agency that awards such assistance:

(1) A grant or loan of Federal financial assistance, including funds made available for:

(i) The acquisition, construction, renovation, restoration, or repair of a building or facility or any portion thereof; and

(ii) Scholarships, loans, grants, wages, or other funds extended to any entity for payment to or on behalf of students admitted to that entity, or extended directly to such students for payment to that entity.

(2) A grant of Federal real or personal property or any interest therein, including surplus property, and the proceeds of the sale or transfer of such property, if the Federal share of the fair market value of the property is not, upon such sale or transfer, properly accounted for to the Federal Government.

(3) Provision of the services of Federal personnel.

(4) Sale or lease of Federal property or any interest therein at nominal consideration, or at consideration reduced for the purpose of assisting the recipient or in recognition of public interest to be served thereby, or permission to use Federal property or any interest therein without consideration.

(5) Any other contract, agreement, or arrangement that has as one of its purposes the provision of assistance to any education program or activity, except a contract of insurance or guaranty.

Institution of graduate higher education means an institution that:

(1) Offers academic study beyond the bachelor of arts or bachelor of science degree, whether or not leading to a certificate of any higher degree in the liberal arts and sciences;

(2) Awards any degree in a professional field beyond the first professional degree (regardless of whether the first professional degree in such field is awarded by an institution of undergraduate higher education or professional education); or

(3) Awards no degree and offers no further academic study, but operates ordinarily for the purpose of facilitating research by persons who have received the highest graduate degree in any field of study.

Institution of professional education means an institution (except any institution of undergraduate higher education) that offers a program of academic study that leads to a first professional degree in a field for which there is a national specialized accrediting agency recognized by the Secretary of Education.

Institution of undergraduate higher education means:

(1) An institution offering at least two but less than four years of college-level study beyond the high school level, leading to a diploma or an associate degree, or wholly or principally creditable toward a baccalaureate degree; or

(2) An institution offering academic study leading to a baccalaureate degree; or

(3) An agency or body that certifies credentials or offers degrees, but that may or may not offer academic study.

Institution of vocational education means a school or institution (except an institution of professional or graduate or undergraduate higher education) that has as its primary purpose preparation of students to pursue a technical, skilled, or semiskilled occupation or trade, or to pursue study in a technical field, whether or not the school or institution offers certificates, diplomas, or degrees and whether or not it offers full-time study.

Recipient means any State or political subdivision thereof, or any instrumentality of a State or political subdivision thereof, any public or private agency, institution, or organization, or other entity, or any person, to whom Federal financial assistance is extended directly or through another recipient and that operates an education program or activity that receives such assistance, including any subunit, successor, assignee, or transferee thereof.

Student means a person who has gained admission.

Title IX means Title IX of the Education Amendments of 1972, Public Law 92-318, 86 Stat. 235, 373 (codified as amended at 20 U.S.C. 1681-1688) (except sections 904 and 906 thereof), as amended by section 3 of Public Law 93-568, 88 Stat. 1855, by section 412 of the Education Amendments of 1976, Public Law 94-482, 90 Stat. 2234, and by Section 3 of Public Law 100-259, 102 Stat. 28, 28-29 (20 U.S.C. 1681, 1682, 1683, 1685, 1686, 1687, 1688).

Title IX regulations means the provisions set forth at §§ 5.100 through 5.605.

Transition plan means a plan subject to the approval of the Secretary of Education pursuant to section 901(a)(2) of the Education Amendments of 1972, 20 U.S.C. 1681(a)(2), under which an educational institution operates in making the transition from being an educational institution that admits only students of one sex to being one that admits students of both sexes without discrimination.

§ 5.110 Remedial and affirmative action and self-evaluation.

[Top of File]

(a) *Remedial action.* If the designated agency official finds that a recipient has discriminated against persons on the basis of sex in an education program or activity, such recipient shall take such remedial action as the designated agency official deems necessary to overcome the effects of such discrimination.

(b) *Affirmative action.* In the absence of a finding of discrimination on the basis of sex in an education program or activity, a recipient may take affirmative action consistent with law to overcome the effects of conditions that resulted in limited participation therein by persons of a particular sex. Nothing in these Title IX regulations shall be interpreted to alter any affirmative action obligations that a recipient may have under Executive Order 11246, 3 CFR, 1964-1965 Comp., p. 339; as amended by Executive Order 11375, 3 CFR, 1966-1970 Comp., p. 684; as amended by Executive Order 11478, 3 CFR, 1966-1970 Comp., p. 803; as amended by Executive Order 12086, 3 CFR, 1978 Comp., p. 230; as amended by Executive Order 12107, 3 CFR, 1978 Comp., p. 264.

(c) *Self-evaluation.* Each recipient education institution shall, within one year of September 29, 2000:

(1) Evaluate, in terms of the requirements of these Title IX regulations, its current policies and practices and the effects thereof concerning admission of students, treatment of students, and employment of both academic and non-academic personnel working in connection with the recipient's education program or activity;

(2) Modify any of these policies and practices that do not or may not meet the requirements of these Title IX regulations; and

(3) Take appropriate remedial steps to eliminate the effects of any discrimination that resulted or may have resulted from adherence to these policies and practices.

(d) *Availability of self-evaluation and related materials.* Recipients shall maintain on file for at least three years following completion of the evaluation required under paragraph (c) of this section, and shall provide to the designated agency official upon request, a description of any modifications made pursuant to paragraph (c)(2) of this section and of any remedial steps taken pursuant to paragraph (c)(3) of this section.

§ 5.115 Assurance required.

[Top of File]

(a) *General.* Either at the application stage or the award stage, Federal agencies must ensure that applications for Federal financial assistance or awards of Federal financial assistance contain, be accompanied by, or be covered by a specifically identified assurance from the applicant or recipient, satisfactory to the designated agency official, that each education program or activity operated by the applicant or recipient and to which these Title IX regulations apply will be operated in compliance with these Title IX regulations. An assurance of compliance with these Title IX regulations shall not be satisfactory to the designated agency official if the applicant or recipient to whom such assurance applies fails to commit itself to take whatever remedial action is necessary in accordance with § 5.110(a) to eliminate existing discrimination on the basis of sex or to eliminate the effects of past discrimination whether occurring prior to or subsequent to the submission to the designated agency official of such assurance.

(b) *Duration of obligation.* (1) In the case of Federal financial assistance extended to provide real property or structures thereon, such assurance shall obligate the recipient or, in the case of a subsequent transfer, the transferee, for the period during which the real property or structures are used to provide an education program or activity.

(2) In the case of Federal financial assistance extended to provide personal property, such assurance shall obligate the recipient for the period during which it retains ownership or possession of the property.

(3) In all other cases such assurance shall obligate the recipient for the period during which Federal financial assistance is extended.

(c) *Form.* (1) The assurances required by paragraph (a) of this section, which may be included as part of a document that addresses other assurances or obligations, shall include that the applicant or recipient will comply with all applicable Federal statutes relating to nondiscrimination. These include but are not limited to: Title IX of the Education Amendments of 1972, as amended (20 U.S.C. 1681-1683, 1685-1688).

(2) The designated agency official will specify the extent to which such assurances will be required of the applicant's or recipient's subgrantees, contractors, subcontractors, transferees, or successors in interest.

§ 5.120 Transfers of property.

[Top of File]

If a recipient sells or otherwise transfers property financed in whole or in part with Federal financial assistance to a transferee that operates any education program or activity, and the Federal share of the fair market value of the property is not upon such sale or transfer properly accounted for to the Federal Government, both the transferor and the transferee shall be deemed to be recipients, subject to the provisions of §§ 5.205 through 5.235(a).

§ 5.125 Effect of other requirements.

[Top of File]

(a) *Effect of other Federal provisions.* The obligations imposed by these Title IX regulations are independent of, and do not alter, obligations not to discriminate on the basis of sex imposed by Executive Order 11246, 3 CFR, 1964-1965 Comp., p. 339; as amended by Executive Order 11375, 3 CFR, 1966-1970 Comp., p. 684; as amended by Executive Order 11478, 3 CFR, 1966-1970 Comp., p. 803; as amended by Executive Order 12087, 3 CFR, 1978 Comp., p. 230; as amended by Executive Order 12107, 3 CFR, 1978 Comp., p. 264; sections 704 and 855 of the Public Health Service Act (42 U.S.C. 295m, 298b-2); Title VII of the Civil Rights Act of 1964 (42 U.S.C. 2000e et seq.); the Equal Pay Act of 1963 (29 U.S.C. 206); and any other Act of Congress or Federal regulation.

(b) *Effect of State or local law or other requirements.* The obligation to comply with these Title IX regulations is not obviated or alleviated by any State or local law or other requirement that would render any applicant or student ineligible, or limit the eligibility of any applicant or student, on the basis of sex, to practice any occupation or profession.

(c) *Effect of rules or regulations of private organizations.* The obligation to comply with these Title IX regulations is not obviated or alleviated by any rule or regulation of any organization, club, athletic or other league, or association that would render any applicant or student ineligible to participate or limit the eligibility or participation of any applicant or student, on the basis of sex, in any education program or activity operated by a recipient and that receives Federal financial assistance.

§ 5.130 Effect of employment opportunities.

[Top of File]

The obligation to comply with these Title IX regulations is not obviated or alleviated because employment opportunities in any occupation or profession are or may be more limited for members of one sex than for members of the other sex.

§ 5.135 Designation of responsible employee and adoption of grievance procedures.

[Top of File]

(a) *Designation of responsible employee.* Each recipient shall designate at least one employee to coordinate its efforts to comply with and carry out its responsibilities under these Title IX regulations, including any investigation of any complaint communicated to such recipient alleging its noncompliance with these Title IX regulations or alleging any actions that would be prohibited by these Title IX regulations. The recipient shall notify all its students and employees of the name, office address, and telephone number of the employee or employees appointed pursuant to this paragraph.

(b) *Complaint procedure of recipient.* A recipient shall adopt and publish grievance procedures providing for prompt and equitable resolution of student and employee complaints alleging any action that would be prohibited by these Title IX regulations.

§ 5.140 Dissemination of policy.

[Top of File]

(a) *Notification of policy.* (1) Each recipient shall implement specific and continuing steps to notify applicants for admission and employment, students and parents of elementary and secondary school students, employees, sources of referral of applicants for admission and employment, and all unions or professional organizations holding collective bargaining or professional agreements with the recipient, that it does not discriminate on the basis of sex in the educational programs or activities that it operates, and that it is required by Title IX and these Title IX regulations not to discriminate in such a manner. Such notification shall contain such information, and be made in such manner, as the designated agency official finds necessary to apprise such persons of the protections against discrimination assured them by Title IX and these Title IX regulations, but shall state at least that the requirement not to discriminate in education programs or activities extends to employment therein, and to admission thereto unless §§ 5.300 through 5.310 do not apply to the recipient, and that inquiries concerning the application of Title IX and these Title IX regulations to such recipient may be referred to the employee designated pursuant to § 5.135, or to the designated agency official.

(2) Each recipient shall make the initial notification required by paragraph (a)(1) of this section within 90 days of September 29, 2000 or of the date these Title IX regulations first apply to such recipient, whichever comes later, which notification shall include publication in:

(i) Newspapers and magazines operated by such recipient or by student, alumnae, or alumni groups for or in connection with such recipient; and

(ii) Memoranda or other written communications distributed to every student and employee of such recipient.

(b) *Publications.* (1) Each recipient shall prominently include a statement of the policy described in paragraph (a) of this section in each announcement, bulletin, catalog, or application form that it makes available to any person of a type, described in paragraph (a) of this section, or which is otherwise used in connection with the recruitment of students or employees.

(2) A recipient shall not use or distribute a publication of the type described in paragraph (b)(1) of this section that suggests, by text or illustration, that such recipient treats applicants, students, or employees differently on the basis of sex except as such treatment is permitted by these Title IX regulations.

(c) *Distribution.* Each recipient shall distribute without discrimination on the basis of sex each publication described in paragraph (b)(1) of this section, and shall apprise each of its admission and employment recruitment representatives of the policy of nondiscrimination described in paragraph (a) of this section, and shall require such representatives to adhere to such policy.

Subpart B--Coverage

[Top of File]

§ 5.200 Application.

Except as provided in §§ 5.205 through 5.235(a), these Title IX regulations apply to every recipient and to each education program or activity operated by such recipient that receives Federal financial assistance.

§ 5.205 Educational institutions and other entities controlled by religious organizations.

[Top of File]

(a) *Exemption.* These Title IX regulations do not apply to any operation of an educational institution or other entity that is controlled by a religious organization to the extent that application of these Title IX regulations would not be consistent with the religious tenets of such organization.

(b) *Exemption claims.* An educational institution or other entity that wishes to claim the exemption set forth in paragraph (a) of this section shall do so by submitting in writing to the designated agency official a statement by the highest-ranking official of the institution, identifying the provisions of these Title IX regulations that conflict with a specific tenet of the religious organization.

§ 5.210 Military and merchant marine educational institutions.

[Top of File]

These Title IX regulations do not apply to an educational institution whose primary purpose is the training of individuals for a military service of the United States or for the merchant marine.

§ 5.215 Membership practices of certain organizations.

[Top of File]

(a) *Social fraternities and sororities.* These Title IX regulations do not apply to the membership practices of social fraternities and sororities that are exempt from taxation under section 501(a) of the Internal Revenue Code of 1954, 26 U.S.C. 501(a), the active membership of which consists primarily of students in attendance at institutions of higher education.

(b) *YMCA, YWCA, Girl Scouts, Boy Scouts, and Camp Fire Girls.* These Title IX regulations do not apply to the membership practices of the Young Men's Christian Association (YMCA), the Young Women's Christian Association (YWCA), the Girl Scouts, the Boy Scouts, and Camp Fire Girls.

(c) *Voluntary youth service organizations.* These Title IX regulations do not apply to the membership practices of a voluntary youth service organization that is exempt from taxation under section 501(a) of the Internal Revenue Code of 1954, 26 U.S.C. 501(a), and the membership of which has been traditionally limited to members of one sex and principally to persons of less than nineteen years of age.

§ 5.220 Admissions.

[Top of File]

(a) Admissions to educational institutions prior to June 24, 1973, are not covered by these Title IX regulations.

(b) *Administratively separate units.* For the purposes only of this section, §§ 5.225 and 5.230, and §§ 5.300 through 5.310, each administratively separate unit shall be deemed to be an educational institution.

(c) *Application of §§ 5.300 through 5.310.* Except as provided in paragraphs (d) and (e) of this section, §§ 5.300 through 5.310 apply to each recipient. A recipient to which §§ 5.300 through 5.310 apply shall not discriminate on the basis of sex in admission or recruitment in violation of §§ 5.300 through 5.310.

(d) *Educational institutions.* Except as provided in paragraph (e) of this section as to recipients that are educational institutions, §§ 5.300 through 5.310 apply only to institutions of vocational education, professional education, graduate higher education, and public institutions of undergraduate higher education.

(e) *Public institutions of undergraduate higher education.* §§ 5.300 through 5.310 do not apply to any public institution of undergraduate higher education that traditionally and continually from its establishment has had a policy of admitting students of only one sex.

§ 5.225 Educational institutions eligible to submit transition plans.

[Top of File]

(a) *Application.* This section applies to each educational institution to which §§ 5.300 through 5.310 apply that:

(1) Admitted students of only one sex as regular students as of June 23, 1972; or

(2) Admitted students of only one sex as regular students as of June 23, 1965, but thereafter admitted, as regular students, students of the sex not admitted prior to June 23, 1965.

(b) *Provision for transition plans.* An educational institution to which this section applies shall not discriminate on the basis of sex in admission or recruitment in violation of §§ 5.300 through 5.310.

§ 5.230 Transition plans.

[Top of File]

(a) *Submission of plans.* An institution to which § 5.225 applies and that is composed of more than one administratively separate unit may

submit either a single transition plan applicable to all such units, or a separate transition plan applicable to each such unit.

(b) *Content of plans.* In order to be approved by the Secretary of Education, a transition plan shall:

(1) State the name, address, and Federal Interagency Committee on Education Code of the educational institution submitting such plan, the administratively separate units to which the plan is applicable, and the name, address, and telephone number of the person to whom questions concerning the plan may be addressed. The person who submits the plan shall be the chief administrator or president of the institution, or another individual legally authorized to bind the institution to all actions set forth in the plan.

(2) State whether the educational institution or administratively separate unit admits students of both sexes as regular students and, if so, when it began to do so.

(3) Identify and describe with respect to the educational institution or administratively separate unit any obstacles to admitting students without discrimination on the basis of sex.

(4) Describe in detail the steps necessary to eliminate as soon as practicable each obstacle so identified and indicate the schedule for taking these steps and the individual directly responsible for their implementation.

(5) Include estimates of the number of students, by sex, expected to apply for, be admitted to, and enter each class during the period covered by the plan.

(c) *Nondiscrimination.* No policy or practice of a recipient to which § 5.225 applies shall result in treatment of applicants to or students of such recipient in violation of §§ 5.300 through 5.310 unless such treatment is necessitated by an obstacle identified in paragraph (b)(3) of this section and a schedule for eliminating that obstacle has been provided as required by paragraph (b)(4) of this section.

(d) *Effects of past exclusion.* To overcome the effects of past exclusion of students on the basis of sex, each educational institution to which § 5.225 applies shall include in its transition plan, and shall implement, specific steps designed to encourage individuals of the previously excluded sex to apply for admission to such institution. Such steps shall include instituting recruitment programs that emphasize the institution's commitment to enrolling students of the sex previously excluded.

§ 5.235 Statutory amendments.

[Top of File]

(a) This section, which applies to all provisions of these Title IX regulations, addresses statutory amendments to Title IX.

(b) These Title IX regulations shall not apply to or preclude:

(1) Any program or activity of the American Legion undertaken in connection with the organization or operation of any Boys State conference, Boys Nation conference, Girls State conference, or Girls Nation conference;

(2) Any program or activity of a secondary school or educational institution specifically for:

(i) The promotion of any Boys State conference, Boys Nation conference, Girls State conference, or Girls Nation conference; or

(ii) The selection of students to attend any such conference;

(3) Father-son or mother-daughter activities at an educational institution or in an education program or activity, but if such activities are provided for students of one sex, opportunities for reasonably comparable activities shall be provided to students of the other sex;

(4) Any scholarship or other financial assistance awarded by an institution of higher education to an individual because such individual has received such award in a single-sex pageant based upon a combination of factors related to the individual's personal appearance, poise, and talent. The pageant, however, must comply with other nondiscrimination provisions of Federal law.

(c) *Program or activity* or *program* means:

(1) All of the operations of any entity described in paragraphs (c)(1)(i) through (iv) of this section, any part of which is extended Federal financial assistance:

(i)(A) A department, agency, special purpose district, or other instrumentality of a State or of a local government; or

(B) The entity of such State or local government that distributes such assistance and each such department or agency (and each other State or local government entity) to which the assistance is extended, in the case of assistance to a State or local government;

(ii)(A) A college, university, or other post secondary institution, or a public system of higher education; or

(B) A local educational agency (as defined in section 8801 of title 20), system of vocational education, or other school system;

(iii)(A) An entire corporation, partnership, or other private organization, or an entire sole proprietorship--

(1) If assistance is extended to such corporation, partnership, private organization, or sole proprietorship as a whole; or

(2) Which is principally engaged in the business of providing education, health care, housing, social services, or parks and recreation; or

(B) The entire plant or other comparable, geographically separate facility to which Federal financial assistance is extended, in the case of any other corporation, partnership, private organization, or sole proprietorship; or

(iv) Any other entity that is established by two or more of the entities described in paragraphs (c)(1)(i), (ii), or (iii) of this section.

(2)(i) *Program or activity* does not include any operation of an entity that is controlled by a religious organization if the application of 20 U. S.C. 1681 to such operation would not be consistent with the religious tenets of such organization.

(ii) For example, all of the operations of a college, university, or other post secondary institution, including but not limited to traditional educational operations, faculty and student housing, campus shuttle bus service, campus restaurants, the bookstore, and other commercial activities are part of a ``program or activity'' subject to these Title IX regulations if the college, university, or other institution receives Federal financial assistance.

(d)(1) Nothing in these Title IX regulations shall be construed to require or prohibit any person, or public or private entity, to provide or pay for any benefit or service, including the use of facilities, related to an abortion. Medical procedures, benefits, services, and the use of facilities, necessary to save the life of a pregnant woman or to address complications related to an abortion are not subject to this section.

(2) Nothing in this section shall be construed to permit a penalty to be imposed on any person or individual because such person or individual is seeking or has received any benefit or service related to a legal abortion. Accordingly, subject to paragraph (d)(1) of this section, no person shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any academic, extracurricular, research, occupational training, employment, or other educational program or activity operated by a recipient that receives Federal financial assistance because such individual has sought or received, or is seeking, a legal abortion, or any benefit or service related to a legal abortion.

Subpart C--Discrimination on the Basis of Sex in Admission and Recruitment Prohibited

[Top of File]

§ 5.300 Admission.

(a) *General.* No person shall, on the basis of sex, be denied admission, or be subjected to discrimination in admission, by any recipient to which §§ 5.300 through §§ 5.310 apply, except as provided in §§ 5.225 and §§ 5.230.

(b) *Specific prohibitions.* (1) In determining whether a person satisfies any policy or criterion for admission, or in making any offer of admission, a recipient to which §§ 5.300 through 5.310 apply shall not:

(i) Give preference to one person over another on the basis of sex, by ranking applicants separately on such basis, or otherwise;

(ii) Apply numerical limitations upon the number or proportion of persons of either sex who may be admitted; or

(iii) Otherwise treat one individual differently from another on the basis of sex.

(2) A recipient shall not administer or operate any test or other criterion for admission that has a disproportionately adverse effect on persons on the basis of sex unless the use of such test or criterion is shown to predict validly success in the education program or activity in question and alternative tests or criteria that do not have such a disproportionately adverse effect are shown to be unavailable.

(c) *Prohibitions relating to marital or parental status.* In determining whether a person satisfies any policy or criterion for admission, or in making any offer of admission, a recipient to which §§ 5.300 through 5.310 apply:

(1) Shall not apply any rule concerning the actual or potential parental, family, or marital status of a student or applicant that treats persons differently on the basis of sex;

(2) Shall not discriminate against or exclude any person on the basis of pregnancy, childbirth, termination of pregnancy, or recovery therefrom, or establish or follow any rule or practice that so discriminates or excludes;

(3) Subject to § 5.235(d), shall treat disabilities related to pregnancy, childbirth, termination of pregnancy, or recovery therefrom in the same manner and under the same policies as any other temporary disability or physical condition; and

(4) Shall not make pre-admission inquiry as to the marital status of an applicant for admission, including whether such applicant is "Miss" or "Mrs." A recipient may make pre-admission inquiry as to the sex of an applicant for admission, but only if such inquiry is made equally of such applicants of both sexes and if the results of such inquiry are not used in connection with discrimination prohibited by these Title IX

regulations.

§ 5.305 Preference in admission.

[Top of File]

A recipient to which §§ 5.300 through 5.310 apply shall not give preference to applicants for admission, on the basis of attendance at any educational institution or other school or entity that admits as students only or predominantly members of one sex, if the giving of such preference has the effect of discriminating on the basis of sex in violation of §§ 5.300 through 5.310.

§ 5.310 Recruitment.

[Top of File]

(a) *Nondiscriminatory recruitment.* A recipient to which §§ 5.300 through 5.310 apply shall not discriminate on the basis of sex in the recruitment and admission of students. A recipient may be required to undertake additional recruitment efforts for one sex as remedial action pursuant to § 5.110(a), and may choose to undertake such efforts as affirmative action pursuant to § 5.110(b).

(b) *Recruitment at certain institutions.* A recipient to which §§ 5.300 through 5.310 apply shall not recruit primarily or exclusively at educational institutions, schools, or entities that admit as students only or predominantly members of one sex, if such actions have the effect of discriminating on the basis of sex in violation of §§ 5.300 through 5.310.

Subpart D--Discrimination on the Basis of Sex in Education Programs or Activities Prohibited

[Top of File]

§ 5.400 Education programs or activities.

(a) *General.* Except as provided elsewhere in these Title IX regulations, no person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any academic, extracurricular, research, occupational training, or other education program or activity operated by a recipient that receives Federal financial assistance. Sections 5.400 through 5.455 do not apply to actions of a recipient in connection with admission of its students to an education program or activity of a recipient to which §§ 5.300 through 5.310 do not apply, or an entity, not a recipient, to which §§ 5.300 through 5.310 would not apply if the entity were a recipient.

(b) *Specific prohibitions.* Except as provided in §§ 5.400 through 5.455, in providing any aid, benefit, or service to a student, a recipient shall not, on the basis of sex:

(1) Treat one person differently from another in determining whether such person satisfies any requirement or condition for the provision of such aid, benefit, or service;

(2) Provide different aid, benefits, or services or provide aid, benefits, or services in a different manner;

(3) Deny any person any such aid, benefit, or service;

(4) Subject any person to separate or different rules of behavior, sanctions, or other treatment;

(5) Apply any rule concerning the domicile or residence of a student or applicant, including eligibility for in-state fees and tuition;

(6) Aid or perpetuate discrimination against any person by providing significant assistance to any agency, organization, or person that discriminates on the basis of sex in providing any aid, benefit, or service to students or employees;

(7) Otherwise limit any person in the enjoyment of any right, privilege, advantage, or opportunity.

(c) *Assistance administered by a recipient educational institution to study at a foreign institution.* A recipient educational institution may administer or assist in the administration of scholarships, fellowships, or other awards established by foreign or domestic wills, trusts, or similar legal instruments, or by acts of foreign governments and restricted to members of one sex, that are designed to provide opportunities to study abroad, and that are awarded to students who are already matriculating at or who are graduates of the recipient institution; Provided, that a recipient educational institution that administers or assists in the administration of such scholarships, fellowships, or other awards that are restricted to members of one sex provides, or otherwise makes available, reasonable opportunities for similar studies for members of the other sex. Such opportunities may be derived from either domestic or foreign sources.

(d) *Aids, benefits or services not provided by recipient.* (1) This paragraph (d) applies to any recipient that requires participation by any applicant, student, or employee in any education program or activity not operated wholly by such recipient, or that facilitates, permits, or considers such participation as part of or equivalent to an education program or activity operated by such recipient, including participation in educational consortia and cooperative employment and student-teaching assignments.

(2) Such recipient:

(i) Shall develop and implement a procedure designed to assure itself that the operator or sponsor of such other education program or activity takes no action affecting any applicant, student, or employee of such recipient that these Title IX regulations would prohibit such recipient from taking; and

(ii) Shall not facilitate, require, permit, or consider such participation if such action occurs.

§ 5.405 Housing.

[Top of File]

(a) *Generally.* A recipient shall not, on the basis of sex, apply different rules or regulations, impose different fees or requirements, or offer different services or benefits related to housing, except as provided in this section (including housing provided only to married students).

(b) *Housing provided by recipient.* (1) A recipient may provide separate housing on the basis of sex.

(2) Housing provided by a recipient to students of one sex, when compared to that provided to students of the other sex, shall be as a whole:

(i) Proportionate in quantity to the number of students of that sex applying for such housing; and

(ii) Comparable in quality and cost to the student.

(c) *Other housing.* (1) A recipient shall not, on the basis of sex, administer different policies or practices concerning occupancy by its students of housing other than that provided by such recipient.

(2)(i) A recipient which, through solicitation, listing, approval of housing, or otherwise, assists any agency, organization, or person in making housing available to any of its students, shall take such reasonable action as may be necessary to assure itself that such housing as is provided to students of one sex, when compared to that provided to students of the other sex, is as a whole:

(A) Proportionate in quantity; and

(B) Comparable in quality and cost to the student.

(ii) A recipient may render such assistance to any agency, organization, or person that provides all or part of such housing to students of only one sex.

§ 5.410 Comparable facilities.

[Top of File]

A recipient may provide separate toilet, locker room, and shower facilities on the basis of sex, but such facilities provided for students of one sex shall be comparable to such facilities provided for students of the other sex.

§ 5.415 Access to course offerings.

[Top of File]

(a) A recipient shall not provide any course or otherwise carry out any of its education program or activity separately on the basis of sex, or require or refuse participation therein by any of its students on such basis, including health, physical education, industrial, business, vocational, technical, home economics, music, and adult education courses.

(b)(1) With respect to classes and activities in physical education at the elementary school level, the recipient shall comply fully with this section as expeditiously as possible but in no event later than one year from September 29, 2000. With respect to physical education classes and activities at the secondary and post-secondary levels, the recipient shall comply fully with this section as expeditiously as possible but in no event later than three years from September 29, 2000.

(2) This section does not prohibit grouping of students in physical education classes and activities by ability as assessed by objective standards of individual performance developed and applied without regard to sex.

(3) This section does not prohibit separation of students by sex within physical education classes or activities during participation in wrestling, boxing, rugby, ice hockey, football, basketball, and other sports the purpose or major activity of which involves bodily contact.

(4) Where use of a single standard of measuring skill or progress in a physical education class has an adverse effect on members of one sex, the recipient shall use appropriate standards that do not have such effect.

(5) Portions of classes in elementary and secondary schools, or portions of education programs or activities, that deal exclusively with human sexuality may be conducted in separate sessions for boys and girls.

(6) Recipients may make requirements based on vocal range or quality that may result in a chorus or choruses of one or predominantly one sex.

§ 5.420 Access to schools operated by LEAs.

[Top of File]

A recipient that is a local educational agency shall not, on the basis of sex, exclude any person from admission to:

(a) Any institution of vocational education operated by such recipient; or

(b) Any other school or educational unit operated by such recipient, unless such recipient otherwise makes available to such person, pursuant to the same policies and criteria of admission, courses, services, and facilities comparable to each course, service, and facility offered in or through such schools.

§ 5.425 Counseling and use of appraisal and counseling materials.

[Top of File]

(a) *Counseling.* A recipient shall not discriminate against any person on the basis of sex in the counseling or guidance of students or applicants for admission.

(b) *Use of appraisal and counseling materials.* A recipient that uses testing or other materials for appraising or counseling students shall not use different materials for students on the basis of their sex or use materials that permit or require different treatment of students on such basis unless such different materials cover the same occupations and interest areas and the use of such different materials is shown to be essential to eliminate sex bias. Recipients shall develop and use internal procedures for ensuring that such materials do not discriminate on the basis of sex. Where the use of a counseling test or other instrument results in a substantially disproportionate number of members of one sex in any particular course of study or classification, the recipient shall take such action as is necessary to assure itself that such disproportion is not the result of discrimination in the instrument or its application.

(c) *Disproportion in classes.* Where a recipient finds that a particular class contains a substantially disproportionate number of individuals of one sex, the recipient shall take such action as is necessary to assure itself that such disproportion is not the result of discrimination on the basis of sex in counseling or appraisal materials or by counselors.

§ 5.430 Financial assistance.

[Top of File]

(a) *General.* Except as provided in paragraphs (b) and (c) of this section, in providing financial assistance to any of its students, a recipient shall not:

(1) On the basis of sex, provide different amounts or types of such assistance, limit eligibility for such assistance that is of any particular type or source, apply different criteria, or otherwise discriminate;

(2) Through solicitation, listing, approval, provision of facilities, or other services, assist any foundation, trust, agency, organization, or person that provides assistance to any of such recipient's students in a manner that discriminates on the basis of sex; or

(3) Apply any rule or assist in application of any rule concerning eligibility for such assistance that treats persons of one sex differently from persons of the other sex with regard to marital or parental status.

(b) *Financial aid established by certain legal instruments.* (1) A recipient may administer or assist in the administration of scholarships, fellowships, or other forms of financial assistance established pursuant to domestic or foreign wills, trusts, bequests, or similar legal instruments or by acts of a foreign government that require that awards be made to members of a particular sex specified therein; Provided, that the overall effect of the award of such sex-restricted scholarships, fellowships, and other forms of financial assistance does not discriminate on the basis of sex.

(2) To ensure nondiscriminatory awards of assistance as required in paragraph (b)(1) of this section, recipients shall develop and use procedures under which:

(i) Students are selected for award of financial assistance on the basis of nondiscriminatory criteria and not on the basis of availability of funds restricted to members of a particular sex;

(ii) An appropriate sex-restricted scholarship, fellowship, or other form of financial assistance is allocated to each student selected under paragraph (b)(2)(i) of this section; and

(iii) No student is denied the award for which he or she was selected under paragraph (b)(2)(i) of this section because of the absence of a scholarship, fellowship, or other form of financial assistance designated for a member of that student's sex.

(c) *Athletic scholarships.* (1) To the extent that a recipient awards athletic scholarships or grants-in-aid, it must provide reasonable opportunities for such awards for members of each sex in proportion to the number of students of each sex participating in interscholastic or intercollegiate athletics.

(2) A recipient may provide separate athletic scholarships or grants-in-aid for members of each sex as part of separate athletic teams for members of each sex to the extent consistent with this paragraph (c) and § 5.450.

§ 5.435 Employment assistance to students.

[Top of File]

(a) *Assistance by recipient in making available outside employment.* A recipient that assists any agency, organization, or person in making employment available to any of its students:

(1) Shall assure itself that such employment is made available without discrimination on the basis of sex; and

(2) Shall not render such services to any agency, organization, or person that discriminates on the basis of sex in its employment practices.

(b) *Employment of students by recipients.* A recipient that employs any of its students shall not do so in a manner that violates §§ 5.500 through 5.550.

§ 5.440 Health and insurance benefits and services.

[Top of File]

Subject to § 5.235(d), in providing a medical, hospital, accident, or life insurance benefit, service, policy, or plan to any of its students, a recipient shall not discriminate on the basis of sex, or provide such benefit, service, policy, or plan in a manner that would violate §§ 5.500 through 5.550 if it were provided to employees of the recipient. This section shall not prohibit a recipient from providing any benefit or service that may be used by a different proportion of students of one sex than of the other, including family planning services. However, any recipient that provides full coverage health service shall provide gynecological care.

§ 5.445 Marital or parental status.

[Top of File]

(a) *Status generally.* A recipient shall not apply any rule concerning a student's actual or potential parental, family, or marital status that treats students differently on the basis of sex.

(b) *Pregnancy and related conditions.* (1) A recipient shall not discriminate against any student, or exclude any student from its education program or activity, including any class or extracurricular activity, on the basis of such student's pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery therefrom, unless the student requests voluntarily to participate in a separate portion of the program or activity of the recipient.

(2) A recipient may require such a student to obtain the certification of a physician that the student is physically and emotionally able to continue participation as long as such a certification is required of all students for other physical or emotional conditions requiring the attention of a physician.

(3) A recipient that operates a portion of its education program or activity separately for pregnant students, admittance to which is completely voluntary on the part of the student as provided in paragraph (b)(1) of this section, shall ensure that the separate portion is comparable to that offered to non-pregnant students.

(4) Subject to § 5.235(d), a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy and recovery therefrom in the same manner and under the same policies as any other temporary disability with respect to any medical or hospital benefit, service, plan, or policy that such recipient administers, operates, offers, or participates in with respect to students admitted to the recipient's educational program or activity.

(5) In the case of a recipient that does not maintain a leave policy for its students, or in the case of a student who does not otherwise qualify for leave under such a policy, a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy, and recovery therefrom as a justification for a leave of absence for as long a period of time as is deemed medically necessary by the student's physician, at the conclusion of which the student shall be reinstated to the status that she held when the leave began.

§ 5.450 Athletics.

[Top of File]

(a) *General.* No person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, be treated differently from another person, or otherwise be discriminated against in any interscholastic, intercollegiate, club, or intramural athletics offered by a recipient, and no recipient shall provide any such athletics separately on such basis.

(b) *Separate teams.* Notwithstanding the requirements of paragraph (a) of this section, a recipient may operate or sponsor separate teams for members of each sex where selection for such teams is based upon competitive skill or the activity involved is a contact sport. However, where a recipient operates or sponsors a team in a particular sport for members of one sex but operates or sponsors no such team for members of the other sex, and athletic opportunities for members of that sex have previously been limited, members of the excluded sex must be allowed to try out for the team offered unless the sport involved is a contact sport. For the purposes of these Title IX regulations, contact sports include boxing, wrestling, rugby, ice hockey, football, basketball, and other sports the purpose or major activity of which involves bodily contact.

(c) *Equal opportunity.* (1) A recipient that operates or sponsors interscholastic, intercollegiate, club, or intramural athletics shall provide equal athletic opportunity for members of both sexes. In determining whether equal opportunities are available, the designated agency official will consider, among other factors:

(i) Whether the selection of sports and levels of competition effectively accommodate the interests and abilities of members of both sexes;

(ii) The provision of equipment and supplies;

(iii) Scheduling of games and practice time;

(iv) Travel and per diem allowance;

(v) Opportunity to receive coaching and academic tutoring;

(vi) Assignment and compensation of coaches and tutors;

(vii) Provision of locker rooms, practice, and competitive facilities;

(viii) Provision of medical and training facilities and services;

(ix) Provision of housing and dining facilities and services;

(x) Publicity.

(2) For purposes of paragraph (c)(1) of this section, unequal aggregate expenditures for members of each sex or unequal expenditures for male and female teams if a recipient operates or sponsors separate teams will not constitute noncompliance with this section, but the designated agency official may consider the failure to provide necessary funds for teams for one sex in assessing equality of opportunity for members of each sex.

(d) *Adjustment period.* A recipient that operates or sponsors interscholastic, intercollegiate, club, or intramural athletics at the elementary school level shall comply fully with this section as expeditiously as possible but in no event later than one year from September 29, 2000. A recipient that operates or sponsors interscholastic, intercollegiate, club, or intramural athletics at the secondary or post secondary school level shall comply fully with this section as expeditiously as possible but in no event later than three years from September 29, 2000.

§ 5.455 Textbooks and curricular material.

[Top of File]

Nothing in these Title IX regulations shall be interpreted as requiring or prohibiting or abridging in any way the use of particular textbooks or curricular materials.

Subpart E--Discrimination on the Basis of Sex in Employment in Education Programs or Activities Prohibited

[Top of File]

§ 5.500 Employment.

(a) *General.* (1) No person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination in employment, or recruitment, consideration, or selection therefor, whether full-time or part-time, under any education program or activity operated by a recipient that receives Federal financial assistance.

(2) A recipient shall make all employment decisions in any education program or activity operated by such recipient in a nondiscriminatory manner and shall not limit, segregate, or classify applicants or employees in any way that could adversely affect any applicant's or employee's employment opportunities or status because of sex.

(3) A recipient shall not enter into any contractual or other relationship which directly or indirectly has the effect of subjecting employees or students to discrimination prohibited by §§ 5.500 through 5.550, including relationships with employment and referral agencies, with labor unions, and with organizations providing or administering fringe benefits to employees of the recipient.

(4) A recipient shall not grant preferences to applicants for employment on the basis of attendance at any educational institution or entity that admits as students only or predominantly members of one sex, if the giving of such preferences has the effect of discriminating on the basis of sex in violation of these Title IX regulations.

(b) *Application.* The provisions of §§ 5.500 through 5.550 apply to:

(1) Recruitment, advertising, and the process of application for employment;

(2) Hiring, upgrading, promotion, consideration for and award of tenure, demotion, transfer, layoff, termination, application of nepotism policies, right of return from layoff, and rehiring;

(3) Rates of pay or any other form of compensation, and changes in compensation;

(4) Job assignments, classifications, and structure, including position descriptions, lines of progression, and seniority lists;

(5) The terms of any collective bargaining agreement;

(6) Granting and return from leaves of absence, leave for pregnancy, childbirth, false pregnancy, termination of pregnancy, leave for persons of either sex to care for children or dependents, or any other leave;

(7) Fringe benefits available by virtue of employment, whether or not administered by the recipient;

(8) Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, selection for tuition assistance, selection for sabbaticals and leaves of absence to pursue training;

(9) Employer-sponsored activities, including social or recreational programs; and

(10) Any other term, condition, or privilege of employment.

§ 5.505 Employment criteria.

[Top of File]

A recipient shall not administer or operate any test or other criterion for any employment opportunity that has a disproportionately adverse effect on persons on the basis of sex unless:

(a) Use of such test or other criterion is shown to predict validly successful performance in the position in question; and

(b) Alternative tests or criteria for such purpose, which do not have such disproportionately adverse effect, are shown to be unavailable.

§ 5.510 Recruitment.

[Top of File]

(a) *Nondiscriminatory recruitment and hiring.* A recipient shall not discriminate on the basis of sex in the recruitment and hiring of employees. Where a recipient has been found to be presently discriminating on the basis of sex in the recruitment or hiring of employees, or has been found to have so discriminated in the past, the recipient shall recruit members of the sex so discriminated against so as to overcome the effects of such past or present discrimination.

(b) *Recruitment patterns.* A recipient shall not recruit primarily or exclusively at entities that furnish as applicants only or predominantly members of one sex if such actions have the effect of discriminating on the basis of sex in violation of §§ 5.500 through 5.550.

§ 5.515 Compensation.

[Top of File]

A recipient shall not make or enforce any policy or practice that, on the basis of sex:

(a) Makes distinctions in rates of pay or other compensation;

(b) Results in the payment of wages to employees of one sex at a rate less than that paid to employees of the opposite sex for equal work on jobs the performance of which requires equal skill, effort, and responsibility, and that are performed under similar working conditions.

§ 5.520 Job classification and structure.

[Top of File]

A recipient shall not:

(a) Classify a job as being for males or for females;

(b) Maintain or establish separate lines of progression, seniority lists, career ladders, or tenure systems based on sex; or

(c) Maintain or establish separate lines of progression, seniority systems, career ladders, or tenure systems for similar jobs, position descriptions, or job requirements that classify persons on the basis of sex, unless sex is a bona fide occupational qualification for the positions in question as set forth in § 5.550.

§ 5.525 Fringe benefits.

[Top of File]

(a) *"Fringe benefits" defined.* For purposes of these Title IX regulations, fringe benefits means: Any medical, hospital, accident, life insurance, or retirement benefit, service, policy or plan, any profit-sharing or bonus plan, leave, and any other benefit or service of employment not subject to the provision of § 5.515.

(b) *Prohibitions.* A recipient shall not:

(1) Discriminate on the basis of sex with regard to making fringe benefits available to employees or make fringe benefits available to spouses, families, or dependents of employees differently upon the basis of the employee's sex;

(2) Administer, operate, offer, or participate in a fringe benefit plan that does not provide for equal periodic benefits for members of each sex and for equal contributions to the plan by such recipient for members of each sex; or

(3) Administer, operate, offer, or participate in a pension or retirement plan that establishes different optional or compulsory retirement ages based on sex or that otherwise discriminates in benefits on the basis of sex.

§ 5.530 Marital or parental status.

[Top of File]

(a) *General.* A recipient shall not apply any policy or take any employment action:

(1) Concerning the potential marital, parental, or family status of an employee or applicant for employment that treats persons differently on the basis of sex; or

(2) Which is based upon whether an employee or applicant for employment is the head of household or principal wage earner in such employee's or applicant's family unit.

(b) *Pregnancy.* A recipient shall not discriminate against or exclude from employment any employee or applicant for employment on the basis of pregnancy, childbirth, false pregnancy, termination of pregnancy, or recovery therefrom.

(c) *Pregnancy as a temporary disability.* Subject to § 5.235(d), a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy, recovery therefrom, and any temporary disability resulting therefrom as any other temporary disability for all job-related purposes, including commencement, duration, and extensions of leave, payment of disability income, accrual of seniority and any other benefit or service, and reinstatement, and under any fringe benefit offered to employees by virtue of employment.

(d) *Pregnancy leave.* In the case of a recipient that does not maintain a leave policy for its employees, or in the case of an employee with insufficient leave or accrued employment time to qualify for leave under such a policy, a recipient shall treat pregnancy, childbirth, false pregnancy, termination of pregnancy, and recovery therefrom as a justification for a leave of absence without pay for a reasonable period of time, at the conclusion of which the employee shall be reinstated to the status that she held when the leave began or to a comparable position, without decrease in rate of compensation or loss of promotional opportunities, or any other right or privilege of employment.

§ 5.535 Effect of state or local law or other requirements.

[Top of File]

(a) *Prohibitory requirements.* The obligation to comply with §§ 5.500 through 5.550 is not obviated or alleviated by the existence of any State or local law or other requirement that imposes prohibitions or limits upon employment of members of one sex that are not imposed upon members of the other sex.

(b) *Benefits.* A recipient that provides any compensation, service, or benefit to members of one sex pursuant to a State or local law or other requirement shall provide the same compensation, service, or benefit to members of the other sex.

§ 5.540 Advertising.

[Top of File]

A recipient shall not in any advertising related to employment indicate preference, limitation, specification, or discrimination based on sex unless sex is a bona fide occupational qualification for the particular job in question.

§ 5.545 Pre-employment inquiries.

[Top of File]

(a) *Marital status.* A recipient shall not make pre-employment inquiry as to the marital status of an applicant for employment, including whether such applicant is "Miss" or "Mrs."

(b) *Sex.* A recipient may make pre-employment inquiry as to the sex of an applicant for employment, but only if such inquiry is made equally of such applicants of both sexes and if the results of such inquiry are not used in connection with discrimination prohibited by these Title IX regulations.

§ 5.550 Sex as a bona fide occupational qualification.

[Top of File]

A recipient may take action otherwise prohibited by §§ 5.500 through 5.550 provided it is shown that sex is a bona fide occupational qualification for that action, such that consideration of sex with regard to such action is essential to successful operation of the employment function concerned. A recipient shall not take action pursuant to this section that is based upon alleged comparative employment characteristics or stereotyped characterizations of one or the other sex, or upon preference based on sex of the recipient, employees, students, or other persons, but nothing contained in this section shall prevent a recipient from considering an employee's sex in relation to employment in a locker room or toilet facility used only by members of one sex.

Subpart F--Procedures

[Top of File]

§ 5.600 Notice of covered programs.

Within 60 days of September 29, 2000, each Federal agency that awards Federal financial assistance shall publish in the Federal Register a notice of the programs covered by these Title IX regulations. Each such Federal agency shall periodically republish the notice of covered programs to reflect changes in covered programs. Copies of this notice also shall be made available upon request to the Federal agency's office that enforces Title IX.

§ 5.605 Enforcement procedures.

[Top of File]

The investigative, compliance, and enforcement procedural provisions of Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000d) ("Title VI") are hereby adopted and applied to these Title IX regulations. These procedures may be found at 10 CFR 4.21 through 4.75.

[65 FR 52875, Aug. 30, 2000]

Appendix A to Part 5--List of Federal Financial Assistance Administered by the Nuclear Regulatory Commission to Which Title IX Applies

[Top of File]

Note: All recipients of Federal financial assistance from NRC are subject to Title IX, but Title IX's anti-discrimination prohibitions are limited to the educational components of the recipient's program or activity, if any. Failure to list a type of Federal assistance below shall not mean, if Title IX is otherwise applicable, that a program or activity is not covered by Title IX.

(a) Conferences on regulatory programs and related matters. Agreements for financial assistance to State and local officials, without full-

cost recovery, to confer on regulatory programs and related matters at NRC facilities and offices, or other locations.

(b) Orientations and instruction. Agreements for financial assistance to State and local officials, without full-cost recovery, to receive orientation and on-the-job instruction at NRC facilities and offices, or other locations.

(c) Technical training courses. Agreements for financial assistance to State and local officials, without full-cost recovery to attend training on nuclear material licensing, inspection and emergency response regulatory responsibilities to ensure compatibility between NRC and Agreement State regulation.

(d) Participation in meetings and conferences. Agreements for participation, without full-cost recovery, in meetings, conferences, workshops, and symposia to assist scientific, professional or educational institutions or groups.

(e) Research support. Agreements for the financial support of basic and applied scientific research and for the exchanges of scientific information.

[66 FR 709, Jan. 4, 2001]

PART 7--ADVISORY COMMITTEES

[Top of File]

§ 7.1 Policy.

[Top of File]

The regulations in this part define the policies and procedures to be followed by the Nuclear Regulatory Commission in the establishment, utilization, and termination of advisory committees. In general, it is the policy of the Commission that--

(a) Except where there is express legal authority to the contrary, the function of NRC advisory committees shall be advisory only.

(b) Each NRC advisory committee shall function in compliance with the Federal Advisory Commitee Act and this part.

(c) The number of NRC advisory committees shall be kept to the minimum necessary, and the number of members of each NRC advisory committee shall be limited to the fewest necessary to accomplish committee objectives.

(d)(1) An NRC advisory committee shall be established only:

(i) When establishment of the committee is required by law;

(ii) When the Commission determines that the committee is essential to the conduct of NRC business; or

(iii) When the information to be obtained is not available through an existing advisory committee or a source within the Federal Government.

(2) Before establishing an advisory committee, the Commission shall consider whether:

(i) Committee deliberations will result in a significant contribution to the creation, amendment, or elimination of regulations, guidelines, or rules affecting NRC business;

(ii) The information to be obtained is available through another source within the Federal Government;

(iii) The committee will make recommendations resulting in significant improvements in service or reductions in cost; or

(iv) The committee's recommendations will provide an important additional perspective or viewpoint relating to NRC's mission. The advice or recommendations of an advisory committee should be the result of the advisory committee's independent judgment.

(e) Except where otherwise required by law, an NRC advisory committee shall be terminated whenever the stated objectives of the committee have been accomplished, the subject matter or work of the committee has become obsolete, the committee's main functions have been assumed by another entity within the Federal Government, or the cost of operating the committee has become excessive in relation to the benefits accruing to the Federal Government from its activities.

(1) An advisory committee not required to be established by statute terminates no later than two years after its establishment or last renewal, unless renewed.

(2) An advisory committee required to be established by statute terminates upon the expiration of the time explicitly specified in the statute or implied by operation of the statute.

(f) NRC advisory committees shall be balanced in their membership in terms of the points of view represented and the functions to be performed.

(g) The Congress shall be kept informed of the number, purpose, membership, activities, and cost of NRC advisory committees.

(h) NRC advisory committee meetings shall be open to the public, except where closure is determined to be justified under § 7.15.

(i) The Commission may periodically invite feedback from the public regarding the effectiveness of NRC advisory committees.

[67 FR 79838, Dec. 31, 2002]

§ 7.2 Definitions.

[Top of File]

Act means the Federal Advisory Committee Act, as amended, 5 U.S.C. App.

Administrator means the Administrator of General Services.

Advisory committee means any committee, board, commission, council, conference, panel, task force, or similar group, or any subcommittee or other subgroup thereof, that is established by statute for the purpose of providing advice or recommendations on issues of policy to an official, branch, or agency of the Federal Government, or that is established or utilized by the President or any agency official to obtain advice or recommendations on issues or policies that fall within the scope of his or her responsibilities, except that the term "advisory committee" does not include the following advisory meetings or groups:

(1) Any group composed wholly of full-time officers or employees of the Federal Government;

(2) Any group specifically exempted from the Act or these regulations by an Act of Congress;

(3) Any local civic group whose primary function is that of rendering a public service with respect to a Federal program, or any State or local committee, council, board, commission, or similar group established to advise or make recommendations to any State or local government unit or an official thereof;

(4) Any group that performs primarily operational functions specifically provided by law. Operational functions are those specifically authorized by statute or Presidential directive, such as making or implementing Government decisions or policy, as long as the group does not become primarily advisory in nature;

(5) Any meeting initiated by the President or one or more Federal employees for the purpose of obtaining advice or recommendations from one individual;

(6) Any meeting between an NRC employee with a non-governmental individual or group where advice or recommendations are provided by the attendees on an individual basis and are not sought from the group as a whole;

(7) Any meeting with a committee or group created by a non-Federal entity that is not managed or controlled by the President or a Federal employee;

(8) Any meeting of two or more advisory committee members convened solely to:

(i) Discuss administrative matters relating to the operation of their advisory committee;

(ii) Receive administrative information from a Federal employee;

(iii) Gather information or conduct research for a chartered advisory committee to analyze relevant issues and facts for their advisory committee; or

(iv) Draft proposed position papers for deliberation by their advisory committee;

(9) Any meeting with a group initiated by the President or by one or more Federal employees for the purpose of exchanging facts or information;

(10) Any meeting attended only by full-time or permanent part-time officers or employees of the Federal Government and elected officers of State, local, and tribal governments (or their designated employees with authority to act on their own behalf), acting in their official capacities. However, the purpose of the meeting must be solely to exchange views, information, or advice relating to the management or implementation of Federal programs established pursuant to statute, that explicitly or inherently share intergovernmental responsibilities or administration;

(11) Any meeting of an NRC contractor, applicant, or licensee with an NRC employee to discuss specific matters involving the solicitation, issuance, or implementation of a contract or the Commission's effort to ensure compliance with its regulations; and

(12) Any meeting of a subcommittee or other subgroup of an advisory committee where the subgroup's recommendations will be reviewed by its parent advisory committee.

Agency means an agency of the Government of the United States as defined in 5 U.S.C. 551(1).

Commission means the Nuclear Regulatory Commission of five members, or a quorum thereof, sitting as a body, as provided by section 201 of the Energy Reorganization Act of 1974, 42 U.S.C. 5841, (88 Stat. 1242).

Committee Management Secretariat means the organization established within the General Services Administration, pursuant to section 7 (a) of the Act, which is responsible for all matters relating to advisory committees, and carries out the responsibilities of the Administrator of the General Services Administration under the Act and Executive Order 12024 (42 FR 61445; December 1, 1977).

Committee meeting means any gathering of advisory committee members (whether in person, by telephone, or through electronic means) held with the approval of an agency for the purpose of deliberating on the substantive matters upon which the advisory committee provides advice or recommendations.

Committee member means an individual who is appointed to serve on an advisory committee and has the full right and obligation to participate in the activities of the committee, including voting on committee recommendations.

Designated Federal Officer means a government employee appointed, pursuant to § 7.11(a), to chair or attend each meeting of an NRC advisory committee to which he or she is assigned.

Discretionary advisory committee means any advisory committee that is established, but not required to be established, under the authority of an agency head, and its establishment or termination is within the legal discretion of an agency head.

GSA means the General Services Administration.

Non-discretionary advisory committee means any advisory committee either required by statute or Presidential directive. A non-discretionary committee required by statute generally is identified specifically in a statute by name, purpose, or functions and its establishment is mandated.

NRC means the agency established by title II of the Energy Reorganization Act of 1974, 42 U.S.C. 5801 (88 Stat. 1233), and known as the Nuclear Regulatory Commission.

NRC Advisory Committee Management Officer means the individual appointed, pursuant to § 7.10(a), to supervise and control the establishment and management of NRC advisory committees.

NRC Public Document Room means the Public Document Room maintained by the NRC at 11555 Rockville Pike, Rockville, Maryland 20852-2738.

Presidential advisory committee means an advisory committee established by statute or directed by the President to advise the President.

Staff member means any individual who serves in a support capacity to an advisory committee.

Subcommittee means a subgroup of an advisory committee, whether or not its members are drawn in whole or in part from the parent advisory committee.

Utilized committee means a committee or group not established by the Federal Government, but whose operations are managed or controlled by a Federal agency.

[54 FR 26948, June 27, 1989, as amended at 67 FR 67098, Nov. 4, 2002; 67 FR 70835, Nov. 27, 2002; 67 FR 79839, Dec. 31, 2002]

§ 7.3 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an NRC officer or employee, other than a written interpretation by the General Counsel, shall be binding upon the Commission.

§ 7.4 Establishment of advisory committees.

[Top of File]

(a) An NRC advisory committee may be established under this part only if its establishment--

(1) Is specifically directed or authorized by statute or by Executive Order of the President; or

(2) Has been determined by the Commission to be in the public interest and essential to the performance of the duties imposed on the Commission by law.

The determination required by paragraph (a)(2) of this section shall be a matter of formal record, and shall include a statement of a clearly defined purpose for the advisory committee.

§ 7.5 Consultation with Committee Management Secretariat on establishment of advisory committees; advisory committee charters.

[Top of File]

(a) Before establishing a discretionary advisory committee, the NRC shall consult with the Committee Management Secretariat. With a full understanding of the background and purpose behind the proposed advisory committee, the Committee Management Secretariat may share its knowledge and experience with the NRC on how best to make use of the proposed committee, alternate methods of attaining the

agency's purpose, or whether a pre-existing advisory committee performs similar functions. Such consultation should include the transmittal of the proposed committee charter and the following information:

(1) A request for a review of the proposed charter;

(2) An explanation stating why the committee is essential to the conduct of NRC business and is in the public interest;

(3) An explanation stating why the committee's functions cannot be performed by the NRC, an existing NRC advisory committee, or other means (such as a public hearing); and

(4) A description of NRC's plan to attain balanced membership on the committee. The plan must ensure that, in the selection of members for the advisory committee, the NRC will consider a cross-section of those directly affected, interested, and qualified, as appropriate to the nature and functions of the committee. For purposes of attaining balance in an NRC advisory committee's membership, the Commission shall consider for membership interested persons and groups with professional, technical, or personal qualifications or experience that will contribute to the functions and tasks to be performed.

(b) Each proposed committee charter submitted for review pursuant to paragraph (a) of this section shall contain the following information:

(1) The committee's official designation;

(2) The committee's objectives and the scope of its activity;

(3) The period of time necessary for the committee to carry out its purposes;

(4) The NRC official to whom the committee will report;

(5) The NRC office responsible for providing support for the committee;

(6) A description of the duties that the committee will perform, and if such duties are not solely advisory, a specification of the authority for the functions that are not advisory;

(7) The estimated annual operating costs, in dollars and person years, for the committee;

(8) The estimated number and frequency of committee meetings; and

(9) The committee's termination date, if less than two years from the date of the committee's establishment.

(c)The requirements of this part, including the requirements of paragraphs (a) and (b) of this section, shall apply to any subcommittee that functions independently of the parent advisory committee (such as by making recommendations directly to the agency rather than to the parent advisory committee), regardless of whether the subcommittee's members are drawn in whole or in part from the parent advisory committee.

(d) After the Committee Management Secretariat has notified the Commission of the results of its review of a proposal to establish or utilize an NRC discretionary advisory committee, submitted pursuant to paragraph (a) of this section, the Commission shall notify the Committee Management Secretariat whether the advisory committee is actually being established. Filing of the advisory committee charter pursuant to § 7.8 shall be deemed to fulfill this notification requirement. If the advisory committee is not being established, the Commission shall so advise the Committee Management Secretariat, stating whether NRC intends to take any further action with respect to the proposed advisory committee.

(e) The date of filing of an advisory committee charter pursuant to § 7.8 shall be added to the charter when such filing takes place, shall appear on the face of the charter, and shall constitute the date of establishment, renewal, or reestablishment of the committee.

[67 FR 79840, Dec. 31, 2002]

§ 7.6 Amendments to advisory committee charters.

[Top of File]

(a) Final authority for amending the charter of an NRC advisory committee established or utilized by the NRC is vested in the Commission.

(b) Any proposed changes made to a current charter for an NRC advisory committee shall be coordinated with the General Counsel to ensure that they are consistent with applicable legal requirements. When a statute or Executive Order that directed or authorized the establishment of an advisory committee is amended, those sections of the advisory committee's charter affected by the amendments shall also be amended.

(c)(1) The charter of an NRC advisory committee established under general agency authority may be amended when the Commission determines that the existing charter no longer reflects the objectives or functions of the committee. Such changes may be minor (such as revising the name of the advisory committee or modifying the estimated number or frequency of meetings), or they may be major (such as

revising the objectives or composition of the committee).

(2) The procedures in paragraph (b) of this section shall be used in the case of charter amendments involving minor changes. A proposed major amendment to the charter of an advisory committee established under general agency authority shall be submitted to the Committee Management Secretariat for review with an explanation of the purpose of the changes and why they are necessary.

(3) A committee charter that has been amended pursuant to this paragraph is subject to the filing requirements set forth in § 7.8.

(4) Amendment of an existing advisory committee charter pursuant to this paragraph does not constitute renewal of the committee for purposes of § 7.7.

[67 FR 79840, Dec. 31, 2002]

§ 7.7 Termination, renewal, and rechartering of advisory committees.

[Top of File]

(a) Except as provided in paragraph (b)(1) of this section, each NRC advisory committee shall terminate two years after it is established, reestablished, or renewed, unless--

(1) It has been terminated sooner;

(2) It has been renewed or reestablished before the end of such period in accordance with the procedures set forth in paragraph (b) of this section; or

(3) Its duration has been otherwise designated by law. The NRC Committee Management Officer shall notify the Committee Management Secretariat of the effective date of termination of any advisory committee that has been terminated by the NRC.

(b)(1) An NRC advisory committee that is established by statute shall require rechartering by the filing of a new charter every 2 years after the date of enactment of the statute establishing the committee. If a new charter is not filed, the committee is not terminated, but it may not meet or take any actions.

(2) Any other NRC advisory committee may be renewed, provided that such renewal is carried out in compliance with the procedures set forth in § 7.5, except that an advisory committee established by the President may be renewed by appropriate action of the President and the filing of a new charter. Renewal of an NRC advisory committee shall not be deemed to terminate the appointment of any committee member who was previously appointed to serve on the committee.

[67 FR 79840, Dec. 31, 2002]

§ 7.8 Charter filing requirements.

[Top of File]

No advisory committee may meet or take any action until a charter has been filed by the Committee Management Officer designated in accordance with § 7.10.

(a) To establish, renew, or reestablish a discretionary advisory committee, a charter must be filed with:

(1) The Commission;

(2) The Committee on Environment and Public Works of the United States Senate and the Committee on Energy and Commerce of the United States House of Representatives;

(3) The Library of Congress, Anglo-American Acquisitions Division, Government Documents Section, Federal Advisory Committee Desk, 101 Independence Avenue, S.E., Washington, DC 20540-4172; and

(4) The Committee Management Secretariat, indicating the date the charter was filed with the congressional committees.

(b) Charter filing requirements for non-discretionary advisory committees are the same as those in paragraph (a) of this section, except the date of establishment for a Presidential advisory committee is the date the charter is filed with the Secretariat.

(c) Subcommittees that report directly to a Federal employee or agency must comply with this subpart.

[67 FR 79841, Dec. 31, 2002]

§ 7.9 Public notice of advisory committee establishment, reestablishment, or renewal.

[Top of File]

(a) After the Commission has received notice from the Committee Management Secretariat that its review of a proposal to establish, reestablish, renew, or utilize an NRC discretionary advisory committee has been completed, the Commission shall publish a notice in the *Federal Register* that the committee is being established, reestablished, renewed, or utilized. In the case of a new committee, the notice shall also describe the nature and purpose of the committee and shall include a statement that the committee is necessary and in the public interest.

(b) Notices required to be published pursuant to paragraph (a) of this section shall be published at least 15 calendar days before the committee charter is filed pursuant to § 7.8, except that the Committee Management Secretariat may approve publication for less than 15 days for good cause shown. The 15-day advance notice requirement does not apply to advisory committee renewals, notices of which may be published concurrently with the filing of the charter.

[At 67 FR 79841, Dec. 31, 2002]

§ 7.10 The NRC Advisory Committee Management Officer.

[Top of File]

(a) The Chairman of the Commission shall appoint an NRC Advisory Committee Management Officer to carry out the functions specified in paragraph (b) of this section.

(b) The NRC Advisory Committee Management Officer shall--

(1) Carry out all responsibilities relating to NRC advisory committees delegated to such officer by the Commission;

(2) Ensure that administrative guidelines and management controls are issued that apply to all NRC advisory committees;

(3) Exercise control and supervision over the establishment, procedures, and accomplishments of NRC advisory committees;

(4) Assemble and maintain the reports, records, and other papers of any such committee during this existence;

(5) Carry out, on behalf of the NRC, the provisions of the Freedom of Information Act (5 U.S.C. 552) and implementing NRC regulations (10 CFR part 9, subpart A) with respect to such reports, records, and other papers;

(6) Ensure that, subject to the Freedom of Information Act and implementing NRC regulations at 10 CFR part 9, subpart A, copies of the records, reports, transcript minutes, appendices, working papers, drafts, studies, agenda, or other documents that were made available to or prepared for or by each NRC advisory committee are available for public inspection and copying at the NRC Web site, *http://www.nrc.gov*, at the NRC Public Document Room, or both, until the advisory committee ceases to exist;

(7) Ensure that, subject to the Freedom of Information Act and implementing NRC regulations, at least eight copies of each report made by each NRC advisory committee and, where appropriate, background papers prepared by consultants, shall be filed with the Library of Congress;

(8) Ensure that NRC keeps such records as will fully disclose the disposition of any funds that may be at the disposal of NRC advisory committees and the nature and extent of their activities; and

(9) Ensure that NRC keeps such other records and provides such support services as are required by § 7.22.

(c) For purposes of paragraph (b) of this section, the term "records" includes (but is not limited to):

(1) A set of approved charters and membership lists for each NRC advisory committee;

(2) Copies of NRC's portion of the Committee Management Secretariat Annual Comprehensive Review of Federal advisory committees required by section 7(b) of the Act;

(3) NRC guidelines on committee management operations and procedures as maintained and updated; and

(4) NRC determinations to close advisory committee meetings made pursuant to § 7.15.

[54 FR 26948, June 27, 1989; 54 FR 28554, July 6, 1989; 54 FR 31646, Aug. 1, 1989; 64 FR 48949, Sept. 9, 1999; 67 FR 79841, Dec. 31, 2002]

§ 7.11 The Designated Federal Officer.

[Top of File]

(a) The Chairman of the Commission or designee shall appoint a Designated Federal Officer or alternate Designated Federal Officer for each NRC advisory committee. The individual holding either position must be employed by the Federal Government on either a full-time or a permanent part-time basis.

(b) All meetings of an NRC advisory committee must be convened or approved by the committee's Designated Federal Officer or alternate, and the agenda for each committee meeting (except a meeting of a Presidential advisory committee) must be approved by that individual.

(c) An NRC advisory committee may not hold a meeting in the absence of its Designated Federal Officer or alternate.

(d) It shall also be the responsibility of the Designated Federal Officer or alternate to:

(1) Attend all meetings of the committee for which he or she has been appointed;

(2) Adjourn the meetings of the committee when such adjournment is in the public interest;

(3) Chair the meetings of the committee when so directed by the Commission;

(4) Ensure compliance with the requirements of § 7.13 regarding minutes of meetings of the committee; and

(5) Make copies of committee documents required to be maintained for public inspection and copying pursuant to § 7.14(b) and ensure their availability at the NRC Web site, *http://www.nrc.gov*, at the NRC Public Document Room, or both.

[54 FR 26948, June 27, 1989; 54 FR 28554, July 6, 1989, as amended at 64 FR 48950, Sept. 9, 1999; 67 FR 79841, Dec. 31, 2002]

§ 7.12 Public participation in and public notice of advisory committee meetings.

[Top of File]

(a) Each meeting of an NRC advisory committee shall be held at a reasonable time and in a place reasonably accessible to the public, including persons with disabilities. Any advisory committee meeting conducted in whole or part by teleconference, video conference, the Internet, or other electronic medium must comply with this section. The size of the meeting room must be sufficient to accommodate advisory committee members, committee or agency staff, and interested members of the public, except that the provisions of this paragraph relating to the room size shall not apply to any part of an NRC advisory committee meeting that has been closed pursuant to § 7.15.

(b) Any member of the public who wishes to do so shall be permitted to file a written statement with an NRC advisory committee regarding any matter discussed at a meeting of the committee. The committee chairman may also permit members of the public to speak at meetings of the committee in accordance with procedures established by the committee.

(c)(1) Except when the President or designee determines in writing that no notice should be published for reasons of national security, at least 15 days prior to an NRC advisory committee meeting, a notice that includes the following information shall be published in the *Federal Register*:

(i) The exact name of the advisory committee as chartered;

(ii) The time, date, place, and purpose of the meeting;

(iii) A summary of the agenda of the meeting;

(iv) Whether all or part of the meeting is open to the public; and

(v) The name and telephone number of the Designated Federal Officer, alternate, or other responsible agency employee who may be contacted for additional information concerning the meeting.

(2) If any part of the meeting is closed, the notice shall provide the reasons for the closure, citing the specific matter that has been determined to justify the closure under § 7.15. The Commission may publish a single notice announcing multiple meetings; however, a meeting may not be announced so far in advance as to prevent the public from being adequately informed of an NRC advisory committee's schedule.

(d) In exceptional circumstances, less than 15 days notice of an advisory committee meeting may be given, provided that there is as much prior notice as possible and the reasons for the shorter time are included in the committee meeting notice published in the Federal Register.

(e) In addition to notice required by paragraph (c) of this section, the NRC may also use other forms of notice, such as press releases, posting the information on the NRC Web site, *http://www.nrc.gov*, or notice by mail, to inform the public of advisory committee meetings. To that end, the Designated Federal Officer or alternate for each NRC advisory committee will, to the extent practicable, maintain lists of people and organizations interested in that advisory committee and notify them of meetings by mail.

(f) Meetings of a subcommittee whose recommendations will not be reviewed by its parent advisory committee shall be conducted in accordance with all notice and openness requirements contained in this section and in §§ 7.13, 7.14, and 7.15.

[67 FR 79841, Dec. 31, 2002]

§ 7.13 Minutes of advisory committee meetings.

[Top of File]

(a) Detailed minutes shall be kept of each NRC advisory committee meeting. The minutes shall include the following information:

(1) The time, date, and place of the meeting;

(2) A list of the attendees at the meeting who are advisory committee members or staff, agency employees, or members of the public who presented oral or written statements;

(3) An estimate of the number of other members of the public who were present;

(4) The extent of public participation; and

(5) An accurate description of each matter discussed during the meeting and its resolution, if any, by the committee.

(b) The minutes of an NRC advisory committee meeting shall include a copy of each report or other document received, issued, or approved by the committee in connection with the meeting. If it is impracticable to attach a document to the minutes, the minutes shall describe the document in sufficient detail to permit it to be identified readily.

(c) The chairperson of an NRC advisory committee shall certify to the accuracy of the minutes of each of the committee's meetings. In the case of a subgroup of an advisory committee, the chairperson of the subgroup shall certify to the accuracy of the minutes.

(d) A verbatim transcript of an advisory committee meeting may be substituted for minutes required by this section, providing that the use of such a transcript is in accordance with the requirements of paragraphs (a), (b), and (c) of this section.

[67 FR 79842, Dec. 31, 2002]

§ 7.14 Public information on advisory committees.

[Top of File]

(a) The Nuclear Regulatory Commission shall maintain systematic information on the nature, functions, and operations of each NRC advisory committee. A complete set of the charters of NRC advisory committees and copies of the annual reports required by § 7.17(a) will be maintained for public inspection at either the NRC Web site, *http://www.nrc.gov*, at the NRC Public Document Room, or both.

(b) Subject to the provisions of the Freedom of Information Act (5 U.S.C. 552) and NRC's Freedom of Information Act regulations at 10 CFR part 9, subpart A, copies of NRC advisory committees' records, reports, transcripts, minutes, appendices, working papers, drafts, studies, agenda, and other documents shall be maintained for public inspection and copying at the NRC Web site, *http://www.nrc.gov*, at the NRC Public Document Room, or both. To provide the public a meaningful opportunity to comprehend fully the work undertaken by an NRC advisory committee, advisory committee records should be available to the public as soon as practicable. Members of the public or other interested parties may review non-exempt advisory committee records without filing a request for these records under the Freedom of Information Act.

(c) Official records generated by or for an advisory committee must be retained for the duration of the advisory committee. Upon termination of the advisory committee, the records must be processed in accordance with the Federal Records Act (44 U.S.C. Chapters 21, 29-33) and regulations issued by the National Archives and Records Administration (see 36 CFR Parts 1220, 1222, 1228, and 1234), or in accordance with the Presidential Records Act (44 U.S.C. Chapter 22).

[64 FR 48950, Sept. 9, 1999; 67 FR 79842, Dec. 31, 2002]

§ 7.15 Procedures for closing an NRC advisory committee meeting.

[Top of File]

(a) To close all or part of a meeting of an NRC advisory committee, the committee shall submit a written request for closure to the General Counsel, citing specific exemptions listed in the Government in the Sunshine Act (5 U.S.C. 552b), as implemented by 10 CFR 9.104, that justify the closure. The request shall provide the General Counsel sufficient time for review in order to make a determination prior to publication of the meeting notice pursuant to § 7.12.

(b) If the General Counsel finds that the request for closure is consistent with the provisions of the Government in the Sunshine Act and this

part, a determination shall be issued in writing that all or part of the meeting will be closed. The determination shall include a statement of the reasons for the closing, citing the applicable exemptions in the Government in the Sunshine Act (as implemented by 10 CFR 9.104).

(c) Except when the President or designee determines in writing that no notice should be published for reasons of national security, the Secretary of the Commission shall make a copy of the determination to close all or part of an NRC advisory committee meeting available to the public upon request. If such a determination has been issued, the meeting notice published in the *Federal Register* should comply with the provisions of § 7.12 applicable to closed meetings.

[67 FR 79842, Dec. 31, 2002]

§ 7.16 Annual comprehensive review.

[Top of File]

(a) The Chairman of the Commission shall conduct an annual comprehensive review of the activities and responsibilities of each NRC advisory committee to determine whether the committee--

(1) Is carrying out its purposes or, consistent with the provisions of applicable statutes, its responsibilities should be revised.

(2) Should be merged with another advisory committee.

(3) Should be terminated.

(b) The comprehensive review required by paragraph (a) of this section shall include consideration of such information regarding the committee as is required for the Commission's annual report to the GSA Secretariat pursuant to § 7.17(a) and such other information as may be requested from the Committee by the NRC Advisory Committee Management Officer. The results of such review shall be included in the annual report to the GSA Secretariat.

(c) If, as a result of the review required by this section, the Commission determines that an advisory committee is no longer needed, the committee shall be terminated; except that in the case of an advisory committee established by an Act of Congress or the President, the committee's termination shall be recommended to the President or the Congress, as the case may be.

[67 FR 79842, Dec. 31, 2002]

§ 7.17 Reports required for advisory committees.

[Top of File]

(a) The Commission shall furnish a report on the activities of NRC advisory committees annually to the Committee Management Secretariat on a fiscal year basis. The report must contain information regarding NRC advisory committees consistent with instructions provided by the Committee Management Secretariat. A copy of the report shall be made available at the NRC Web site, *http://www.nrc.gov*, at the NRC Public Document Room, or both. The information provided by the Commission regarding its advisory committees is contained in the Committee Management Secretariat's report which is available on its Web site, *http://www.gsa.gov/committeemanagement*.

(b) Any NRC advisory committee holding closed or partially closed meetings shall issue a report, at least annually, setting forth a summary of its activities consistent with the policy of the Government in the Sunshine Act (5 U.S.C. 552b), as implemented by 10 CFR 9.104. A copy of the report shall be made available at the NRC Web site, *http://www.nrc.gov*, at the NRC Public Document Room, or both.

(c) Subject to the Freedom of Information Act (5 U.S.C. 552) and implementing NRC regulations (10 CFR part 9, subpart A), eight copies of each report made by an advisory committee, including any report on closed meetings pursuant to paragraph (b) of this section, and, where appropriate, background papers prepared by consultants, shall be filed for public inspection and use with the Library of Congress, Anglo-American Acquisitions Division, Government Documents Section, Federal Advisory Committee Desk, 101 Independence Avenue, SE., Washington, DC 20540-4172.

[54 FR 26948, June 27, 1989, as amended at 64 FR 48950, Sept. 9, 1999; 67 FR 79842, Dec. 31, 2002]

§ 7.18 Appointment, compensation, and expense reimbursement of advisory committee members, staffs, and consultants.

[Top of File]

(a) Unless otherwise provided by law, advisory committee members serve at the pleasure of the Commission and their terms are at the sole discretion of the Commission.

(b)Except where otherwise provided by law, the Commission may accept the gratuitous services of an NRC advisory committee member, staff member, or consultant who agrees in advance to serve without compensation.

(c)(1) Subject to the provisions of paragraph (c)(2) of this section, if the Commission determines that compensation of a member of an NRC advisory committee is appropriate, the amount that will be paid shall be fixed by the Chairman of the Commission at a rate that is the daily equivalent of a rate in NRC's General Grade Salary Schedule, unless the member is appointed as a consultant and compensated at a rate applicable to NRC consultants.

(2) In determining an appropriate rate of pay for a member of an NRC advisory committee, the Chairman of the Commission shall give consideration to the significance, scope, and technical complexity of the matters with which the advisory committee is concerned and the qualifications required of the committee member; provided that the Chairman may not set the rate of pay for an NRC advisory committee member higher than the daily equivalent rate for level IV of the Executive Schedule under 5 U.S.C. 5315, unless a higher rate is expressly allowed by another statute. The Chairman may authorize a rate of basic pay in excess of the maximum rate of basic pay established for NRC's General Grade Salary Schedule. This maximum rate includes an applicable locality payment. The Commission may pay advisory committee members on either an hourly or a daily rate basis. The Commission may not provide additional compensation in any form, such as bonuses or premium pay. The Chairman may not delegate the responsibility for making a determination that a higher rate of pay than that established by NRC's General Grade Salary Schedule is necessary and justified for an NRC advisory committee member, and such a determination must be reviewed annually.

(d)(1) Each NRC advisory committee staff member may be paid at a rate that is the daily equivalent of a rate in NRC's General Grade Salary Schedule in which the staff member's position would appropriately be placed.

(2) A staff member of an NRC advisory committee may not be paid at a rate higher than the daily equivalent of the maximum rate for a GG-15 under NRC's General Grade Salary Schedule, unless the Chairman of the Commission determines that the staff member's position would appropriately be placed at a grade higher than GG-15, provided that in establishing rates of compensation, the Chairman shall comply with any applicable statutes, regulations, Executive Orders, and administrative guidelines. The Commission may provide advisory committee staff members with additional compensation, such as bonuses or premium pay, as long as the aggregate compensation does not exceed the rate of pay for Executive Schedule level IV.

(3) A Federal employee may serve as a staff member of an NRC advisory committee only with the knowledge of the advisory committee's Designated Federal Officer or alternate and the approval of the employee's direct supervisor. A staff member who is not otherwise a Federal employee shall be appointed in accordance with applicable agency procedures, following consultation with the advisory committee.

(e)(1) Subject to the limitations in paragraph (e)(2) of this section, the following factors shall be considered in determining an appropriate rate of pay for a consultant to an NRC advisory committee:

(i) The qualifications required of the consultant, and

(ii) The significance, scope, and technical complexity of the work for which his services are required;

(2) The rate of pay for an NRC advisory committee consultant may not be higher than the maximum rate of basic pay established by NRC's General Salary Schedule (that is, the GG-15, step 10 rate, excluding locality pay or any other supplement), unless a higher rate is expressly allowed by another statute. The appointment and compensation of NRC experts and consultants must be in conformance with applicable regulations issued by the United States Office of Personnel Management (see 5 CFR part 304).

(f) A member or staff member of an NRC advisory committee engaged in the performance of duties away from his or her home or regular place of business may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703, title 5, United States Code, for persons employed intermittently in the Government service.

(g) Nothing in this section shall:

(1) Prevent any full-time Federal employee who provides services to an NRC advisory committee from receiving compensation at a rate at which he or she would otherwise be compensated as a full-time Federal employee;

(2) Prevent any individual who provides services to an NRC advisory committee, and who immediately before providing such services was a full-time Federal employee, from receiving compensation at a rate at which he or she was compensated as a full-time Federal employee; or

Provided that the rate of pay for an NRC advisory committee consultant may not be higher than the maximum rate of pay applicable to NRC consultants. In establishing such a rate of pay, NRC shall comply with any applicable statutes, regulations, Executive Orders, and administrative guidelines.

(e) A member or staff member of an NRC advisory committee engaged in the performance of duties away from his or her home or regular place of business may be allowed travel expenses, including per diem in lieu of subsistence, as authorized by section 5703, title 5, United States Code, for persons employed intermittently in the Government service.

(f) Nothing in this section shall--

(1) Prevent any full-time Federal employee who provides services to an NRC advisory committee from receiving compensation at a rate at which he or she would otherwise be compensated as a full-time Federal employee.

(2) Prevent any individual who provides services to an NRC advisory committee, and who immediately before providing such services was a full-time Federal employee, from receiving compensation at a rate at which he or she was compensated as a full-time Federal employee.

(3) Affect a rate of pay or a limitation on a rate of pay that is specifically established by law or a rate of pay established under the NRC's General Salary Schedule and evaluation system (see NRC Manual).

[67 FR 79843, Dec. 31, 2002]

§ 7.19 Advisory committee members with disabilities.

[Top of File]

An NRC advisory committee member who is disabled may be provided services by a personal assistant while performing advisory committee duties, if the member;

(a) Qualifies as disabled under section 501 of the Rehabilitation Act of 1973 (29 U.S.C. 794) ; and

(b) Does not otherwise qualify for assistance under 5 U.S.C. 3102 by reason of being an employee of NRC.

[67 FR 79843, Dec. 31, 2002]

§ 7.20 Conflict of interest reviews of advisory committee members' outside interests.

[Top of File]

The Designated Federal Officer or alternate for each NRC advisory committee and the General Counsel or designee shall review the interests and affiliations of each member of the Designated Federal Officer's advisory committee annually, and upon the commencement of the member's appointment to the committee, for the purpose of ensuring that such appointment is consistent with the laws and regulations on conflict of interest applicable to that member.

[67 FR 79843, Dec. 31, 2002]

§ 7.21 Cost of duplication of documents.

[Top of File]

Copies of the records, reports, transcripts, minutes, appendices, working papers, drafts, studies, agenda, or other documents that were made available to or prepared for or by an NRC advisory committee shall be made available to any person at the actual cost of duplication prescribed in part 9 of this chapter. (For availability of information on advisory committees, see § 7.14.)

§ 7.22 Fiscal and administrative responsibilities.

[Top of File]

(a) The Office of the Chief Financial Officer shall keep such records as will fully disclose the disposition of any funds that may be at the disposal of NRC advisory committees.

(b) The Office of Information Services shall keep such records as will fully disclose the nature and extent of activities of NRC advisory committees.

(c) NRC shall provide support services (including staff support and meeting space) for each advisory committee established by or reporting to it unless the establishing authority provides otherwise. Where any such advisory committee reports to another agency in addition to NRC, only one agency shall be responsible for support services at any one time, and the establishing authority shall designate the agency responsible for providing such services.

[54 FR 26948, June 27, 1989, as amended at 63 FR 15742, Apr. 1, 1998; 70 FR 69421, Nov. 16, 2005]

PART 8--INTERPRETATIONS

[Top of File]

§ 8.1 Interpretation of section 152 of the Atomic Energy Act of 1954; opinion of the General Counsel.

[Top of File]

(a) Inquiries have been received as to the applicability of the provisions of section 152 of the Atomic Energy Act of 1954 (68 Stat. 944) to inventions or discoveries made or conceived in the course of activities under licenses issued by the Atomic Energy Commission.

(b) In my [General Counsel, U.S. Atomic Energy Commission] opinion a license issued by the Atomic Energy Commission is not a "contract, subcontract, arrangement or other relationship with the Commission" as those terms are used in section 152 of the act. Hence, the mere fact that an invention or discovery is made by a licensee in the course of activities authorized by a license would not give the Commission rights under section 152 with respect to such invention or discovery. On the other hand, if a licensee has entered into a "contract, subcontract, arrangement or other relationship with the Commission," inventions or discoveries made or conceived by the licensee under the contract or other relationship would come within the purview of section 152.

(c) As used in this section, "license" means a license issued pursuant to Chapter 6 (Special Nuclear Material), 7 (Source Material), 8 (Byproduct Material) or 10 (Atomic Energy Licenses) of the Atomic Energy Act of 1954, or a construction permit issued pursuant to section 185 of the act.

[21 FR 1414, Mar. 3, 1956]

§ 8.2 Interpretation of Price-Anderson Act, section 170 of the Atomic Energy Act of 1954.

[Top of File]

(a) It is my opinion that an indemnity agreement entered into by the Atomic Energy Commission under the authority of the Atomic Energy Act of 1954 (42 U.S.C. 2011, et seq.), hereafter cited as "the Act," as amended by Pub. L. 85-256 (the "Price-Anderson Act") 42 U.S.C. 2210 indemnifies persons indemnified against public liability for bodily injury, sickness, disease or death, or loss of or damage to property, or for loss of use of property caused outside the United States by a nuclear incident occurring within the United States.

(b) Section 170 authorizes the Commission to indemnify against "public liability" as defined in section 11(u) of the Act.[1] Coverage under the Act therefore is predicated upon "public liability," and requires (1) "legal liability" for (2) a "nuclear incident." Determination of the Act's coverage, therefore, necessitates a finding that these two elements are present.

(c) In the case of damage outside of the United States caused by a nuclear facility based in the United States there would be a "nuclear incident" as defined in section 11(o) since there would be an "occurrence within the United States causing * * * damage."[2] The "occurrence" would be "within the United States" since "occurrence" is intended by the Act to be "that event at the site of the licensed activity * * * which may cause damage rather than the site where the damage may perhaps be caused." (S. Rep. 296, 85th Cong., 1st Sess., p. 16 1957) (hereafter cited as Report). In section 11(o) an "occurrence" is that which causes damage. It would be, therefore, an event taking place at the site. This definition of "occurrence" is referred to in the Report at page 22 and is crucial to the Act's placing of venue under section 170(e).[3] 027 In its definition of "nuclear incident." The Act makes no limitation upon the place where the damage is received but states only that the "occurrence" must be within the United States.

(d) Similarly, the requirement of "legal liability" would be met. The words of the Act impose no limitation that the liability be one for damage caused in the United States but, on the contrary, are exceedingly broad permitting indemnification for "any legal liability." In the most exhaustive study of the subject, it is stated that the phrase "any legal liability" indicates that liability for damage outside the United States is covered by the Act. Atomic Industrial Forum, Financial Protection Against Atomic Hazards 61 n. 355 (1957).

(e) Thus the precise language of the Act provides coverage for damage ensuing both within and without the United States arising out of an occurrence within the United States. There would be no occasion for doubt were it not for a single statement contained in the Report of the Joint Committee on Atomic Energy on the Price-Anderson Act. The Report states, at p. 16 that "[i]f there is anything from a nuclear incident at the licensed activity which causes injury abroad, or if there is any activity abroad which causes further injury in the United States the situation will require further investigation at that time." This sentence follows an explicit and lengthy statement that the "occurrence" is an event at the site of the activity:

* * * The occurrence which is the subject of this definition is that event at the site of the licensed activity, or activity for which the Commission has entered into a contract, which may cause damage, rather than the site where the damage may perhaps be caused. This site must be within the United States. The suggested exclusion of facilities under license for export was not accepted. This is because the definition of "nuclear incident" limits the occurrence causing damage to one within the United States. It does not matter what license may be applicable if the occurrence is within the United States. If there is anything from a nuclear incident at the licensed activity which causes injury abroad or if there is any activity abroad which causes further injury in the United States the situation will require further investigation by the Congress at that time * * *

Read literally, the last sentence would seem inconsistent with the preceding statement. It is, however, possible to read the sentence as

consistent with the preceding statement if it is taken as indicating a recognition by Congress of the fact that the statutory limitation of liability to $500,000,000 would probably not limit claims by foreign residents to that amount in foreign courts and that therefore the persons indemnified were not fully protected against bankrupting claims, one of the primary purposes of the bill.[4]

(f) The point in question received scant consideration during the hearings preceding adoption of the bill held by the Joint Committee on Atomic Energy. A summary of the study of the Atomic Industrial Forum, cited above, was introduced into the record of the hearing and included a conclusion that the provisions of the bill seemed to cover the situation.[5] That conclusion would seem entitled to more than ordinary weight since the Forum study received the careful consideration of the Joint Committee.[6] and the study referenced a statement from the 1956 Report very similar to the confusing statement in the 1957 Report noted above.[7]

(g) There was also a rather ambiguous colloquy in the hearings between Representative Cole and Mr. Charles Haugh in which Representative Cole indicated that the Joint Committee

"* * * will do pretty well if we successfully protect the American people and property owners in this country without worrying about those that live abroad."[8]

(h) Congress, in enacting the Price-Anderson Indemnity Act added to section 2 of the Atomic Energy Act of 1954, a new subsection which stated, inter alia:

In order * * * to encourage the development of the atomic energy industry, * * * the United States may make funds available for a portion of the damages suffered by the public from nuclear incidents and may limit the liability of those persons liable for such losses.

This statutory purpose is frustrated if the atomic energy industry is not protected from bankrupting liabilities for damages caused abroad by an accident occurring in the United States.[9] In the Report, the Joint Committee on Atomic Energy made explicit mention of the fact that the private insurance to be provided for reactor operators included coverage for damage in Canada and Mexico and, at another point, noted the Committee's hope that the insurance contract in its final form would cover the same scope as the bill.10[10]

(i) It is my opinion that since the language of the Act draws no distinction between damage received in the United States and that received abroad, none can properly be drawn. To read the Act as imposing such a limitation in the absence of statutory direction and in the light of an avowed Congressional intention to encourage the development of the atomic energy industry would be unwarranted. The confusing sentence cited in the Report must, therefore, be read consistently with the language of the Act in the manner suggested above, i.e., as recognizing Congressional inability to limit foreign liability, or must be ignored as inconsistent with the broad coverage of the statutory language.

[25 FR 4075, May 7, 1960]

[1] Sec. 11u "The term 'public liability' means any legal liability arising out of or resulting from a nuclear incident, except claims under State or Federal Workmen's Compensation Acts of employees of persons indemnified who are employed at the site of and in connection with the activity where the nuclear incident occurs, and except for claims arising out of an act of war. 'Public Liability' also includes damage to property of persons indemnified: *Provided*, That such property is covered under the terms of the financial protection required, except property which is located at the site of and used in connection with the activity where the nuclear incident occurs."

[2] Sec. 11*o*. "The term 'nuclear incident' means any occurrence within the United States causing bodily injury, sickness, disease, or death, or loss of or damage to property, or for loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material: * * *"

[3] "In order to provide a framework for establishing the limitation of liability, the Commission or any person indemnified is permitted to apply to the appropriate district court of the United States which has venue in bankruptcy matters over the site of the nuclear incident. Again it should be pointed out that the site is where the occurrence takes place which gives rise to the liability, not the place where the damage may be caused * * * " Report. p. 22.

[4] Atomic Industrial Forum, Financial Protection Against Atomic Hazards, The International Aspects, p. 52 (1959).

[5] Hearings before the Joint Committee on Atomic Energy, Governmental Indemnity and Reactor Safety, 85th Cong., 1st Sess., p. 181 (1957) (hereinafter referred to as "Hearings.")

[6] Hearings, p. 168.

[7] Hearings, p. 182.

[8] Hearings, p. 97. It is significant to note that Mr. Haugh stated at that point the problem of the reactor operator who is concerned with any type of liability. He noted that the insurance contracts would cover "* * * the instance where * * * something happen[ed] out of the country and a suit is brought in the United States on that."

[9] The Atomic Industrial Forum study notes that "[T]o be adequate, the governmental indemnity must cover industry's liability to residents of the countries who suffer as a result of an accident at an installation based in the United States." p. 61. This is certainly the case and one of the major Congressional purposes is frustrated should the Act be said to be unclear on this point. The principal reason for the conclusion that there is coverage reached in the Forum study is the fact that Price-Anderson provides indemnity for "any legal liability." Arthur Murphy, Director of the study, in a recent article, has stated that the confusing sentence in the Report is "* * * inconsistent with the flat coverage of any legal liability by the indemnity." Murphy, Liability for Atomic Accidents and Insurance, in Law and Administration in Nuclear Energy 75 (1959). In the testimony before the Joint Committee last year, Professor Samuel D. Estep, one of three authors of the comprehensive study of Atoms and the Law apparently relying upon the legislative history, stated that the problem of a reactor accident in the United States causing damage in a foreign country was unclear, presumably since he considered the phrase "any legal liability" directed at a different problem. Hearings before the Joint Committee on Atomic Energy, Indemnity and Reactor Safety, 86th Cong., 1st Sess., p. 77 (1959); Stason Estep, and Pierce, Atoms and the Law, 577 (1959). Professor Estep stated that there "surely ought to be" coverage and suggested a clarifying amendment. His statement that the phrase "any legal liability" covers only the question of time restrictions for claims seems to me erroneous since the language used, "any legal liability," seems intentionally broad. Additionally, should this very narrow reading be given to admittedly broad statutory language, the Congressional purpose would be frustrated.

[10] Report, p. 11.

§ 8.3 [Reserved]

[Top of File]

§ 8.4 Interpretation by the General Counsel: AEC jurisdiction over nuclear facilities and materials under the Atomic Energy Act.

[Top of File]

(a) By virtue of the Atomic Energy Act of 1954, as amended,[11] the individual States may not, in the absence of an agreement with the Atomic Energy Commission, regulate the materials described in the Act from the standpoint of radiological health and safety. Even States which have entered into agreements with the AEC lack authority to regulate the facilities described in the Act, including nuclear power plants and the discharge of effluents from such facilities, from the standpoint of radiological health and safety.

(b) The Atomic Energy Act of 1954 sets out a pattern for licensing and regulation of certain nuclear materials and facilities on the basis of the common defense and security and radiological health and safety. The regulatory pattern requires, in general, that the construction and operation of production facilities (nuclear reactors used for production and separation of plutonium or uranium-233 or fuel reprocessing plants) and utilization facilities (nuclear reactors used for production of power, medical therapy, research, and testing) and the possession and use of byproduct material (radioisotopes), source material (thorium and uranium ores), and special nuclear material (enriched uranium and plutonium, used as fuel in nuclear reactors), be licensed and regulated by the Commission.[12] In carrying out its statutory responsibilities for the protection of the public health and safety from radiation hazards and for the promotion of the common defense and security, the AEC has promulgated regulations which establish requirements for the issuance of licenses (Parts 30-36, 40, 50, 70, 71, and 100 of this chapter) and specify standards for radiation protection (Part 20 of this chapter).

(c) The Atomic Energy Act of 1954 had the effect of preempting to the Federal Government the field of regulation of nuclear facilities and byproduct, source, and special nuclear material. Whatever doubts may have existed as to that preemption were settled by the passage of the Federal-State amendment to the Atomic Energy Act of 1954 in 1959.[13]

(d) Prior to 1954, all nuclear facilities and the special nuclear material produced by or used in them were owned by the AEC.[14] This Federal monopoly of atomic energy activities was due in large part to the use of atomic energy materials and facilities in our national weapons program, and the large capital investment required for their development. The Atomic Energy Act of 1954 permitted private ownership of nuclear facilities for the first time, but only under a comprehensive, pervasive system of Federal regulation and licensing. That Act recognized no State responsibility or authority over such facilities and materials except the States' traditional regulatory authority over generation, sale, and transmission of electric power produced through the use of nuclear facilities.[15] As interest grew in the private construction of facilities and the use of atomic energy materials, and the numbers of persons qualified in the field increased, questions arose as to the role State authorities should play with regard to the public health and safety aspects of such activities. Several bills were introduced with respect to Federal-State cooperation in 1956 and 1957.[16] An AEC proposed bill which would have authorized concurrent radiation safety standards to be enforced by the States was forwarded to the Joint Committee on Atomic Energy in 1957, but was never reported out. Finally, in 1959, legislation was enacted whose purpose was to promote an orderly regulatory pattern between the Federal and State governments with respect to regulation of byproduct, source, and special nuclear material, while avoiding dual regulation (see section 274a). That legislation added section 274, the so-called Federal-State amendment, to the Atomic Energy Act.

(e) Section 274 (42 U.S.C. 2021) authorizes the Commission to enter into an agreement with the Governor of any State providing for the discontinuance of regulatory authority of the Commission with respect to byproduct materials, source materials, and special nuclear materials in quantities not sufficient to form a "critical mass." However, section 274c (42 U.S.C. 2021(c)) provides that the Commission shall retain authority and responsibility with respect to the regulation of:

(1) The construction and operation of production or utilization facilities (note: this includes construction and operation of nuclear powerplants);

(2) The export and import of by-product, source or special nuclear material or production or utilization facilities;

(3) The disposal into the ocean of waste byproduct, source or special nuclear materials; and

(4) The disposal of such other byproduct, source or special nuclear material as the Commission determines should, because of the hazards or potential hazards thereof, not be so disposed of without a Commission license.

(f) The amendment, in providing for the discontinuance of some of the AEC's regulatory authority over source, by-product and special nuclear material in States which entered into agreements with the AEC, made clear that there should be no "dual regulation" with respect to those materials for the purpose of protection of the public health and safety from radiation hazards.

(g) Section 274b of the Atomic Energy Act (42 U.S.C. 2021(b)) states that:

During the duration of such an agreement it is recognized that the State shall have authority to regulate the materials covered by the agreement for the protection of the public health and safety from radiation hazards.

Section 274k (42 U.S.C. 2021(k)) states:

Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.

(h) In its comments on the bill that was enacted as section 274, the Joint Committee on Atomic Energy commented that:

It is not intended to leave any room for the exercise of dual or concurrent jurisdiction by States to control radiation hazards by regulating byproduct, source, or special nuclear materials. The intent is to have the material regulated and licensed either by the Commission, or by the State and local governments, but not by both.[17]

In explaining section 274k, the Joint Committee said:

As indicated elsewhere, the Commission has exclusive authority to regulate for protection against radiation hazards until such time as the State enters into an agreement with the Commission to assume such responsibility.[18]

(i) It seems completely clear that the Congress, in enacting section 274, intended to preempt to the Federal Government the total responsibility and authority for regulating, from the standpoint of radiological health and safety, the specified nuclear facilities and materials; that it stated that intent unequivocally; and that the enactment of section 274 effectively carried out the Congressional intent, subject to the arrangement for limited relinquishment of AEC's regulatory authority and assumption thereof by states in areas permitted, and subject to conditions imposed, by section 274.[19]

(j) Thus, under the pattern of the Atomic Energy Act, as amended by section 274, States which have not entered into a section 274 agreement with the AEC are without authority to license or regulate, from the standpoint of radiological health and safety, byproduct, source, and special nuclear material or production and utilization facilities. Even those States which have entered into a section 274 agreement with the AEC (Agreement States) lack authority to license or regulate, from the standpoint of radiological health and safety, the construction and operation of production and utilization facilities (including nuclear power plants) and other activities reserved to the AEC by section 274c. (To the extent that Agreement States have authority to regulate byproduct, source, and special nuclear material, their section 274 Agreements require them to use their best efforts to assure that their regulatory programs for protection against radiation hazards will continue to be compatible with the AEC's program for the regulation of byproduct, source and special nuclear material.)

(k) The following judicial precedents and legal authorities support the foregoing conclusions: Northern California Ass'n, Etc. v. Public Utilities Commission, 37 Cal. Rep. 432, 390 P. 2d 200 (1964); Boswell v. City of Long Beach, CCH Atomic Energy Law Reports, par. 4045 (1960); Opinion of the Attorney General of Michigan (Oct. 31, 1962); Opinion of the Attorney General of South Dakota (July 23, 1964); New York State Bar Association, Committee on Atomic Energy, State Jurisdiction to Regulate Atomic Activities (July 12, 1963). No precedents or authorities to the contrary have come to our attention.

[34 FR 7273, May 3, 1969]

[11] Pub. L. 83-703, 68 Stat. 919.

[12] The terms "byproduct material," "source material," and "special nuclear material" are defined in the Atomic Energy Act, sections 11e, 11z, and 11aa, respectively. The terms "production facility" and "utilization facility" are defined in sections 11v and 11cc of the Act, respectively.

[13] Pub. L. 86-373, 73 Stat. 688.

[14] Atomic Energy Act of 1946, Pub. L. 79-585, 60 Stat. 755.

[15] Sec. 271, 42 U.S.C. 2018.

[16] S. 4298 and H.R. 8676, 84th Cong., second session; S. 53, 85th Cong., first session.

[17] 1959 U.S. Code Congressional and Administrative News, v. 2, p. 2879.

[18] Id. at pp. 2882-3.

[19] As noted above, regulation of construction and operation of production or utilization facilities was one of the areas reserved to the AEC. It is clear from the legislative history of section 274 that control of "operation" of such facilities includes the regulation of the radiological effects of the discharge of effluents from the facilities. (Hearings before the Joint Committee on Atomic Energy on Federal-State Relationships in the Atomic Energy Field, 86th Cong., first session, 1959, p. 306.) AEC regulations implementing section 274 recognize that intent by defining facility operation to include the discharge of radioactive effluents from the facility site (10 CFR 150.15).

§ 8.5 Interpretation by the General Counsel of § 73.55 of this chapter; illumination and physical search requirements.

[Top of File]

(a) A request has been received to interpret 10 CFR 73.55(c)(5) and 73.55(d)(1).

10 CFR 73.55(c)(5) provides:

Isolation zones and all exterior areas within the protected area shall be provided with illumination sufficient for the monitoring and observation requirements of paragraphs (c)(3), (c)(4), and (h)(4) of this section, but not less than 02. footcandle measured horizontally at ground level.

(b) The requester contends that the regulation is satisfied if 0.2 footcandle is provided only at the protected area boundary and the isolation zone. The language of the regulation is clearly to the contrary. It requires not less than 0.2 footcandle for "all exterior areas within the protected area." This regulation helps effectuate the monitoring and observation requirements of 10 CFR 73.55. For example, 10 CFR 73.55 (c)(4) states that "All exterior areas within the protected area shall be periodically checked to detect the presence of unauthorized persons, vehicles, or materials." In the absence of illumination, such checking could not be fully effective.

(c) The requester also asks whether the illumination requirement extends to the tops and sides of buildings within the protected area. To effectuate the monitoring and observation requirements cited above, illumination must be maintained for the tops and sides of all accessible structures within the protected area. This interpretation is consistent with that given by the Commission's staff to affected licensees and applicants at a series of regional meetings held in March of 1977 and will be reflected in forthcoming revisions to NUREG 0220, Draft Interim Acceptance Criteria for a Physical Security Plan for Nuclear Power Plants (March 1977).

(d) 10 CFR 73.55(d)(1) provides in pertinent part: The search function for detection of firearms, explosives, and incendiary devices shall be conducted either by a physical search or by use of equipment capable of detecting such devices.

(e) The requester contends that until "equipment capable of detecting such devices" is in place, a licensee need not comply with the search requirement, but can utilize instead previous security programs. This contention is based on the first sentence of 10 CFR 73.55 which provides in pertinent part that the requirements of paragraph (d) of that section shall be met by May 25, 1977, "except for any requirement involving construction and installation of equipment not already in place expressed in (paragraph)(d)(1) * * *" Under this sentence only those requirements of paragraph (d) which involve "construction and installation of equipment" do not take effect on May 25, 1977. Because a "physical search" does not require "constuction and installation of equipment", implementation of such searches is required on May 25, 1977. The regulation provides alternative: "the search function * * * shall be conducted either by a physical search or by use of equipment * * *." Thus when appropriate equipment is in place, the search function need not involve a physical search.

(f) The paragraphs above set forth interpretation of regulations; they do not apply those regulations to particular factual settings. For example, no effort is made to state what lighting system might be used for a given facility; all that is stated is that a system must provide not less than 0.2 footcandle for all exterior areas within the protected area. Similarly, no effort is made to define what is an adequate "physical search"; all that is stated is that, in the absence of appropriate equipment, such searches must begin on May 25, 1977.

[42 FR 33265, June 30, 1977]

PART 9--PUBLIC RECORDS

[Top of File]

§ 9.1 Scope and purpose.

[Top of File]

(a) Subpart A implements the provisions of the Freedom of Information Act, 5 U.S.C. 552, concerning the availability to the public of Nuclear Regulatory Commission records for inspection and copying.

(b) Subpart B implements the provisions of the Privacy Act of 1974, 5 U.S.C. 552a, concerning disclosure and availability of certain Nuclear Regulatory Commission records maintained on individuals.

(c) Subpart C implements the provisions of the Government in the Sunshine Act, 5 U.S.C. 552b, concerning the opening of Commission meetings to public observation.

(d) Subpart D describes procedures governing the production of agency records, information, or testimony in response to subpoenas or demands of courts or other judicial or quasi-judicial authorities in State and Federal proceedings.

[52 FR 49355, Dec. 31, 1987]

§ 9.3 Definitions.

[Top of File]

As used in this part:

Commission means the Commission of five members or a quorum thereof sitting as a body, as provided by section 201 of the Energy Reorganization Act of 1974.

Government agency means any executive department, military department, Government corporation, Government-controlled corporation, or other establishment in the executive branch of the Government (including the Executive Office of the President), or any independent regulatory agency.

NRC means the Nuclear Regulatory Commission, established by the Energy Reorganization Act of 1974.

NRC personnel means employees, consultants, and members of advisory boards, committees, and panels of the NRC; members of boards designated by the Commission to preside at adjudicatory proceedings; and officers or employees of Government agencies, including military personnel, assigned to duty at the NRC.

Working days mean Monday through Friday, except legal holidays.

[52 FR 49355, Dec. 31, 1987]

§ 9.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized as binding upon the Commission.

[52 FR 49356, Dec. 31, 1987]

9.6 Communications.

[Top of File]

Except as otherwise indicated, communications relating to this part shall be addressed to the Freedom of Information Act and Privacy Act Officer, may be sent to the NRC by mail addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission via facsimile to (301) 415-5130 or e-mail to foia@nrc.gov. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making

electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to EIE@nrc.gov, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[68 FR 58800, Oct. 10, 2003 as amended at 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 9.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0043.

(b) The approved information collection requirements contained in this part appear in §§ 9.23, 9.25, 9.28, 9.29, 9.40, 9.41, 9.53, 9.54, 9.55, 9.65, 9.66, and 9.67.

[62 FR 52184, Oct. 6, 1997, as amended at 63 FR 2876, Jan. 20, 1998, 70 FR 34306, June 14, 2005]

Subpart A--Freedom of Information Act Regulations

[Top of File]

Source: 63 FR 2876, Jan. 20, 1998, unless otherwise noted.

§ 9.11 Scope of subpart.

This subpart prescribes procedures for making NRC agency records available to the public for inspection and copying pursuant to the provisions of the Freedom of Information Act (5 U.S.C. 552) and provides notice of procedures for obtaining NRC records otherwise publicly available. This subpart does not affect the dissemination or distribution of NRC-originated, or NRC contractor-originated, information to the public under any other NRC public, technical, or other information program or policy.

§ 9.13 Definitions.

[Top of File]

Agency record means a record in the possession and control of the NRC that is associated with Government business. Agency record does not include records such as--

(1) Publicly-available books, periodicals, or other publications that are owned or copyrighted by non-Federal sources;

(2) Records solely in the possession and control of NRC contractors;

(3) Personal records in possession of NRC personnel that have not been circulated, were not required to be created or retained by the NRC, and can be retained or discarded at the author's sole discretion, or records of a personal nature that are not associated with any Government business; or

(4) Non-substantive information in logs or schedule books of the Chairman or Commissioners, uncirculated except for typing or recording purposes.

Commercial-use request means a request made under § 9.23(b) for a use or purpose that furthers the commercial, trade, or profit interests of the requester or the person on whose behalf the request is made.

Direct costs mean the expenditures that an agency incurs in searching for and duplicating agency records. For a commercial-use request, direct costs include the expenditures involved in reviewing records to respond to the request. Direct costs include the salary of the employee category performing the work based on that basic rate of pay plus 16 percent of that rate to cover fringe benefits and the cost of operating duplicating machinery.

Duplication means the process of making a copy of a record necessary to respond to a request made under § 9.23. Copies may take the form of paper copy, microform, audio-visual materials, disk, magnetic tape, or machine readable documentation, among others.

Educational institution means an institution that operates a program or programs of scholarly research. Educational institution refers to a preschool, a public or private elementary or secondary school, an institution of graduate higher education, an institution of undergraduate higher education, an institution of professional education, or an institution of vocational education.

Freedom of Information Act and Privacy Act Officer means the NRC official designated to fulfill the responsibilities for implementing and administering the Freedom of Information Act and the Privacy Act as specifically designated under the regulations in this part.

Noncommercial scientific institution means an institution that is not operated on a commercial basis, as the term "commercial" is referred to in the definition of "commercial-use request," and is operated solely for the purpose of conducting scientific research, the results of which are not intended to promote any particular product or industry.

Office, unless otherwise indicated, means all offices, boards, panels, and advisory committees of the NRC.

Record means any information that would be an agency record subject to the requirements of the Freedom of Information Act when maintained by the NRC in any format, including an electronic format. Record also includes a book, paper, map, drawing, diagram, photograph, brochure, punch card, magnetic tape, paper tape, sound recording, pamphlet, slide, motion picture, or other documentary material regardless of form or characteristics. Record does not include an object or article such as a structure, furniture, a tangible exhibit or model, a vehicle, or piece of equipment.

Representative of the news media means any person actively gathering news for an entity that is organized and operated to publish or broadcast news to the public. The term news means information that is about current events or that would be of current interest to the public. Examples of news media entities include television or radio stations broadcasting to the public at large, and publishers of periodicals (but only in those instances when they can qualify as disseminators of "news") who make their products available for purchase or subscriptions by the general public.

Review time means the period devoted to examining records retrieved in response to a request to determine whether they are exempt from disclosure in whole or in part. Review time also includes the period devoted to examining records to determine which Freedom of Information Act exemptions, if any, are applicable and identifying records, or portions thereof, to be disclosed.

Search time means the period devoted to looking for agency records, either manually or by automated means, for the purpose of locating those records that are responsive to a request. This includes a page-by-page or line-by-line identification of responsive information within the records.

Unusual circumstances mean--

(1) The need to search for and collect the requested records from field facilities or other establishments that are separate from the office processing the request;

(2) The need to search for, collect, and appropriately examine a voluminous amount of separate and distinct records demanded in a single request; or

(3) The need for consultation, which will be conducted with all practicable speed, with another agency having a substantial interest in the determination of the request or among two or more components of the NRC having substantial subject-matter interest therein.

[70 FR 34306, June 14, 2005]

§ 9.15 Availability of records.

[Top of File]

The NRC will make available for public inspection and copying any reasonably described agency record in the possession and control of the NRC under the provisions of this subpart, and upon request by any person. Records will be made available in any form or format requested by a person if the record is readily reproducible by NRC in that form or format. NRC will make reasonable efforts to maintain its records in forms or formats that are reproducible. NRC will make reasonable efforts to search for records in electronic form or format when requested, except when these efforts would significantly interfere with the operation of any of the NRC's automated information systems. Records that the NRC routinely makes publicly available are described in § 9.21. Procedures and conditions governing requests for records are set forth in § 9.23.

§ 9.17 Agency records exempt from public disclosure.

[Top of File]

(a) The following types of agency records are exempt from public disclosure under § 9.15:

(1) Records--

(i) That are specifically authorized under criteria established by an Executive Order to be kept secret in the interest of national defense or foreign policy, and

(ii) That are in fact properly classified pursuant to such Executive Order;

(2) Records related solely to the internal personnel rules and practices of the agency;

(3) Records specifically exempted from disclosure by statute (other than 5 U.S.C. 552b), provided that the statute--

(i) Requires that the matters be withheld from the public in a manner that leaves no discretion on the issue; or

(ii) Establishes particular criteria for withholding or refers to particular types of matters to be withheld;

(4) Trade secrets and commercial or financial information obtained from a person that are privileged or confidential;

(5) Interagency or intra-agency memorandums or letters that would not be available by law to a party other than an agency in litigation with the agency;

(6) Personnel and medical files and similar files, the disclosure of which would constitute a clearly unwarranted invasion of personal privacy;

(7) Records or information compiled for law enforcement purposes, but only to the extent that the production of these law enforcement records or information--

(i) Could reasonably be expected to interfere with enforcement proceedings;

(ii) Would deprive a person of a right to a fair trial or an impartial adjudication;

(iii) Could reasonably be expected to constitute an unwarranted invasion of personal privacy;

(iv) Could reasonably be expected to disclose the identity of a confidential source, including a State, local, or foreign agency or authority, or any private institution which furnished information on a confidential basis, and, in the case of a record or information compiled by a criminal law enforcement authority in the course of a criminal investigation, or by an agency conducting a lawful national security intelligence investigation, or information furnished by a confidential source;

(v) Would disclose techniques and procedures for law enforcement investigations or prosecutions, or would disclose guidelines for law enforcement investigations or prosecutions, if the disclosure could reasonably be expected to risk circumvention of the law; or

(vi) Could reasonably be expected to endanger the life or physical safety of any individual;

(8) Matters contained in or related to examination, operating, or condition reports prepared by, on behalf of, or for the use of any agency responsible for the regulation or supervision of financial institutions; or

(9) Geological and geophysical information and data, including maps, concerning wells.

(b) Nothing in this subpart authorizes withholding of information or limiting the availability of records to the public except as specifically provided in this part, nor is this subpart authority to withhold information from Congress.

(c) Whenever a request is made that involves access to agency records described in paragraph (a)(7) of this section, the NRC may, during only the time as that circumstance continues, treat the records as not subject to the requirements of this subpart when--

(1) The investigation or proceeding involves a possible violation of criminal law; and

(2) There is reason to believe that--

(i) The subject of the investigation or proceeding is not aware of its pendency; and

(ii) Disclosure of the existence of the records could reasonably be expected to interfere with enforcement proceedings.

§ 9.19 Segregation of exempt information and deletion of identifying details.

[Top of File]

(a) For records required to be made available under 5 U.S.C. 552(a)(2), the NRC shall delete information that is exempt under one or more of the exemptions cited in § 9.17. The amount of information deleted will be indicated on the released portion of the record, unless providing this indication would harm an interest protected by the exemption(s) under which the matter has been withheld.

(b) In responding to a request for information submitted under § 9.23, in which it has been determined to withhold exempt information, the NRC shall segregate--

(1) Information that is exempt from public disclosure under § 9.17(a) from nonexempt information; and

(2) Factual information from advice, opinions, and recommendations in predecisional records unless the information is inextricably intertwined, or is contained in drafts, legal work products, and records covered by the lawyer-client privilege, or is otherwise exempt from

disclosure.

(c) In denying a request for records, in whole or in part, NRC will make a reasonable effort to estimate the volume of any information requested that is denied and provide the estimate to the person making the request, unless providing the estimate would harm an interest protected by the exemption(s) under which the information has been denied.

(d) When entire records or portions thereof are denied and deletions are made from parts of the record by computer, the amount of information deleted will be indicated on the released portion of the record, unless providing this indication would harm an interest protected by the exemption(s) under which the matter has been denied.

§ 9.21 Publicly available records.

[Top of File]

(a) Single copies of NRC publications in the NUREG series, NRC Regulatory Guides, and Standard Review Plans can be ordered from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia, 22161.

(b) For the convenience of persons who may wish to inspect without charge, or purchase copies of a record or a limited category of records for a fee, publicly available records of the NRC's activities described in paragraph (c) of this section are also made available at the NRC Web site, http://www.nrc.gov, and/or at the Public Document Room located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852-2738, between 7:45 am and 4:15 pm on Monday through Friday except Federal holidays.

(c) The following records of NRC activities are available for public inspection and copying:

(1) Final opinions including concurring and dissenting opinions as well as orders of the NRC issued as a result of adjudication of cases;

(2) Statements of policy and interpretations that have been adopted by the NRC and have not been published in the Federal Register;

(3) Nuclear Regulatory Commission rules and regulations;

(4) Nuclear Regulatory Commission Manuals and instructions to NRC personnel that affect any member of the public;

(5) Copies of records that have been released to a person under the FOIA that, because of the nature of their subject matter, the NRC determines have become or are likely to become the subject of subsequent requests for substantially the same records and a general index to those records; and

(6) Individual indexes to publicly available records, including those records specified in paragraph (c) of this section, may be created by using the search features of the Agencywide Documents Access and Management System (ADAMS), located at the NRC Web site, *http://www.nrc.gov*. This capability made it unnecessary for the NRC to continue publishing its monthly publication, Documents Made Publicly Available (NUREG-0540) after March 1999.

(d) The published versions of the records made publicly available under paragraph (c)(1) of this section are available under the title, Nuclear Regulatory Issuances, NUREG-0750, for purchase through the National Technical Information Service.

[64 FR 48950, Sept. 9, 1999, as amended at 67 FR 67098, Nov. 4, 2002, 70 FR 34306, June 14, 2005]

§ 9.23 Requests for records.

[Top of File]

(a)(1) A person may request access to records routinely made available by the NRC under § 9.21 in person, by telephone, by e-mail, facsimile, or U.S. mail from the NRC Public Document Room, One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852-2738.

(i) Each record requested must be described in sufficient detail to enable the NRC Public Document Room staff to locate the record.

(ii) To obtain copies of records expeditiously, a person may open an account with the NRC Public Document Room reproduction contractor. Payment for reproduction services will be made directly to the contractor.

(2) [Reserved]

(b) A person may request agency records by submitting a request authorized by 5 U.S.C. 552(a)(3) to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6 of this chapter. The request must be in writing and clearly state on the envelope and in the letter that it is a "Freedom of Information Act request.'' The NRC does not consider a request as received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer.

(1) A Freedom of Information Act request covers only agency records that are in existence on the date the Freedom of Information Act and Privacy Act Officer receives the request. A request does not cover agency records destroyed or discarded before receipt of a request or

which are created after the date of the request.

(2) All Freedom of Information Act requests for copies of agency records must reasonably describe the agency records sought in sufficient detail to permit the NRC to identify the requested agency records. Where possible, the requester should provide specific information regarding dates, titles, docket numbers, file designations, and other information which may help identify the agency records. If a requested agency record is not described in sufficient detail to permit its identification, the Freedom of Information Act and Privacy Act Officer will contact the requester within 10 working days after receipt of the request and inform the requester of the additional information or clarification needed to process the request.

(3) Upon receipt of a request made under paragraph (b) of this section, the NRC will provide written notification to the requester that indicates the request has been received, the name and telephone number of the NRC point of contact to find out the status of the request, and other pertinent matters regarding the processing of the request.

(4)(i) The NRC shall advise a requester that fees will be assessed if--

(A) A request involves anticipated costs in excess of the minimum specified in § 9.39; and

(B) Search and duplication is not provided without charge under § 9.39; or

(C) The requester does not specifically state that the cost involved is acceptable or acceptable up to a specified limit.

(ii) The NRC has discretion to discontinue processing a request made under this paragraph until--

(A) A required advance payment has been received;

(B) The requester has agreed to bear the estimated costs;

(C) A determination has been made on a request for waiver or reduction of fees; or

(D) The requester meets the requirements of § 9.39.

(c) If a requested agency record that has been reasonably described is located at a place other than at the NRC Web site, *http://www.nrc.gov,* the NRC Public Document Room, or the NRC headquarters, the NRC may, at its discretion, make the record available for inspection and copying at either of the locations.

(d) Except as provided in § 9.39--

(1) If the record requested under paragraph (b) of this section is a record available through the National Technical Information Service, the NRC shall refer the requester to the National Technical Information Service; and

(2) If the requested record has been placed on the NRC Internet Web site, under § 9.21, the NRC may inform the requester that the record is available at the NRC Web site, *http://www.nrc.gov,* and/or at the NRC Public Document Room, and that the record may be obtained in accordance with the procedures set forth in paragraph (a) of this section.

(e) The Freedom of Information Act and Privacy Act Officer will promptly forward a Freedom of Information Act request made under paragraph (b) of this section for an agency record to the head of the office(s) primarily concerned with the records requested, as appropriate. The responsible office will conduct a search for the agency records responsive to the request and compile those agency records to be reviewed for initial disclosure determination and/or identify those that have already been made publicly available at the NRC Web site, *http://www.nrc.gov,* and/or at the NRC Public Document Room.

[63 FR 2876, Jan. 20, 1998, as amended at 64 FR 48950, Sept. 9, 1999; 67 FR 67098, Nov. 4, 2002; 68 FR 58800, Oct. 10, 2003, 70 FR 34306, June 14, 2005]

§ 9.25 Initial disclosure determination.

[Top of File]

(a) *Time for initial disclosure determination.* The NRC will notify a requester within 20 working days of its determination. If the NRC cannot act upon the request within this period, the NRC will provide the requester with the reasons for the delay and provide a projected response date.

(b) *Extension of time limit in unusual circumstances.* In unusual circumstances, the NRC may extend the time limit prescribed in paragraph (a) of this section by not more than 10 working days. The extension may be made by written or telephonic notice to the person making the request to explain the reasons for the extension and indicate the date on which a determination is expected to be made. "Unusual circumstances" is limited to one or more of the following reasons for delay:

(1) The need to search for and collect the requested records from field facilities or other establishments that are separate from the office processing the request;

(2) The need to search for, collect, and appropriately examine a voluminous amount of separate and distinct records which are demanded in a single request; or

(3) The need for consultation, which will be conducted with all practicable speed, with another agency having a substantial interest in the determination of the request or among two or more components of the NRC having substantial subject-matter interest therein.

(c) *Exceptional circumstances.* A requester may be notified in certain exceptional circumstances, when it appears that a request cannot be completed within the allowable time, and will be provided an opportunity to limit the scope of the request so that it may be processed in the time limit, or to agree to a reasonable alternative time frame for processing. For purposes of this paragraph, the term "exceptional circumstances" does not include delays that result from the normal predictable workload of FOIA requests or a failure by the NRC to exercise due diligence in processing the request. A requester's unwillingness to agree to reasonable modification of the request or an alternative time for processing the request may be considered as factors in determining whether exceptional circumstances exist and whether the agency exercised due diligence in responding to the request.

(d) *Multiple-Track processing.* To ensure the most equitable treatment possible of all requesters, the NRC will process requests on a first-in, first-out basis, using multiple tracking systems based upon the estimated time it will take to process the request.

(1) NRC uses a three-track system.

(i) The first track is for requests of simple to moderate complexity that are expected to be completed within 20 working days.

(ii) The second track is for requests involving "unusual circumstances" that are expected to take between 21-30 working days to complete (e.g. requests involving possible records from two or three offices and/or various types of files of moderate volume, of which, some are expected to be exempt)

(iii) The third track is for requests that, because of their unusual volume or other complexity, are expected to take more than 30 working days to complete (e.g. requests involving several offices, regional offices, another agency's records, classified records requiring declassification review, records from businesses that are required to be referred to the submitter for their proprietary review prior to disclosure, records in large volumes which require detailed review because of the sensitive nature of the records such as investigative records or legal opinions and recordings of internal deliberations of agency staff).

(2) Upon receipt of requests, NRC will notify requesters of the track in which the request has been placed for processing and the estimated time for completion. Should subsequent information substantially change the estimated time to process a request, the requester will be notified telephonically or in writing. A requester may modify the request to allow it to be processed faster or to reduce the cost of processing. Partial responses may be sent to requesters as documents are obtained by the FOIA office from the supplying offices.

(e) *Expedited processing.* (1) NRC may place a person's request at the front of the queue for the appropriate track for that request upon receipt of a written request that clearly demonstrates a compelling need for expedited processing. For purposes of determining whether to grant expedited processing, the term compelling need means--

(i) That a failure to obtain requested records on an expedited basis could reasonably be expected to pose an imminent threat to the life or physical safety of an individual; or

(ii) With respect to a request made by a person primarily engaged in disseminating information, urgency to inform the public concerning actual or alleged Federal Government activity.

(2) A person requesting expedited processing must include a statement certifying the compelling need given to be true and correct to the best of his or her knowledge and belief. The certification requirement may be waived by the NRC as a matter of agency discretion.

(3) The Freedom of Information Act and Privacy Act Officer will make the initial determination whether to grant or deny a request for expedited processing and will notify a requester within 10 calendar days after the request has been received whether expedited processing will be granted.

(f) *Disclosure review.* The head of the responsible office shall review agency records located in a search under § 9.23(b) to determine whether the agency records are exempt from disclosure under § 9.17(a). If the head of the office determines that, although exempt, the disclosure of the agency records will not be contrary to the public interest and will not affect the rights of any person, the head of the office may authorize disclosure of the agency records. If the head of the office authorizes disclosure of the agency records, the head of the office will furnish the agency records to the Freedom of Information Act and Privacy Act Officer, who will notify the requester of the determination in the manner provided in § 9.27.

(g)(1) *Initial disclosure determination on requests for records originated by, or located in the files of the Office of the Inspector General.* If, as a result of the review specified in paragraph (f) of this section, the Assistant Inspector General for Investigations finds that agency records that are originated by or located in the Office of the Inspector General are exempt from disclosure and should be denied in whole or in part, and disclosure of the records is contrary to the public interest and will adversely affect the rights of any person, the Assistant Inspector General for Investigations will submit that finding to the Freedom of Information Act and Privacy Act Officer who will notify the requester of the determination in the manner provided in § 9.27.

(2) *Initial disclosure determinations on requests for records originated by or transmitted to the Commission, or a Commissioner, or records originated by, or for which the Office of the Secretary or an Advisory Committee has primary responsibility.* If, as a result of the review specified in paragraph (f) of this section, the Executive Assistant to the Secretary of the Commission finds that agency records originated by

or transmitted to the Commission or a Commissioner, or records originated by, or for which the Office of the Secretary or an Advisory Committee has primary responsibility, are exempt from disclosure and should be denied in whole or in part, and disclosure of the records is contrary to the public interest and will adversely affect the rights of any person, the Executive Assistant to the Secretary of the Commission will submit that finding to the Freedom of Information Act and Privacy Act Officer who will notify the requester of the determination in the manner provided in § 9.27.

(3) *Initial disclosure determination for records originated by, or for which the Office of the General Counsel has principal responsibility*. If, as a result of the review specified in paragraph (f) of this section, the General Counsel finds that agency records that are originated by, or for which the Office of the General Counsel has primary responsibility, are exempt from disclosure and should be denied in whole or in part, and disclosure of the records is contrary to the public interest and will adversely affect the rights of any person, the General Counsel will submit that finding to the Freedom of Information Act and Privacy Act Officer who will notify the requester of the determination in the manner provided in § 9.27.

(h) *Initial disclosure determinations on requests for records other than those for which the initial disclosure determination is made by the Assistant Inspector General for Investigations, the Executive Assistant to the Secretary of the Commission, or the General Counsel*. If, as a result of the review specified in paragraph (f) of this section, the head of the responsible office finds that agency records other than those described in paragraph (g) of this section, that are originated by, or for which the office has primary responsibility, should be denied in whole or in part, the head of the office will submit that finding to the Freedom of Information Act and Privacy Act Officer, who will, in consultation with the Office of the General Counsel, make an independent determination whether the agency records should be denied in whole or in part. If the Freedom of Information Act and Privacy Act Officer determines that the agency records sought are exempt from disclosure and disclosure of the records is contrary to the public interest and will adversely affect the rights of any person, the Freedom of Information Act and Privacy Act Officer will notify the requester of the determination in the manner provided in § 9.27.

(i) *Records and information originated by another Federal agency.* If a requested record is located that was originated or contains information originated by another Federal Government agency, or deals with subject matter over which an agency other than the NRC has exclusive or primary responsibility, the NRC will promptly refer the record to that Federal Government agency for disposition or for guidance regarding disposition.

(j) If the NRC does not respond to a request within the 20 working-day period, or within the extended periods described in paragraph (b) of this section, the requester may treat that delay as a denial of the request and immediately appeal as provided in § 9.29(a) or sue in a Federal District Court as noted in § 9.29(c).

[70 FR 34306, June 14, 2005]

§ 9.27 Form and content of responses.

[Top of File]

(a) When the NRC has located a requested agency record and has determined to disclose the agency record, the Freedom of Information Act and Privacy Act Officer will promptly furnish the agency record or notify the requester where and when the agency record will be available for inspection and copying. The NRC will also advise the requester of any applicable fees under § 9.35 and § 9.37. The NRC will routinely make copies of non-sensitive records disclosed in response to Freedom of Information Act requests publicly available through the Agencywide Document Access and Management System (ADAMS) located in the NRC's Electronic Reading Room that can be accessed via the NRC Web site at *http://www.nrc.gov/NRC/reading-rm/adams.html*. Records that contain information personal to the requester, involve matters that are not likely to be of public interest to anyone other than the requester or contain privileged or confidential information that should only be disclosed to the requester will not be made publicly available on the NRC Web site.

(b) When the NRC denies access to a requested agency record or denies a request for expedited processing or for a waiver or reduction of fees, the Freedom of Information Act and Privacy Act Officer will notify the requester in writing. The denial will include as appropriate--

(1) The reason for the denial;

(2) A reference to the specific exemption under the Freedom of Information Act, or other appropriate reason, and the Commission's regulations authorizing the denial;

(3) The name and title or position of each person responsible for the denial of the request, including the head of the office recommending denial of the record;

(4) A statement stating why the request does not meet the requirements of § 9.41 if the request is for a waiver or reduction of fees; and

(5) A statement that the denial may be appealed within 30 calendar days from the date of the denial to the Executive Director for Operations, to the Secretary of the Commission, or to the Inspector General, as appropriate.

(c) The Freedom of Information Act and Privacy Act Officer will maintain a copy of each letter granting or denying requested agency records, denying a request for expedited processing, or denying a request for a waiver or reduction of fees in accordance with the NRC Comprehensive Records Disposition Schedule.

[70 FR 34307, June 14, 2005]

§ 9.28 Predisclosure notification procedures for information containing trade secrets or confidential

commercial or financial information.

[Top of File]

(a) *Notice of opportunity to object to NRC's initial disclosure determination*. Whenever NRC makes an initial determination that information should be disclosed in response to a Freedom of Information Act request or a Freedom of Information Act appeal which has been designated by the submitter as trade secrets or confidential commercial or financial information, or the NRC believes the information contains such trade secrets or confidential commercial or financial information, the NRC will give the submitter of the information written notice of NRC's initial determination, or NRC's need for information on which to base a determination, and an opportunity to object. The notice must describe the business information requested or include copies of the requested records or record portions containing the information.

(b) *Submitter objection to disclosure*. The submitter will be allowed 30 calendar days from date of the notice described in paragraph (a) of this section to object to disclosure, unless the Commission determines that a shorter period of time to respond is necessary in a particular instance. If a submitter has any objection to disclosure, the submitter must provide a detailed written statement. The statement must specify all grounds that support why the information is a trade secret or commercial or financial information that is privileged or confidential. If a submitter fails to respond to the notice within the time specified in the notice, the submitter will be considered to have no objection to disclosure of the information. Information provided by the submitter that is not received until after the date specified for response will not be considered unless that date is extended by the Freedom of Information Act and Privacy Act Officer upon request by the submitter.

(c) *Notice of final decision to disclose*. The NRC shall consider a submitter's written statement and specific grounds for nondisclosure. If the NRC agrees to withhold the information from public disclosure, the NRC will inform the requester in the manner described in § 9.27 of the agency decision to deny access to the requested information. Whenever the NRC denies the submitter's request for nondisclosure and decides to disclose the information, the NRC shall give the submitter written notice, which must include:

(1) A statement of the reason(s) for the determination;

(2) A description of the business information to be disclosed; and

(3) A specified disclosure date, which will be 30 calendar days subsequent to the date of the notice, or less, as provided under paragraph (b) of this section, after which the information will be made available to the public.

(d) *Corresponding notice to requesters*. When the NRC provides a submitter with notice and opportunity to object to disclosure under paragraph (b) of this section, the NRC shall also notify the requester(s). Whenever the NRC notifies a submitter of its final decision to disclose the requested information under paragraph (c) of this section, the NRC shall also notify the requester(s). When a submitter files a lawsuit seeking to prevent the disclosure of trade secrets or confidential commercial or financial information, the NRC shall notify the requester(s).

(e) *Notice to submitter of Freedom of Information Act lawsuit*. Whenever a requester files a lawsuit seeking to compel disclosure of trade secrets or confidential commercial or financial information, the NRC shall promptly notify the submitter.

[70 FR 34307, June 14, 2005]

§ 9.29 Appeal from initial determination.

[Top of File]

(a) A requester may appeal a notice of denial of a Freedom of Information Act request for access to agency records, denial of a request for waiver or reduction of fees, or denial of a request for expedited processing under this subpart within 30 calendar days of the date of the NRC's denial.

(b) For agency records to which access is denied by the Assistant Inspector General for Investigations, the appeal must be in writing directed to the Inspector General and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. The appeal should clearly state on the envelope and in the letter that it is an "Appeal from Initial Freedom of Information Act Decision." The NRC does not consider an appeal received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer. The Inspector General will make the NRC determination on the appeal within 20 working days after the receipt of the appeal. If the Inspector General denies an appeal of access to records, in whole or in part, the Inspector General will notify the requester of the denial, explaining the exemptions relied upon and how the exemptions apply to the agency records withheld. The notice will inform the requester that the denial is a final agency action and that judicial review is available in a district court of the United States in the district in which the requester resides or has a principal place of business, in which the agency records are situated, or in the District of Columbia.

(c) For agency records to which access is denied by the Executive Assistant to the Secretary of the Commission, the General Counsel, or an office director reporting to the Commission, the appeal must be in writing directed to the Secretary of the Commission and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. The appeal should clearly state on the envelope and in the letter that it is an "Appeal from Initial Freedom of Information Act Decision." The NRC does not consider an appeal received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer. The Secretary of the Commission will make the NRC determination on the appeal within 20 working days after the receipt of the appeal. If the Secretary of the Commission denies an appeal of access to records, in whole or in part, the Secretary of the Commission will notify the requester of the denial, explaining the exemptions relied upon and how the exemptions apply to the agency records withheld. The notice will inform the requester that the denial is a final agency action and that judicial review is available in a district court of the United States in the district in which the requester resides or has a principal place of business, in which the agency records are situated, or in the District of Columbia.

(d) For agency records to which access is denied by agency officials other than the Assistant Inspector General for Investigations, the Executive Assistant to the Secretary of the Commission, the General Counsel, or other office director reporting to the Commission, the appeal must be in writing directed to the Executive Director for Operations and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. The appeal should clearly state on the envelope and in the letter that it is an "Appeal from Initial FOIA Decision.'' The NRC does not consider an appeal received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer. The Executive Director for Operations or a Deputy Executive Director will make the NRC determination on the appeal within 20 working days after the receipt of the appeal. If the Executive Director for Operations or a Deputy Executive Director denies an appeal of access to records, in whole or in part, the Executive Director for Operations or a Deputy Executive Director, will notify the requester of the denial, explaining the exemptions relied upon and how the exemptions apply to the agency records withheld. The notice will inform the requester that the denial is a final agency action and that judicial review is available in a district court of the United States in the district in which the requester resides or has a principal place of business, in which the agency records are situated, or in the District of Columbia.

(e) For the denial of a request for expedited processing the appeal must be in writing directed to the Executive Director for Operations and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. The appeal should clearly state on the envelope and in the letter that it is an "Appeal from Initial FOIA Decision.'' The NRC does not consider an appeal received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer. The NRC will make a determination on the appeal within 10 working days after the receipt of the appeal. If the Executive Director for Operations or a Deputy Executive Director denies an appeal for expedited processing, the Executive Director for Operations or a Deputy Executive Director, will notify the person making the request of the decision to sustain the denial, including a statement explaining why the request does not meet the requirements of § 9.25(e)(1) and (2). The notice will inform the requester that the denial is a final agency action and that judicial review is available in a district court of the United States in the district in which the requester resides or has a principal place of business, in which the agency records are situated, or in the District of Columbia.

(f) For denial of a waiver or reduction of fees for locating and reproducing agency records, the appeal must be in writing directed to the Executive Director for Operations and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. The appeal should clearly state on the envelope and in the letter that it is an "Appeal from Initial FOIA Decision.'' The NRC does not consider an appeal received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer. The NRC will make a determination on the appeal within 20 working days after the receipt of the appeal. If the Executive Director for Operations or a Deputy Executive Director denies an appeal of a waiver or reduction of fees for locating and reproducing agency records, the Executive Director for Operations or a Deputy Executive Director, will notify the person making the request of the decision to sustain the denial, including a statement explaining why the request does not meet the requirements of § 9.41. The notice will inform the requester that the denial is a final agency action and that judicial review is available in a district court of the United States in the district in which the requester resides or has a principal place of business, in which the agency records are situated, or in the District of Columbia.

(g) The Executive Director for Operations, a Deputy Executive Director, the Secretary of the Commission, or the Inspector General will furnish copies of all appeals and written determinations on appeals to the Freedom of Information Act and Privacy Act Officer.

[68 FR 58800, Oct. 10, 2003, 70 FR 34307, June 14, 2005]

§ 9.31 Extension of time for response.

[Top of File]

(a) In unusual circumstances defined in § 9.13, the NRC may extend the time limits prescribed in § 9.25 or § 9.29 by not more than 10 working days. The extension may be made by written notice to the person making the request to explain the reasons for the extension and indicate the date on which a determination is expected to be dispatched.

(b) An extension of the time limits prescribed in §§ 9.25 and 9.29 may not exceed a combined total of 10 working days per request, unless a requester has agreed to an alternative time frame as described in § 9.25 (c).

§ 9.33 Search, review, and special service fees.

[Top of File]

(a) The NRC charges fees for--

(1) Search, duplication, and review, when agency records are requested for commercial use;

(2) Duplication of agency records provided in excess of 100 pages when agency records are not sought for commercial use and the request is made by an educational or noncommercial scientific institution, or a representative of the news media;

(3) Search time that exceeds two hours and duplication of agency records of more than 100 pages for requests from all other categories of requesters not described in paragraphs (a)(1) and (a)(2) of this section;

(4) The direct costs of searching for agency records. The NRC will assess fees even when no agency records are located as a result of the search or when agency records that are located as a result of the search are not disclosed; and

(5) Computer searches which includes the cost of operating the Central Processing Unit for the portion of operating time that is directly

attributable to searching for agency records plus the operator/programmer salary apportionable to the search.

(b) The NRC may charge requesters who request the following services for the direct costs of the service:

(1) Certifying that records are true copies;

(2) Sending records by special methods, such as express mail, package delivery service, courier, and other means other than first class mail; or

(3) Producing or converting records to formats specified by a requester other than ordinary copying processes that are readily available in NRC.

§ 9.34 Assessment of interest and debt collection.

[Top of File]

(a) The NRC will assess interest on the fee amount billed starting on the 31st day following the day on which the billing was sent in accordance with NRC's regulations set out in § 15.37 of this chapter. The rate of interest is prescribed in 31 U.S.C. 3717.

(b) The NRC will use its debt collection procedures under part 15 of this chapter for any overdue fees.

§ 9.35 Duplication fees.

[Top of File]

(a)(1) The charges by the duplicating service contractor for the duplication of records made available under § 9.21 at the NRC Public Document Room (PDR), One White Flint North, 11555 Rockville Pike, Room O-1F23, Rockville, Maryland, may be found on the NRC's Web site at *http://www.nrc.gov/reading-rm/pdr/copy-service.html* or by calling the PDR at 1-800-397-4209 or 301-415-4737, by e-mail *pdr@nrc.gov* and are as follows:

(i) Paper-to-paper reproduction is $0.30 per page for standard size (up to and including 11 x 14 reduced). Pages 11 x 17 are $0.30 per page. Pages larger than 11 x 17, including engineering drawings, are $1.50 per square foot.

(ii) Pages larger than 11 x 17 are $1.50 per square foot.

(iii) Microfiche-to-paper reproduction is $0.30 per page. Aperture card blowback to paper is $3.00 per square foot.

(iv) Microfiche card duplication is $5.00 per card; CD-ROM duplication is $10.00 each.

(v) The charges for Electronic Full Text (EFT) (ADAMS documents) copying are as follows:

(A) Electronic Full Text (EFT) copying of ADAMS documents to paper (applies to images, OCR TIFF, and PDF text) is $0.30 per page.

(B) EFT copying of ADAMS documents to CD-ROM is $5.00 per CD plus $0.15 per page.

(C) CD-ROM-to-paper reproduction is $0.30 per page.

(vi) Priority rates (rush processing) are as follows:

(A) The priority rate offered for standard size paper-to-paper reproduction is $0.35, microfiche-to-paper reproduction is $0.40, EFT copying of ADAMS documents to paper and CD-ROM-to-paper production is $0.35 per page.

(B) The priority rate for aperture cards is $3.50 per square foot. The priority rate for copying EFT to CD-ROM is $6.00 per CD-ROM plus $0.20 per page.

(vii) Facsimile charges are $1.00 per page for local calls; $2.00 per page for U.S. long distance calls, and $6.00 per page for foreign long distance calls, plus the regular per page copying charge.

(2) A requester may submit mail-order requests for contractor duplication of NRC records made by writing to the NRC Public Document Room. The charges for mail-order duplication of records are the same as those set out in paragraph (a)(1) of this section, plus mailing or shipping charges.

(3) A requester may open an account with the duplicating service contractor. A requester may obtain the name and address and billing policy of the contractor from the NRC Public Document Room.

(4) Any change in the costs specified in this section will become effective immediately pending completion of the final rulemaking that

amends this section to reflect the new charges. The Commission will post the charges that will be in effect for the interim period at the NRC Public Document Room. The Commission will publish a final rule in the FEDERAL REGISTER that includes the new charges within 15 working days from the beginning of the interim period.

(b) The NRC will assess the following charges for copies of records to be duplicated by the NRC at locations other than the NRC Public Document Room located in Washington, DC:

(1) Sizes up to 81/2 x 14 inches made on office copying machines-- $0.20 per page of copy; and

(2) The charge for duplicating records other than those specified in paragraphs (a) and (b) of this section is computed on the basis of NRC's direct costs.

(c) In compliance with the Federal Advisory Committee Act, a requester may purchase copies of transcripts of testimony in NRC Advisory Committee proceedings, which are transcribed by a reporting firm under contract with the NRC directly from the reporting firm at the cost of reproduction as provided for in the contract with the reporting firm. A requester may also purchase transcripts from the NRC at the cost of reproduction as set out in paragraphs (a) and (b) of this section.

(d) Copyrighted material may not be reproduced in violation of the copyright laws. Requesters will be given the citation to any copyrighted publication and advised to contact the NRC Public Document Room to arrange to view the publication.

[63 FR 2876, Jan. 20, 1998, as amended at 64 FR 48951, Sept. 9, 1999; 66 FR 22907, May 7, 2001; 67 FR 67098, Nov. 4, 2002, 70 FR 34308, June 14, 2005; 17 FR 54571, Sept. 18, 2006]

§ 9.37 Fees for search and review of agency records by NRC personnel.

[Top of File]

The NRC will charge the following hourly rates for search and review of agency records by NRC personnel:

(a) Clerical search and review at a salary rate that is equivalent to a GG-7/step 7, plus 16 percent fringe benefits;

(b) Professional/managerial search and review at a salary rate that is equivalent to a GG-13/step 6, plus 16 percent fringe benefits; and

(c) Senior executive or Commissioner search and review at a salary rate that is equivalent to an ES-4, plus 16 percent fringe benefits.

§ 9.39 Search and duplication provided without charge.

[Top of File]

(a) The NRC will search for agency records requested under § 9.23(b) without charges when agency records are not sought for commercial use and the records are requested by an educational or noncommercial scientific institution, or a representative of the news media.

(b) The NRC will search for agency records requested under § 9.23(b) without charges for the first two hours of search for any request not sought for commercial use and not covered in paragraph (a) of this section.

(c) The NRC will duplicate agency records requested under § 9.23(b) without charge for the first 100 pages of standard paper copies, or the equivalent cost of 100 pages of standard paper copies when providing the requester copies in microfiche or electronic form such as computer disks, if the requester is not a commercial use requester.

(d) The NRC may not bill any requester for fees if the cost of collecting the fee would be equal to or greater than the fee itself.

(e) The NRC may aggregate requests in determining search and duplication to be provided without charge as provided in paragraphs (a) and (b) of this section, if the NRC finds a requester or group of requesters acting in concert, has filed multiple requests that actually constitute a single request, and that the requests involve clearly-related matters.

§ 9.40 Assessment of fees.

[Top of File]

(a) If the request is expected to require the NRC to assess fees in excess of $25 for search and/or duplication, the NRC will notify the requester that fees will be assessed unless the requester has indicated in advance his or her willingness to pay fees as high as estimated.

(b) In the notification, the NRC will include the estimated cost of search fees and the nature of the search required and estimated cost of duplicating fees.

(c) The NRC will encourage requesters to discuss with the NRC the possibility of narrowing the scope of the request with the goal of reducing the cost while retaining the requester's original objective.

(d) If the fee is determined to be in excess of $250, the NRC will require an advance payment.

(e) Unless a requester has agreed to pay the estimated fees or, as provided for in paragraph (d) of this section, the requester has paid an estimated fee in excess of $250, the NRC may not begin to process the request.

(f) If the NRC receives a new request and determines that the requester has previously failed to pay a properly charged fee under the Freedom of Information Act to the NRC or other Federal agency within 30 calendar days of receipt of the bill on a previous request, the NRC may refuse to accept the new request for processing until payment is made of the full amount owed on the prior request, plus any applicable interest assessed as provided in § 9.34.

(g) Within 10 working days of the receipt of NRC's notice that fees will be assessed, the requester will provide advance payment if required, notify the NRC in writing that the requester agrees to bear the estimated costs, or submit a request for a waiver or reduction of fees pursuant to § 9.41.

[70 FR 34308, June 14, 2005]

§ 9.41 Requests for waiver or reduction of fees.

[Top of File]

(a)(1) The NRC will collect fees for searching for, reviewing, and duplicating agency records, except as provided in § 9.39, unless a requester submits a request in writing for a waiver or reduction of fees. To ensure that there will be no delay in the processing of Freedom of Information Act requests, the request for a waiver or reduction of fees should be included in the initial Freedom of Information Act request letter.

(2) Each request for a waiver or reduction of fees should be addressed to the Office of Information Services, and sent using an appropriate method listed in § 9.6.

(b) A person requesting the NRC to waive or reduce search, review, or duplication fees will--

(1) Describe the purpose for which the requester intends to use the requested information;

(2) Explain the extent to which the requester will extract and analyze the substantive content of the agency record;

(3) Describe the nature of the specific activity or research in which the agency records will be used and the specific qualifications the requester possesses to utilize information for the intended use in such a way that it will contribute to public understanding;

(4) Describe the likely impact on the public's understanding of the subject as compared to the level of public understanding of the subject before disclosure;

(5) Describe the size and nature of the public to whose understanding a contribution will be made;

(6) Describe the intended means of dissemination to the general public;

(7) Indicate if public access to information will be provided free of charge or provided for an access fee or publication fee; and

(8) Describe any commercial or private interest the requester or any other party has in the agency records sought.

(c) The NRC will waive or reduce fees, without further specific information from the requester if, from information provided with the request for agency records made under § 9.23(b), it can determine that disclosure of the information in the agency records is in the public interest because it is likely to contribute significantly to public understanding of the operations or activities of the Federal Government and is not primarily in the commercial interest of the requester.

(d) In making a determination regarding a request for a waiver or reduction of fees, the NRC will consider the following factors:

(1) How the subject of the requested agency records concerns the operations or activities of the Federal Government;

(2) How the disclosure of the information is likely to contribute significantly to public understanding of Federal Government operations or activities;

(3) The extent to which, the requester has a commercial interest that would be furthered by the disclosure of the requested agency records; and whether that commercial interest exceeds the public interest in disclosure.

(e) The Freedom of Information Act and Privacy Act Officer will make an initial determination whether a request for a waiver or reduction of fees meets the requirements of this section. The Freedom of Information Act and Privacy Act Officer will inform requesters whenever their request for a waiver or reduction of fees is denied and will inform them of their appeal rights under § 9.29.

[68 FR 58800, Oct. 10, 2003 as amended at 70 FR 69421, Nov. 16, 2005]

§ 9.43 Processing of requests for a waiver or reduction of fees.

[Top of File]

(a) Within 20 working days after receipt of a request for access to agency records for which the NRC agrees to waive fees under § 9.39 (a) through (d) or § 9.41(c), the NRC will respond to the request as provided in § 9.25.

(b) In making a request for a waiver or reduction of fees, a requester shall provide the information required by § 9.41(b).

(c) After receipt of a request for the waiver or reduction of fees made in accordance with § 9.41, the NRC will either waive or reduce the fees and notify the requester of the NRC's intent to provide the agency records promptly or deny the request and provide a statement to the requester explaining why the request does not meet the requirements of § 9.41(b).

(d) As provided in § 9.29, a requester may appeal a denial of a request to waive or reduce fees to the Executive Director for Operations. The appeal must be submitted within 30 calendar days from the date of the notice.

[70 FR 34308, June 14, 2005]

§ 9.45 Annual report to the Attorney General of the United States.

[Top of File]

(a) On or before February 1 of each year, the NRC will submit a report covering the preceding fiscal year to the Attorney General of the United States.

Guidelines for agency preparation of the annual FOIA report can be found at: http://www.usdoj.gov/oip/foiapost/guidance-annualreport-052008.pdf EXIT.

[63 FR 2876, Jan. 20, 1998; 63 FR 12988, Mar. 17, 1998, as amended at 64 FR 48951, Sept. 9, 1999]

Subpart B--Privacy Act Regulations

[Top of File]

Source: 40 FR 44484, Sept. 26, 1975, unless otherwise noted.

§ 9.50 Scope of subpart.

This subpart implements the provisions of section 3 of the Privacy Act of 1974, Pub. L. 93 - 579, 5 U.S.C. 552a, with respect to (a) the procedures by which individuals may determine the existence of, seek access to and request correction of NRC records concerning themselves, and (b) the requirements applicable to NRC personnel with respect to the use and dissemination of such records. The regulations in this subpart apply to all records which are retrievable from a system of records under the control of the Nuclear Regulatory Commission by the use of an individual's name or of an identifying number, symbol, or other identifying particular assigned to such individual. Except where specifically provided otherwise, this subpart applies to all NRC records maintained on individuals whether they predate or postdate September 27, 1975.

§ 9.51 Definitions.

[Top of File]

As used in this subpart:

(a) *Individual* means a citizen of the United States or an alien lawfully admitted for permanent residence.

(b) The term *maintain* includes maintain, collect, use or disseminate.

(c) *Record* means any item, collection or grouping of information about an individual that is maintained by the NRC, including, but not limited to, his education, financial transactions, medical history, employment history or criminal history, and that contains the individual's name, or the identifying number, symbol or other identifying particular assigned to the individual, such as a finger or voice print or a photograph.

(d) *System manager* means the NRC official responsible for maintaining a system of records.

(e) *Systems of records* means a group of records under the control of the NRC from which information is retrieved by the name of an individual or by an identifying number, symbol, or other identifying particular assigned to an individual.

(f) *Statistical record* means a record in a system of records maintained for statistical research or reporting purposes only and not used in whole or in part in making any determination about an identifiable individual, except as provided by the Census Act, 13 U.S.C. 8.

(g) *Routine use* means, with respect to the disclosure of a record, the use of such record for a purpose which is compatible with the purpose for which it was collected, as described in a notice published in the *Federal Register*.

Procedures Applicable to Requests by Individuals for Information, Access or Amendment of Records Maintained About Them

[Top of File]

Presentation of Requests

§ 9.52 Types of requests.

(a) Individuals may make the following requests respecting records about themselves maintained by NRC in a system of records subject to the provisions of the Privacy Act of 1974:

(1) Request a determination whether a record about the individual is contained in a system of records.

(2) Request access to a record about the individual. Access requests may include requests to review the record and to have a copy made of all or any portion thereof in a form comprehensible to the individual.

(3) Request correction or amendment of a record about the individual.

(b) *Requests for accounting of disclosures*. Individuals may, at any time, request an accounting by NRC of disclosures to any other person or Government agency of any record about themselves contained in a system of records controlled by NRC, except the following: (1) Disclosures made pursuant to the Freedom of Information Act, 5 U.S.C. 552; (2) disclosures made within the Nuclear Regulatory Commission; (3) disclosures made to another Government agency or instrumentality for an authorized law enforcement activity pursuant to 5 U.S.C. 552a(b)(7); (4) disclosures expressly exempted by NRC regulations from the requirements of 5 U.S.C. 552a(c)(3) pursuant to 5 U. S.C. 552a(j)(2) and (k).

[40 FR 44484, Sept. 26, 1975, as amended at 60 FR 63900, Dec. 13, 1995]

§ 9.53 Requests; how and where presented.

[Top of File]

(a) Requests may be made in person or in writing. Assistance regarding requests or other matters relating to the Privacy Act of 1974 may be obtained by writing to the Freedom of Information Act and Privacy Act Officer, by an appropriate method listed in § 9.6. Requests relating to records in multiple systems of records should be made to the same Officer. That Officer shall assist the requestor in identifying his request more precisely and shall be responsible for forwarding the request to the appropriate system manager.

(b) All written requests must be made to the Freedom of Information Act and Privacy Act Officer, U.S. Nuclear Regulatory Commission, and sent by an appropriate method listed in § 9.6, and should clearly state on the envelope and in the letter, as appropriate: "Privacy Act Request,'' "Privacy Act Disclosure Accounting Request,'' "Privacy Act Correction Request.'' The NRC does not consider a request received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer.

(c) Requests may be made in person during official hours at the U.S. Nuclear Regulatory Commission office where the record is located, as listed in the "Notice of System of Records" for the system in which the record is contained.

[40 FR 44484, Sept. 26, 1975, as amended at 41 FR 20645, May 20, 1976; 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 63 FR 15743, Apr. 1, 1998; 68 FR 58800, Oct. 10, 2003, 70 FR 34308, June 14, 2005]

§ 9.54 Verification of identity of individuals making requests.

[Top of File]

(a) Identification requirements in paragraphs (a) (1) and (2) of this section are applicable to any individual who makes requests respecting records about himself, except that no verification of identity shall be required if the records requested are available to the public under the provisions of the Freedom of Information Act. With respect to certain sensitive records, additional requirements for verification of identity stated in the appropriate published "Notice of System of Records" may be imposed.

(1) *Written requests*. An individual making a written request respecting a record about himself may establish his identity by a signature,

address, date of birth, employee identification number, if any, and one other item of identification such as a copy of a driver's license or other document.

(2) *Requests in person*. An individual making a request in person respecting a record about himself may establish his identity by the presentation of a single document bearing a photograph (such as a passport or identification badge) or by the presentation of two items of identification which do not bear a photograph but do bear a name, address and signature (such, as a driver's license or credit card).

(b) *Inability to provide requisite documentation of identity*. An individual making a request in person or in writing respecting a record about himself who cannot provide the necessary documentation of identity may provide a notarized statement, swearing or affirming to his identity and to the fact that he understands that penalties for false statements may be imposed pursuant to 18 U.S.C. 1001, and that penalties for obtaining a record concerning an individual under false pretenses may be imposed pursuant to 5 U.S.C. 552a(i)(3). Forms for such notarized statements may be obtained on request from the Freedom of Information Act and Privacy Act Officer, and sent by an appropriate method listed in § 9.6.

(c) *Verification of parentage or guardianship*. In addition to establishing the identity of the minor, or other individual he represents as required in paragraph (a) of this section, the parent or legal guardian of a minor or of an individual judicially determined to be incompetent shall establish his status as parent or guardian by furnishing a copy of a birth certificate of the minor showing parentage or a copy of a court order establishing guardianship.

[40 FR 44484, Sept. 26, 1975, as amended at 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 63 FR 15743, Apr. 1, 1998; 68 FR 58800, Oct. 10, 2003, 70 FR 34309, June 14, 2005]

§ 9.55 Specification of records.

[Top of File]

(a)(1) Requests relating to records shall, insofar as practicable, specify the nature of the record sought, the approximate dates covered by the record, the system of records in which the record is thought to be included and the system manager having custody of the record system as shown in the annual compilation, "Notices of Records Systems", published by the General Services Administration. Requests shall, in addition, comply with any additional specification requirements contained in the published "Notice of System of Records" for that system.

(2) Requests for correction or amendment of records shall, in addition, specify the particular record involved, state the nature of the correction or amendment sought and furnish justification for the correction or amendment.

(b) Requests which do not contain information sufficient to identify the record requested will be returned promptly to the requestor, with a notice indicating what information is lacking. Individuals making requests in person will be informed of any deficiency in the specification of records at the time the request is made. Individuals making requests in writing will be notified of any such deficiency when their request is acknowledged.

§ 9.56 Accompanying persons.

[Top of File]

An individual requesting access to records about himself may be accompanied by another individual of his own choosing. Both the individual requesting access and the individual accompanying him shall sign the required form indicating that the Nuclear Regulatory Commission is authorized to discuss the contents of the subject record in the presence of both individuals.

NRC Procedures for Processing Requests

[Top of File]

§ 9.60 Acknowledgement of requests.

(a) Written requests by individuals to verify the existence of, obtain access to or correct or amend records about themselves maintained by NRC in a system of records subject to the provisions of the Privacy Act of 1974, shall be acknowledged in writing by the Freedom of Information Act and Privacy Act Officer, within ten working days after date of actual receipt. The acknowledgement shall advise the requestor if any additional information is needed to process the request. Wherever practicable, the acknowledgement shall notify the individual whether his request to obtain access to the record or to correct or amend the record has been granted or denied.

(b) When an individual requests access to records or permission to correct or amend records in person, every effort will be made to make an immediate determination as to whether access or correction or amendment should be granted. If an immediate determination cannot be made, the request will be processed in the same manner as a written request. Records will be made available for immediate inspection whenever possible.

[40 FR 44484, Sept. 26, 1975, as amended at 53 FR 17689, May 18, 1988; 54 FR 53316, Dec. 28, 1989; 63 FR 15743, Apr. 1, 1998]

§ 9.61 Procedures for processing requests for records exempt in whole or in part.

[Top of File]

(a) When an individual requests information concerning the existence of, or access to, records about himself which have been compiled in reasonable anticipation of a civil action or proceeding in either a court or before an administrative tribunal, the NRC shall advise the individual only that no record available to him pursuant to the Privacy Act of 1974 has been identified.

(b) *General exemptions*. Generally, 5 U.S.C. 552a(j)(2) allows the exemption of any system of records within the NRC from any part of section 552a except subsections (b), (c)(1) and (2), (e)(4)(A) through (F), (e)(6), (7), (9), (10), and (11), and (i) of the act if the system of records is maintained by an NRC component that performs as one of its principal functions any activity pertaining to the enforcement of criminal laws, including police efforts to prevent, control, or reduce crimes, or to apprehend criminals, and consists of--

(1) Information compiled for the purpose of identifying individual criminal offenders and alleged offenders and consisting only of identifying data and notations of arrests, the nature and disposition of criminal charges, sentencing, confinement, release and parole, and probation status;

(2) Information compiled for the purpose of a criminal investigation, including reports of informants and investigators, and associated with an identifiable individual; or

(3) Reports identifiable to an individual compiled at any stage of the process of enforcement of the criminal laws from arrest or indictment through release from supervision.

(c) *Specific exemptions under 5 U.S.C. 552a(k)*. Individual requests for access to records which have been exempted from access under the provisions of 5 U.S.C. 552a(k) shall be processed as follows:

(1) *Information classified under criteria established by an Executive Order to be kept secret in the interest of national defense or foreign policy, and exempted under 5 U.S.C. 552a(k)(1)*.

(i) Requested information classified by NRC will be reviewed by the responsible official of the NRC to determine whether it continues to warrant classification under criteria established by an Executive Order to be kept secret in the interest of national defense or foreign policy.

(ii) Information which no longer warrants classification under these criteria shall be declassified and made available to the individual. If the requested information has been classified by another agency, the responsible official of the NRC will request the classifying agency to review the information to ascertain if classification is still warranted. If the information continues to warrant classification, the individual shall be advised that the information sought is classified, that it has been reviewed and continues to warrant classification, and that it has been exempted from access pursuant to 5 U.S.C. 552a(k)(1).

(2) *Investigatory material compiled for law enforcement purposes exempted pursuant to 5 U.S.C. 552a(k)(2)*. Requests shall be responded to in the manner provided in paragraph (a) of this section unless a review of the information indicates that the information has been used or is being used to deny the individual any right, privilege or benefit for which he is eligible or to which he would otherwise be entitled under Federal law. In that event, the individual shall be advised of the existence of the information and shall be provided the information except to the extent it would reveal the identity of a confidential source. Information that would reveal the identity of a confidential source shall be extracted or summarized in a manner which protects the source and the summary or extract shall be provided to the requesting individual.

(3) *Material within a system of records required by statute to be maintained and used solely as statistical records and exempted pursuant to 5 U.S.C. 552a(k)(4)*. The exempted information requested will be reviewed by the responsible official of the NRC to determine whether it continues to warrant exemption. Information which no longer warrants exemption shall be made available to the individual. If the information continues to warrant exemption, the individual shall be advised that the information sought is exempt from disclosure, that it has been reviewed and continues to warrant exemption, and that it has been exempted from access pursuant to 5 U.S.C. 552a(k)(4).

(4) *Investigatory material compiled solely for the purpose of determining suitability, eligibility, or qualifications for Federal civilian employment, Federal contracts, or access to classified information and exempted pursuant to 5 U.S.C. 552a(k)(5)*. Information exempted pursuant to 5 U.S.C. 552a(k)(5) shall be made available to an individual upon request except to the extent that the information would reveal the identity of a confidential source. Material that would reveal the identity of a confidential source shall be extracted or summarized in a manner which protects the source and the summary or extract shall be provided to the requesting individual.

(5) *Testing or examination material exempted pursuant to 5 U.S.C. 552a(k)(6)*. Testing or examination material used solely to determine individual qualifications for appointment or promotion in the Federal service which has been exempted pursuant to 5 U.S.C. 552a(k)(6) shall not be made available to an individual if disclosure would compromise the objectivity or fairness of the testing or examination process but may be made available if no possibility of such compromise exists.

[40 FR 44484, Sept. 26, 1975, as amended at 44 FR 50804, Aug. 30, 1979; 50 FR 50284, Dec. 10, 1985; 60 FR 63900, Dec. 13, 1995, 70 FR 34309, June 14, 2005]

§ 9.62 Records under control of another Government agency.

[Top of File]

Requests received by NRC pertaining to records under the control of another Government agency will be returned to the requester with the name of the controlling Government agency, if known, within ten working days after receipt by the NRC.

[40 FR 44484, Sept. 26, 1975, as amended at 41 FR 44997, Oct. 14, 1976, 70 FR 34309, June 14, 2005]

Determinations and appeals

[Top of File]

§ 9.65 Access determinations; appeals.

(a) *Initial determinations*. For agency records located in the Office of the Inspector General, the Assistant Inspector General for Investigations shall determine whether access to the record is available under the Privacy Act. For all other agency records, the Freedom of Information Act and Privacy Act Officer with the advice of the system manager having control of the record to which access is requested, shall determine whether access to the record is available under the Privacy Act. The Freedom of Information Act and Privacy Act Officer shall notify the requesting individual in person or in writing of the determination. Unless the request presents unusual difficulties or involves extensive numbers of records, individuals shall be notified of determinations to grant or deny access within 30 working days after receipt of the request.

(1) Notices granting access shall inform the individual when and where the requested record may be seen, how copies may be obtained, and of any fees or anticipated charges which may be incurred pursuant to § 9.85 of this subpart.

(2) Notices denying access must state the reasons for the denial, and advise the individual that the denial may be appealed to the Inspector General, for agency records located in the Office of Inspector General, or the Executive Director for Operations, for all other agency records, in accordance with the procedures set forth in this section.

(b) *Appeals from denials of access*. If an individual has been denied access to a record the individual may request a final review and determination of that individual's request by the Inspector General or the Executive Director for Operations, as appropriate. A request for final review of an initial determination must be filed within 60 calendar days of the receipt of the initial determination. For agency records denied by the Assistant Inspector General for Investigations, the appeal must be in writing directed to the Inspector General and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. For agency records denied by the Freedom of Information Act and Privacy Act Officer, the appeal must be in writing directed to the Executive Director for Operations and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. The appeal should clearly state on the envelope and in the letter "Privacy Act Appeal-Denial of Access.'' The NRC does not consider an appeal received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer.

(c) *Final determinations*. (1) The Inspector General, or the Executive Director for Operations or the EDO's designee, shall make a final determination within 30 working days of the receipt of the request for final review, unless the time is extended for good cause shown such as the need to obtain additional information, the volume of records involved, or the complexity of the issue. The extension of time may not exceed 30 additional working days. The requester shall be advised in advance of any extension of time and of the reasons therefor.

(2) If the Inspector General, or the Executive Director for Operations or the EDO's designee, determines that access was properly denied because the information requested has been exempted from disclosure, the Inspector General, or the Executive Director for Operations or the EDO's designee shall undertake a review of the exemption to determine whether the information should continue to be exempt from disclosure. The Inspector General, or the Executive Director for Operations or the EDO's designee, shall notify the individual in writing of the final agency determination to grant or deny the request for access. Notices denying access must state the reasons therefor and must advise the individual of his/her right to judicial review pursuant to 5 U.S.C. 552a(g).

[40 FR 44484, Sept. 26, 1975, as amended at 41 FR 20645, May 20, 1976; 41 FR 25997, June 24, 1976; 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 55 FR 33647, Aug. 17, 1990; 63 FR 15743, Apr. 1, 1998; 68 FR 58800, Oct. 10, 2003, 70 FR 34309, June 14, 2005]

§ 9.66 Determinations authorizing or denying correction of records; appeals.

[Top of File]

(a) *Initial determinations*. (1) For agency records located in the Office of the Inspector General, the Assistant Inspector General for Investigations shall determine whether to authorize or refuse correction or amendment of a record. For all other agency records, the Freedom of Information Act and Privacy Act Officer, with the advice of the system manager having control of the record, shall determine whether to authorize or refuse correction or amendment of a record. The Freedom of Information Act and Privacy Act Officer shall notify the requesting individual. Unless the request presents unusual difficulties or involves extensive numbers of records, individuals must be notified of determinations to authorize or refuse correction or amendment of a record within 30 working days after receipt of the request. In making this determination, the NRC official shall be guided by the following standards:

(i) Records shall contain only such information about an individual as is relevant and necessary to accomplish an NRC function required to be accomplished by statute or by executive order of the President;

(ii) Records used by NRC in making any determination about any individual shall be as accurate, relevant, current, and complete as is reasonably necessary to assure fairness to the individual in the determination;

(iii) No record shall describe how any individual has exercised rights guaranteed by the First Amendment unless such record is expressly authorized by statute or by the individual about whom the record is maintained, or is pertinent to and within the scope of an authorized law enforcement activity.

(2) For agency records located in the Office of Inspector General, if correction or amendment of a record is authorized, the Assistant Inspector General for Investigations shall correct or amend the record. For all other agency records, the Freedom of Information Act and Privacy Act Officer shall correct or amend the record. The Freedom of Information Act and Privacy Act Officer shall notify the requesting individual in writing that the correction or amendment has been made and provide the individual with a courtesy copy of the corrected record.

(3) If correction or amendment of a record is refused, the Director, Office of Administration or the Director's designee, shall notify the requesting individual in writing of the refusal and the reasons therefor, and shall advise the individual that the refusal may be appealed to the Inspector General or the Executive Director for Operations, as appropriate, in accordance with the procedures set forth in this section.

(b) *Appeals from initial adverse determinations*. If an individual's request to amend or correct a record has been denied, in whole or in part, the individual may appeal that action and request a final review and determination of that individual's request by the Inspector General or the Executive Director for Operations, as appropriate. An appeal of an initial determination must be filed within 60 calendar days of the receipt of the initial determination. For agency records denied by the Assistant Inspector General for Investigations, the appeal must be in writing directed to the Inspector General and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. For agency records denied by the Freedom of Information Act and Privacy Act Officer the appeal must be in writing directed to the Executive Director for Operations and sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6. The appeal should clearly state on the envelope and in the letter ``Privacy Act Correction Appeal.'' The NRC does not consider an appeal received until the date it is actually received by the Freedom of Information Act and Privacy Act Officer. Requests for final review must set forth the specific item of information sought to be corrected or amended and should include, where appropriate, records supporting the correction or amendment.

(c) *Final determinations*. (1) The Inspector General, for agency records located in the Office of the Inspector General, or the Executive Director for Operations or the EDO's designee, for all other agency records, shall make a final agency determination within 30 working days of receipt of the request for final review, unless the time is extended for good cause shown such as the need to obtain additional information, the volume of records involved, or the complexity of the issue. The extension of time may not exceed 30 additional working days. The requester shall be advised in advance of any extension of time and of the reasons therefor.

(2) For agency records located in the Office of the Inspector General, if the Inspector General makes a final determination that an amendment or correction of the record is warranted on the facts, the Inspector General or the IG's designee, shall correct or amend the record pursuant to the procedures in § 9.66(a)(2). For all other agency records, if the Executive Director for Operations, or the EDO's designee, makes a final determination that an amendment or correction of the record is warranted on the facts, the EDO or the EDO's designee, shall notify the Freedom of Information Act and Privacy Act Officer to correct or amend the record to the procedures in § 9.66(a)(2).

(3) If the Inspector General, or the Executive Director for Operations or the EDO's designee, makes a final determination that an amendment or correction of the record is not warranted on the facts, the individual shall be notified in writing of the refusal to authorize correction or amendment of the record in whole or in part, and of the reasons therefor, and the individual shall be advised of his/her right to provide a "Statement of Disagreement" for the record and of his/her right to judicial review pursuant to 5 U.S.C. 552a(g).

[40 FR 44484, Sept. 26, 1975, as amended at 41 FR 20645, May 20, 1976; 41 FR 25997, June 24, 1976; 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 55 FR 33647, Aug. 17, 1990; 63 FR 15743, Apr. 1, 1998; 68 FR 58800, Oct. 10, 2003, 70 FR 34309, June 14, 2005]

§ 9.67 Statements of disagreement.

[Top of File]

(a) Written "Statements of Disagreement'' may be furnished by the individual within 30 calendar days of the date of receipt of the final adverse determination of the Inspector General or the Executive Director for Operations. "Statements of Disagreement'' directed to the Executive Director for Operations must be sent to the Freedom of Information Act and Privacy Act Officer by an appropriate method listed in § 9.6, and should be clearly marked on the statement and on the envelope, "Privacy Act Statement of Disagreement." "Statements of Disagreement'' directed to the Inspector General must be sent to the Freedom of Information Act and Privacy Officer by an appropriate method listed in § 9.6, and should be clearly marked on the statement and on the envelope "Privacy Act Statement of Disagreement''.

(b) The Inspector General or the Executive Director for Operations, or their designees, as appropriate, are responsible for ensuring that: (1) The "Statement of Disagreement" is included in the system or systems of records in which the disputed item of information is maintained; and (2) the original record is marked to indicate the information disputed, the existence of a "Statement of Disagreement" and the location of the "Statement of Disagreement" within the system of records.

[55 FR 33848, Aug. 17, 1990; 68 FR 58800, Oct. 10, 2003, 70 FR 34309, June 14, 2005, 70 FR 34309, June 14, 2005]

§ 9.68 NRC statement of explanation.

[Top of File]

The Inspector General, or the Executive Director for Operations or the EDO's designee, may if deemed appropriate, prepare a concise statement of the reasons why the requested amendments or corrections were not made. Any NRC "Statement of Explanation" must be included in the system of records in the same manner as the "Statement of Disagreement". Courtesy copies of the NRC statement and of the notation of the dispute as marked on the original record must be furnished to the individual who requested correction or amendment of

the record.

[55 FR 33648, Aug. 17, 1990]

§ 9.69 Notices of correction or dispute.

[Top of File]

(a) When a record has been corrected upon request or when a "Statement of Disagreement" has been filed, the Freedom of Information Act and Privacy Act Officer, shall, within 30 working days thereof, advise all prior recipients of the affected record whose identity can be determined pursuant to an accounting of disclosures required by the Privacy Act or any other accounting previously made, of the correction or of the filing of the "Statement of Disagreement".

(b) Any disclosure of disputed information occurring after a "Statement of Disagreement" has been filed shall clearly identify the specific information disputed and be accompanied by a copy of the "Statement of Disagreement" and a copy of any NRC "Statement of Explanation".

[40 FR 44484, Sept. 26, 1975, as amended at 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 63 FR 15743, Apr. 1, 1998]

Disclosure to others of records about individuals

[Top of File]

§ 9.80 Disclosure of record to persons other than the individual to whom it pertains.

(a) NRC Commissioners and NRC personnel shall not disclose any record which is contained in a system of records maintained by NRC by any means of communication to any person, or to another Government agency, except pursuant to a written request by, or with the prior written consent of, the individual to whom the record pertains, unless disclosure of the record is:

(1) To NRC Commissioners and NRC personnel who have a need for the record in the performance of their duties;

(2) Required under 5 U.S.C. 552;

(3) For a routine use published in the Federal Register;

(4) To the Bureau of the Census for purposes of planning or carrying out a census or survey or related activity pursuant to the provisions of Title 13 of the United States Code;

(5) To a recipient who has provided the agency with advance adequate written assurance that the record will be used solely as a statistical research or reporting record and the record is transferred in a form that is not individually identifiable. The advance written statement of assurance shall (i) state the purpose for which the record is requested, and (ii) certify that the record will be used only for statistical purposes. Prior to release for statistical purposes in accordance with the provisions of this paragraph, the record shall be stripped of all personally identifying information and reviewed to ensure that the identity of any individual cannot reasonably be determined by combining two or more statistical records;

(6) To the National Archives and Records Administration as a record that has sufficient historical or other value to warrant its continued preservation by the United States Government, or to the Archivist of the United States or designee for evaluation to determine whether the record has such value;

(7) To another agency or to an instrumentality of any governmental jurisdiction within or under the control of the United States for a civil or criminal law enforcement activity if the activity is authorized by law, and if the head of the agency or instrumentality has made a written request to the NRC specifying the particular portion of the record desired and the law enforcement activity for which the record is sought. A record may be disclosed to a law enforcement agency at the initiative of the NRC if criminal conduct is suspected, provided that such disclosure has been established as a routine use by publication in the Federal Register, and the instance of misconduct is directly related to the purpose for which the record is maintained;

(8) To any person upon a showing of compelling circumstances affecting the health or safety of any individual;

(9) To either House of Congress or, to the extent of matter within its jurisdiction, to any committee or subcommittee thereof or to any joint committee of the Congress or to any subcommittee of such joint committee;

(10) To the Comptroller General, or any authorized representatives, in the course of the performance of the duties of the General Accounting Office;

(11) Pursuant to the order of a court of competent jurisdiction; or

(12) To a consumer reporting agency in accordance with 31 U.S.C. 3711(f).

(b) [Reserved]

[40 FR 44484, Sept. 26, 1975, as amended at 60 FR 63900, Dec. 13, 1995]

§ 9.81 Notices of subpoenas.

[Top of File]

When records concerning an individual are subpoenaed or otherwise disclosed pursuant to court order, the NRC officer or employee served with the subpoena shall be responsible for assuring that the individual is notified of the disclosure within five days after such subpoena or other order becomes a matter of public record. The notice shall be mailed to the last known address of the individual and shall contain the following information: (a) The date the subpoena is returnable; (b) the court in which it is returnable; (c) the name and number of the case or proceeding; and (d) the nature of the information sought.

§ 9.82 Notices of emergency disclosures.

[Top of File]

When information concerning an individual has been disclosed to any person under compelling circumstances affecting health or safety, the NRC officer or employee who made or authorized the disclosure shall notify the individual at his last known address within five days of the disclosure. The notice shall contain the following information: (a) The nature of the information disclosed; (b) the person or agency to whom the information was disclosed; (c) the date of the disclosure; and (d) the compelling circumstances justifying the disclosure.

Fees

[Top of File]

§ 9.85 Fees.

Fees shall not be charged for search or review of records requested under this subpart or for making copies or extracts of records to make them available for review, although fees may be charged for additional copies. Fees established under 31 U.S.C. 483c and 5 U.S.C. 552a(f)(5) shall be charged according to the schedule contained in § 9.35 for actual copies of records disclosed under the Freedom of Information Act from Privacy Act Systems of Records.

[52 FR 49362, Dec. 31, 1987, as amended at 53 FR 52993, Dec. 30, 1988; 63 FR 15743, Apr. 1, 1998, 70 FR 34309, June 14, 2005]

Enforcement

[Top of File]

§ 9.90 Violations.

(a) An injunction or other court order may be obtained pursuant to 5 U.S.C. 552a(g) (1 - 3) to compel NRC to permit an individual to review, amend or copy a record pertaining to him, or to be accompanied by someone of his own choosing when he reviews his record. A court order may be obtained for the payment of a civil penalty imposed pursuant to 5 U.S.C. 552a(g)(4) if NRC intentionally or willfully fails to maintain a record accurately, or fails to comply with any provision of 5 U.S.C. 552a, or any provision of this subpart, if such failure results in an adverse determination or has an adverse effect on an individual. Court costs and attorney's fees may be awarded in civil actions.

(b) Any officer or employee of NRC who willfully maintains a system of records without meeting the notice requirements of 5 U.S.C. 552a(e)(4), or who willfully discloses information knowing such disclosure to be prohibited by 5 U.S.C. 552a or by any rules or regulations issued thereunder, may be guilty of a criminal misdemeanor and upon conviction may be fined up to $5000. Any person who knowingly and willfully requests or obtains any record concerning an individual from NRC under false pretenses may be convicted of a criminal misdemeanor and upon conviction may be fined up to $5,000.

Exemptions

[Top of File]

§ 9.95 Specific exemptions.

Exemptions applicable to Privacy Act Systems of Records are stated in each Privacy Act System of Records Notice which is published in the Federal Register and is available at the NRC Web site, *http://www.nrc.gov*.

[60 FR 63900, Dec. 13, 1995, 70 FR 34309, June 14, 2005]

Subpart C--Government in the Sunshine Act Regulations

[Top of File]

Source: 42 FR 12877, Mar. 7, 1977, unless otherwise noted.

§ 9.100 Scope of subpart.

This subpart prescribes procedures pursuant to which NRC meetings shall be open to public observation pursuant to the provisions of 5 U.S. C. 552b. This subpart does not affect the procedures pursuant to which NRC records are made available to the public for inspection and copying which remain governed by subpart A, except that the exemptions set forth in § 9.104(a) shall govern in the case of any request made pursuant to § 9.23 to copy or inspect the transcripts, recordings, or minutes described in § 9.108. Access to records considered at NRC meetings shall continue to be governed by subpart A of this part.

[52 FR 49362, Dec. 31, 1987]

§ 9.101 Definitions.

[Top of File]

As used in this subpart:

(a) *Commission* means the collegial body of five Commissioners or a quorum thereof as provided by section 201 of the Energy Reorganization Act of 1974, or any subdivision of that collegial body authorized to act on its behalf, and shall not mean any body not composed of members of that collegial body.

(b) *Commissioner* means an individual who is a member of the Commission.

(c) *Meeting* means the deliberations of at least a quorum of Commissioners where such deliberations determine or result in the joint conduct or disposition of official Commission business, that is, where discussions are sufficiently focused on discrete proposals or issues as to cause or to be likely to cause the individual participating members to form reasonably firm positions regarding matters pending or likely to arise before the agency. Deliberations required or permitted by §§ 9.105, 9.106, or 9.108(c), do not constitute "meetings" within this definition.

(d) *Closed meeting* means a meeting of the Commission closed to public observation as provided by § 9.104.

(e) *Open meeting* means a meeting of the Commission open to public observation pursuant to this subpart.

(f) *Secretary* means the Secretary to the Commission.

(g) *General Counsel* means the General Counsel of the commission as provided by section 25(b) of the Atomic Energy Act of 1954 and section 201(f) of the Energy Reorganization Act of 1974, and, until such time as the offices of that officer are in the same location as those of the Commission, any member of his office specially designated in writing by him pursuant to this subsection to carry out his responsibilities under this subpart.

[42 FR 12877, Mar. 7, 1977, as amended at 50 FR 20891, May 21, 1985]

§ 9.102 General requirement.

[Top of File]

Commissioners shall not jointly conduct or dispose of Commission business in Commission meetings other than in accordance with this subpart. Except as provided in § 9.104, every portion of every meeting of the Commission shall be open to public observation.

§ 9.103 General provisions.

[Top of File]

The Secretary shall ensure that all open Commission meetings are held in a location such that there is reasonable space and adequate visibility and acoustics, for public observation. No additional right to participate in Commission meetings is granted to any person by this subpart. An open meeting is not part of the formal or informal record of decision of the matters discussed therein except as otherwise required by law. Statements of views or expressions of opinion made by Commissioners or NRC employees at open meetings are not intended to represent final determinations or beliefs. Such statements may not be pleaded, cited, or relied upon before the Commission or in any proceeding under part 2 of these regulations (10 CFR part 2) except as the Commission may direct. Members of the public attending open Commission meetings may use small electronic sound recorders to record the meeting, but the use of other electronic recording equipment and cameras requires the advance written approval of the Secretary.

[42 FR 12877, Mar. 7, 1977, as amended at 43 FR 13055, Mar. 29, 1978; 43 FR 37421, Aug. 23, 1978]

§ 9.104 Closed meetings.

[Top of File]

(a) Except where the Commission finds that the public interest requires otherwise, Commission meetings shall be closed, and the requirements of §§ 9.105 and 9.107 shall not apply to any information pertaining to such meeting otherwise required by this subpart to be disclosed to the public, where the Commission determines in accordance with the procedures of § 9.105 that opening such meetings or portions thereof or disclosing such information, is likely to:

(1) Disclose matters that are (i) specifically authorized under criteria established by an Executive order to be kept secret in the interests of national defense or foreign policy, and (ii) in fact properly classified pursuant to such Executive order;

(2) Relate solely to the internal personnel rules and practices of the Commission;

(3) Disclose matters specifically exempted from disclosure by statute (other than 5 U.S.C. 552) provided that such statute (i) requires that the matters be withheld from the public in such a manner as to leave no discretion on the issue, or (ii) establishes particular criteria for withholding or refers to particular types of matters to be withheld;

(4) Disclose trade secrets and commercial or financial information obtained from a person and privileged or confidential, including such information as defined in § 2.790(d) of this title;

(5) Involve accusing any person of a crime, imposing a civil penalty on any person pursuant to 42 U.S.C. 2282 or 42 U.S.C. 5846, or any revocation of any license pursuant to 42 U.S.C. sec. 2236, or formally censuring any person;

(6) Disclose information of a personal nature where such disclosure would constitute a clearly unwarranted invasion of personal privacy;

(7) Disclose investigatory reports compiled for law enforcement purposes, including specifically enforcement of the Atomic Energy Act of l1954, as amended, 42 U.S.C. 2011 et seq., and the Energy Reorganization Act of 1974, as amended, 42 U.S.C. 5801 et seq., or information which if written would be contained in such records, but only to the extent that the production of such records or information would: (i) Interfere with enforcement proceedings, (ii) deprive a person of a right to a fair trial or an impartial adjudication, (iii) constitute an unwarranted invasion of personal privacy, (iv) disclose the identity of a confidential source and, in the case of a record compiled by a criminal law enforcement authority in the course of a criminal investigation, or by an agency conducting a lawful national security intelligence investigation, confidential information furnished only by the confidential source, (v) disclose investigative techniques and procedures, or (vi) endanger the life or physical safety of law enforcement personnel;

(8) [Reserved]

(9) Disclose information the premature disclosure of which would be likely to significantly frustrate implementation of a proposed Commission action, except that this subparagraph shall not apply in any instance where the Commission has already disclosed to the public the content or nature of its proposed action, or where the Commission is required to make such disclosure on its own initative prior to taking final action on such proposal; or

(10) Specifically concern the Commission's issuance of a subpoena, or the Commission's participation in a civil action or proceeding or an action or proceeding before a state or federal administrative agency, an action in a foreign court or international tribunal, or an arbitration, or the initiation, conduct or disposition by the Commission of a particular case of formal agency adjudication pursuant to 5 U.S.C. 554 or otherwise involving a determination on the record after an opportunity for a hearing pursuant to part 2 or similar provisions.

(b) Examples of situations in which Commission action may be deemed to be significantly frustrated are: (1) If opening any Commission meeting or negotiations would be likely to disclose information provided or requests made to the Commission in confidence by persons outside the Commission and which would not have been provided or made otherwise; (2) if opening a meeting or disclosing any information would reveal legal or other policy advice, public knowledge of which could substantially affect the outcome or conduct of pending or reasonably anticipated litigation or negotiations; or (3) if opening any meeting or disclosing any information would reveal information requested by or testimony or proposals to be given to other agencies of government, including the Congress and the Executive Branch before the requesting agency would receive the information, testimony or proposals. The examples in the above sentence are for illustrative purposes only and are not intended to be exhaustive.

§ 9.105 Commission procedures.

[Top of File]

(a) Action under § 9.104 shall be taken only when a majority of the entire membership of the Commission votes to take such action. A separate vote of the Commissioners shall be taken with respect to each Commission meeting a portion or portions of which are proposed to be closed to the public pursuant to § 9.104, or which respect to any information which is proposed to be withheld under § 9.105(c). A single vote may be taken with respect to a series of meetings, a portion or portions of which are proposed to be closed to the public, or with respect to any information concerning such series of meetings, so long as each meeting in such series involves the same particular matters and is scheduled to be held no more than thirty days after the initial meeting in such series. The vote of each Commissioner participating in such vote shall be recorded and no proxies shall be allowed.

(b) Within one day of any vote taken pursuant to paragraph (a) of this section, § 9.106(a), or § 9.108(c), the Secretary shall make publicly available at the NRC Web site, *http://www.nrc.gov,* a written copy of such vote reflecting the vote of each member on the question. If a portion of a meeting is to be closed to the public, the Secretary shall, within one day of the vote taken pursuant to paragraph (a) of this section or § 9.106(a), make publicly available at the NRC Web site, *http://www.nrc.gov,* a full written explanation of its action closing the portion together with a list of all persons expected to attend the meeting and their affiliation.

(c) The notices and lists required by paragraph (b) of this section to be made public may be withheld from the public to the extent that the Commission determines that such information itself would be protected against disclosure by § 9.104(a). Any such determination shall be made independently of the Commission's determination pursuant to paragraph (a) of this section to close a meeting, but in accordance with the procedure of that subsection. Any such determination, including a written explanation for the action and the specific provision or provisions of § 9.104(a) relied upon, must be made publicly available to the extent permitted by the circumstances.

[42 FR 12877, Mar. 7, 1977, as amended at 64 FR 48951, Sept. 9, 1999]

§ 9.106 Persons affected and motions for reconsideration.

[Top of File]

(a) Whenever any person whose interests may be directly affected by a portion of a meeting requests that the Commission close such portion to the public for any of the reasons referred to in paragraphs (a) (5), (6), or (7) of § 9.104, the Commission, upon request of any one Commissioner, shall vote by recorded vote whether to close such meeting.

(b) Any person may petition the Commission to reconsider its action under § 9.105(a) or paragraph (a) of this section by filing a petition for reconsideration with the Commission within seven days after the date of such action and before the meeting in question is held.

(c) A petition for reconsideration filed pursuant to paragraph (b) of this section shall state specifically the grounds on which the Commission action is claimed to be erroneous, and shall set forth, if appropriate, the public interest in the closing or opening of the meeting. The filing of such a petition shall not act to stay the effectiveness of the Commission action or to postpone or delay the meeting in question unless the Commission orders otherwise.

§ 9.107 Public announcement of Commission meetings.

[Top of File]

(a) In the case of each meeting, the Secretary shall make public announcement, at least one week before the meeting, of the time, place, and subject matter of the meeting, whether it is to be open or closed to the public, and the name and phone number of the official designated by the Commission to respond to requests for information about the meeting. Such announcement shall be made unless a majority of the members of the Commission determines by a recorded vote that Commission business requires that such meeting be called at an earlier date, in which case the Secretary shall make public announcement of the time, place and subject matter of such meeting, and whether open or closed to the public, at the earliest practical time.

(b) The time or place of a meeting may be changed following the public announcement required by paragraph (a) of this section only if the Secretary publicly announces such changes at the earliest practicable time. The subject matter of as meeting, or the determination of the Commission to open or close a meeting, or portion of a meeting, to the public, may be changed following the public announcement required by this subsection only if: (1) A majority of the entire membership of the Commission determines by a recorded vote that Commission business so requires and that no earlier announcement of the change was possible, and (2) the Secretary publicly announces such change and the vote of each member upon such change at the earliest practicable time.

(c) Immediately following each public announcement required by this section, notice of the time, place, and subject matter of a meeting, whether the meeting is open or closed, any change in one of the preceding, and the name and phone number of the official designated by the Commission to respond to requests for information about the meeting, shall also be submitted for publication in the Federal Register.

(d) The public announcement required by paragraph (a) of this section shall consist of the Secretary:

(1) Publicly posting a copy of the document at the NRC Web site, http://www.nrc.gov,; and, to the extent appropriate under the circumstances;

(2) Mailing a copy to all persons whose names are on a mailing list maintained for this purpose;

(3) Submitting a copy for possible publication to at least two newspapers of general circulation in the Washington, DC metropolitan area;

(4) Any other means which the Secretary believes will serve to further inform any persons who might be interested.

(e) Action under the second sentence of paragraph (a) or (b) of this section shall be taken only when the Commission finds that the public interest in prompt Commission action or the need to protect the common defense or security or to protect the public health or safety overrides the public interest in having full prior notice of Commission meetings.

[42 FR 12877, Mar. 7, 1977, as amended at 53 FR 43420, Oct. 27, 1988; 64 FR 48951, Sept. 9, 1999]

§ 9.108 Certification, transcripts, recordings and minutes.

[Top of File]

(a) For every meeting closed pursuant to paragraphs (a) (1) through (10) of § 9.104 and for every determination pursuant to § 9.105(c), the General Counsel shall publicly certify at the time of the public announcement of the meeting, or if there is no public announcement at the earliest practical time, that, in his or her opinion, the meeting may be closed to the public and shall state each relevant exemptive provision unless the Commission votes pursuant to § 9.105(c) that such certification is protected against disclosure by § 9.104(a). A copy of such certification, together with a statement from the presiding officer of the meeting setting forth the time and place of the meeting, and the persons present, shall be retained by the Commission. The Commission shall maintain a complete transcript or electronic recording adequate to record fully the proceedings of each meeting, or portion of a meeting closed to the public, except that in the case of a meeting, or portion of a meeting, closed to the public pursuant to paragraph (c)(10) of § 9.104, the Commission shall maintain such a transcript, or recording or a set of minutes. Such minutes shall fully and clearly describe all matters discussed and shall provide a full and accurate summary of any actions taken, and the reasons therefor, including a description of each of the views expressed on any item and the record of any rollcall vote (reflecting the vote of each Commissioner on the question). All documents considered in connection with any action shall be identified in such minutes.

(b) The Commission shall make promptly available to the public at the NRC Web site, *http://www.nrc.gov,* the transcript, electronic recording, or minutes (as required by paragraph (a) of this section) of the discussion of any item on the agenda, or of any item of the testimony of any witness received at the meeting, except for such item or items of such discussion or testimony as the Commission determines pursuant to paragraph (c) of this section to contain information which may be withheld under § 9.104 or § 9.105(c). Copies of such transcript, or minutes, or a transcription of such recording disclosing the identity of each speaker, shall be furnished to any person upon payment of the actual cost of duplication or transcription as provided in § 9.14. The Secretary shall maintain a complete verbatim copy of the transcript, a complete copy of the minutes, or a complete electronic recording of each meeting, or portion of a meeting, closed to the public, for a period of at least two years after such meeting, or until one year after the conclusion of any Commission proceeding with respect to which the meeting or portion was held, whichever occurs later.

(c) In the case of any meeting closed pursuant to § 9.104, the Secretary of the Commission, upon the advice of the General Counsel and after consultation with the Commission, shall determine which, if any, portions of the electronic recording, transcript or minutes and which, if any, items of information withheld pursuant to § 9.105(c) contain information which should be withheld pursuant to § 9.104, in the event that a request for the recording, transcript, or minutes is received within the period during which the recording, transcript, or minutes must be retained, under paragraph (b) of this section.

(d) If at some later time the Commission determines that there is no further justification for withholding any transcript, recording or other item of information from the public which has previously been withheld, then such information shall be made available.

[42 FR 12877, Mar. 7, 1977, as amended at 50 FR 20891, May 21, 1985; 64 FR 48951, Sept. 9, 1999]

§ 9.109 Report to Congress.

[Top of File]

The Secretary shall annually report to the Congress regarding the Commission's compliance with the Government in the Sunshine Act, including a tabulation of the total number of open meetings, the total number of closed meetings, the reasons for closing such meetings and a description of any litigation brought against the Commission pursuant to the Government in the Sunshine Act, including any cost assessed against the Commission in such litigation (whether or not paid by the Commission).

Subpart D--Production or Disclosure in Response to Subpoenas or Demands of Courts or Other Authorities

[Top of File]

Source: 50 FR 37645, Sept. 17, 1985, unless otherwise noted.

§ 9.200 Scope of subpart.

(a) This subpart sets forth the procedures to be followed when a subpoena, order, or other demand (hereinafter referred to as a "demand") for the production of NRC records or disclosure of NRC information, including testimony regarding such records, is issued by a court or other judicial or quasi-judicial authority in a proceeding, excluding Federal grand jury proceedings, to which the NRC is not a party. Information and documents subject to this subpart include:

(1) Any material contained in the files of the NRC;

(2) Any information relating to material contained in the files of the NRC.

(b) For purposes of this subpart, the term "employee of the NRC" includes all NRC personnel as that term is defined in § 9.3 of this part, including NRC contractors.

(c) This subpart is intended to provide instructions regarding the internal operations of the NRC and is not intended, and does not, and may

not, be relied upon to create any right or benefit, substantive or procedural, enforceable at law by a party against the NRC.

[50 FR 37645, Sept. 17, 1985, as amended at 52 FR 49362, Dec. 31, 1987]

§ 9.201 Production or disclosure prohibited unless approved by appropriate NRC official.

[Top of File]

No employee of the NRC shall, in response to a demand of a court or other judicial or quasi-judicial authority, produce any material contained in the files of the NRC or disclose, through testimony or other means, any information relating to material contained in the files of the NRC, or disclose any information or produce any material acquired as part of the performance of that employee's official duties or official status without prior approval of the appropriate NRC official. When the demand is for material contained in the files of the Office of the Inspector General or for information acquired by an employee of that Office, the Inspector General is the appropriate NRC official. In all other cases, the General Counsel is the appropriate NRC official.

[55 FR 33648, Aug. 17, 1990]

§ 9.202 Procedure in the event of a demand for production or disclosure.

[Top of File]

(a) Prior to or simultaneous with a demand upon an employee of the NRC for the production of material or the disclosure of information described in § 9.200, the party seeking production or disclosure shall serve the General Counsel of the NRC with an affidavit or statement as described in paragraphs (b) (1) and (2) of this section. Except for employees in the Office of Inspector General, whenever a demand is made upon an employee of the NRC for the production of material or the disclosure of information described in § 9.200, that employee shall immediately notify the General Counsel. If the demand is made upon a regional NRC employee, that employee shall immediately notify the Regional Counsel who, in turn, shall immediately request instructions from the General Counsel. If the demand is made upon an employee in the Office of Inspector General, that employee shall immediately notify the Inspector General. The Inspector General shall immediately provide a copy of the demand to the General Counsel, and as deemed necessary, consult with the General Counsel.

(b)(1) If oral testimony is sought by the demand, a summary of the testimony desired must be furnished to the General Counsel by a detailed affidavit or, if that is not feasible, a detailed statement by the party seeking the testimony or the party's attorney. This requirement may be waived by the General Counsel in appropriate circumstances.

(2) The General Counsel may request a plan from the party seeking discovery of all demands then reasonably foreseeable, including but not limited to, names of all NRC personnel from whom discovery is or will be sought, areas of inquiry, length of time away from duty involved, and identification of documents to be used in each deposition, where appropriate.

(c) The Inspector General or the General Counsel will notify the employee and such other persons, as circumstances may warrant, of the decision on the matter.

[50 FR 37645, Sept. 17, 1985, as amended at 55 FR 33648, Aug. 17, 1990]

§ 9.203 Procedure where response to demand is required prior to receiving instructions.

[Top of File]

If a response to the demand is required before the instructions from the Inspector General or the General Counsel are received, a U.S. attorney or NRC attorney designated for the purpose shall appear with the employee of the NRC upon whom the demand has been made, and shall furnish the court or other authority with a copy of the regulations contained in this subpart and inform the court or other authority that the demand has been, or is being, as the case may be, referred for the prompt consideration of the appropriate NRC official and shall respectfully request the court or authority to stay the demand pending receipt of the requested instructions. In the event that an immediate demand for production or disclosure is made in circumstances which would preclude the proper designation or appearance of a U.S. or NRC attorney on the employee's behalf, the employee shall respectfully request the demanding authority for sufficient time to obtain advice of counsel.

[55 FR 33649, Aug. 17, 1990]

§ 9.204 Procedure in the event of an adverse ruling.

[Top of File]

If the court or other judicial or quasi-judicial authority declines to stay the effect of the demand in response to a request made in accordance with § 9.203 pending receipt of instructions, or if the court or other authority rules that the demand must be complied with irrespective of instructions not to produce the material or disclose the information sought, the employee upon whom the demand has been made shall respectfully decline to comply with the demand, citing these regulations and *United States ex rel. Touhy v. Ragen*, 340 U.S. 462 (1951).

PART 10--CRITERIA AND PROCEDURES FOR DETERMINING ELIGIBILITY FOR ACCESS TO RESTRICTED DATA OR NATIONAL SECURITY INFORMATION OR AN EMPLOYMENT CLEARANCE

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 10.1 Purpose.

(a) This part establishes the criteria, procedures, and methods for resolving questions concerning:

(1) The eligibility of individuals who are employed by or applicants for employment with NRC contractors, agents, and other individuals who are NRC employees or applicants for NRC employment, and other persons designated by the Deputy Executive Director for Information Services and Administration and Chief Information Officer of the NRC, for access to Restricted Data under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, or for access to national security information;

(2) The eligibility of NRC employees, or the eligibility of applicants for employment with the NRC, for employment clearance; and

(3) The eligibility of individuals who are employed by or are applicants for employment with NRC licensees, certificate holders, holders of standard design approvals under part 52 of this chapter, applicants for licenses, certificates, and NRC approvals, and others who may require access related to a license, certificate, or NRC approval, or other activities as the Commission may determine, for access to Restricted Data under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, or for access to national security information.

(b) This part is published to implement the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, Executive Order 10865, 25 FR 1583 (February 24, 1960) Executive Order 10450, 18 FR 2489 (April 27, 1954), and Executive Order 12968, 60 FR 40245 (August 2, 1995).

[64 FR 15641, Apr. 1, 1999; 72 FR 49483, Aug. 28, 2007]

§ 10.2 Scope.

[Top of File]

The criteria and procedures in this part shall be used in determining eligibility for NRC access authorization and/or employment clearance involving:

(a) Employees (including consultants) of contractors and agents of the Nuclear Regulatory Commission and applicants for employment;

(b) NRC licensees, certificate holders and holders of standard design approvals under part 52 of this chapter, applicants for licenses, certificates, and standard design approvals under part 52 of this chapter, and their employees (including consultants) and applicants for employment (including consulting);

(c) NRC employees (including consultants) and applicants for employment; and

(d) Any other person designated by the Deputy Executive Director for Information Services and Administration and Chief Information Officer of the Nuclear Regulatory Commission.

[47 FR 38676, Sept. 2, 1982, as amended at 64 FR 15641, Apr. 1, 1999; 72 FR 49483, Aug. 28, 2007]

§ 10.3 [Reserved]

[Top of File]

§ 10.4 Policy.

[Top of File]

It is the policy of the Nuclear Regulatory Commission to carry out its responsibility for the security of the nuclear energy program in a manner consistent with traditional American concepts of justice. To this end, the Commission has established criteria for determining eligibility for access authorization and/or employment clearance and will afford those individuals described in § 10.2 the opportunity for administrative review of questions concerning their eligibility for access authorization and/or employment clearance.

§ 10.5 Definitions.

[Top of File]

Access authorization means an administrative determination that an individual (including a consultant) who is employed by or an applicant for employment with the NRC, NRC contractors, agents, and licensees of the NRC, or other person designated by the Deputy Executive Director for Information Services and Administration and Chief Information Officer, is eligible for a security clearance for access to Restricted Data or National Security Information.

Commission means the Nuclear Regulatory Commission of five members or a quorum thereof sitting as a body, as provided by section 201 of the Energy Reorganization Act of 1974, or its designee.

Eligible or *Eligibility* means both initial eligibility and continued eligibility of an individual for access authorization and/or employment clearance.

Employment Clearance means an administrative determination that an individual (including a consultant) who is an NRC employee or applicant for NRC employment and other persons designated by the Deputy Executive Director for Information Services and Administration and Chief Information Officer of the NRC is eligible for employment or continued employment pursuant to subsection 145(b) of the Atomic Energy Act of 1954, as amended.

Hearing Counsel means an NRC attorney assigned by the General Counsel to prepare and administer hearings in accordance with this part.

Hearing Examiner means a qualified attorney appointed by the Director, Office of Administration, to conduct a hearing in accordance with this part.

National Security Information means information that has been determined pursuant to Executive Order 12958 or any predecessor order to require protection against unauthorized disclosure and that is so designated.

NRC Personnel Security Review Panel means an appeal panel appointed by the Deputy Executive Director for Information Services and Administration and Chief Information Officer and consisting of three members, two of whom shall be selected from outside the security field. One member of the Panel shall be designated as Chairman.

Personnel Security Review Examiners are persons designated by the Executive Director for Operations to conduct a review of the record in accordance with this part.

Restricted Data means all data concerning design, manufacture, or utilization of atomic weapons, the production of special nuclear material, or the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Atomic Energy Act of 1954, as amended.

[47 FR 38676, Sept. 2, 1982, as amended at 51 FR 35999, Oct. 8, 1986; 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 64 FR 15641, Apr. 1, 1999]

Subpart B--Criteria for Determining Eligibility for Access to Restricted Data or National Security Information or an Employment Clearance

[Top of File]

§ 10.10 Application of the criteria.

(a) The decision as to access authorization and/or employment clearance is a comprehensive, common-sense judgment, made after consideration of all the information, favorable or unfavorable, relevant to whether the granting of access authorization and/or employment clearance would not endanger the common defense and security and would be clearly consistent with the national interest.

(b) The criteria in § 10.11 set forth a number of the types of derogatory information used to assist in making determinations of eligibility for access authorization and/or employment clearance. These criteria are not exhaustive but contain the principal types of derogatory information which create a question as to the individual's eligibility for access authorization and/or employment clearance. While there must necessarily be adherence to such criteria, the NRC is not limited to them, nor precluded from exercising its judgment that information or facts in a case under its cognizance are derogatory although at variance with, or outside the scope of, the stated categories. These criteria are subject to continuing review and may be revised from time to time as experience and circumstances may make desirable.

(c) When the reports of investigation of an individual contain information reasonably tending to establish the truth of one or more of the items in the criteria, such information shall be regarded as derogatory and shall create a question as to the individual's eligibility for access authorization and/or employment clearance. A question concerning the eligibility of an individual for access authorization and/or employment clearance shall be resolved in accordance with the procedures set forth in § 10.20 et seq.

(d) In resolving a question concerning the eligibility or continued eligibility of an individual for access authorization and/or employment clearance, the following principles shall be applied by the Director, Division of Facilities and Security, Hearing Examiners, and the NRC Personnel Security Review Panel:

(1) Information reasonably tending to establish the truth of one or more of the items in the criteria shall be the basis for recommending denial or revocation of access authorization and/or employment clearance unless evidence to support faith in the individual's reliability and trust-worthiness is affirmatively shown.

(2) When deemed material to the deliberations, the extent of the activity, conduct, or condition, the period in which they occurred or existed, the length of time which has since elapsed, and the attitude and convictions of the individual shall be considered in determining whether the recommendation will be adverse or favorable.

[47 FR 38676, Sept. 2, 1982, as amended at 64 FR 15641, Apr. 1, 1999]

§ 10.11 Criteria.

[Top of File]

(a) The criteria for determining eligibility for access authorization and/or employment clearance shall relate, but not be limited, to the following where an individual:

(1) Committed, attempted to commit, aided, or abetted another who committed or attempted to commit any act of sabotage, espionage, treason, sedition, or terrorism.

(2) Publicly or privately advocated actions that may be inimical to the interest of the United States, or publicly or privately advocated the use of force or violence to overthrow the Government of the United States or the alteration of the form of government of the United States by unconstitutional means.

(3) Knowingly established or continued a sympathetic association with a saboteur, spy, traitor, seditionist, anarchist, terrorist, or revolutionist, or with an espionage agent or other secret agent or representative of a foreign nation whose interests may be inimical to the interests of the United States, or with any person who advocates the use of force or violence to overthrow the Government of the United States or the alteration of the form of government of the United States by unconstitutional means.

(4) Joined or engaged in any activity knowingly in sympathy with or in support of any foreign or domestic organization, association, movement, group, or combination of persons which unlawfully advocates or practices the commission of acts of force or violence to prevent others from exercising their rights under the Constitution or laws of the United States or any State or any subdivisions thereof by unlawful means, or which advocate the use of force and violence to overthrow the Government of the United States or the alteration of the form of government of the United States by unconstitutional means. (Ordinarily, criteria (3) and (4) will not include chance or casual meetings or contacts limited to normal business or official relations.)

(5) Deliberately misrepresented, falsified or omitted relevant and material facts from or in a personnel security questionnaire, a personal qualifications statement, a personnel security interview, or any other information submitted pursuant to this part.

(6) Willfully violated or disregarded security regulations or was grossly negligent with respect thereto to a degree which could endanger the common defense and security; or by intention or gross carelessness disclosed Restricted Data or national security information to any person not authorized to receive it.

(7) Has any illness or mental condition which in the opinion of competent medical authority may cause significant defect in the judgment or reliability of the individual.

(8) Has been convicted of crimes indicating habitual criminal tendencies.

(9) Has been convicted of a crime, or has a background, where the facts, circumstances, or conduct are of a nature indicating poor judgment, unreliabilty, or untrustworthiness.

(10) Is a user of alcohol habitually and to excess, or has been such without adequate evidence of rehabilitation.

(11) Has been, or is, a user of a drug or other substance listed in the schedules of Controlled Substances established pursuant to the Controlled Substances Act of 1970 (such as amphetamines, barbiturates, narcotics, etc.), except as prescribed or administered by a physician licensed to dispense drugs in the practice of medicine, without adequate evidence of rehabilitation.

(12) Refused, without satisfactory explanation, to answer questions before a congressional committee, Federal or state court, or Federal administrative body including the NRC regarding charges relevant to the individual's eligibility for access authorization and/or employment clearance.

(13) Engaged in any other conduct or is subject to any other circumstances which tend to show that the individual is not reliable or trustworthy, or which furnishes reason to believe that the individual may be subject to coercion, influence, or pressures which may cause the individual to act contrary to the national interest.

§ 10.12 Interview and other investigation.

[Top of File]

(a) The Director, Division of Facilities and Security, Office of Administration, may authorize the granting of access authorization and/or employment clearance on the basis of the information in the possession of the NRC or may authorize an interview with the individual, if the individual consents to be interviewed, or other investigation as the Director deems appropriate. On the basis of this interview and/or an investigation, the Director may authorize the granting of access authorization and/or employment clearance.

(b) The individual may elect on constitutional or other grounds not to participate in an interview or other investigation; however, such refusal or failure to furnish or authorize the furnishing of relevant and material information is deemed to be derogatory information pursuant to § 10.11(a)(5) and (12).

(c) If the Director, Division of Facilities and Security, cannot make a favorable finding regarding the eligibility of an individual for access authorization and/or employment clearance, the question of the individual's eligibility must be resolved in accordance with the procedures set forth in § 10.20 *et seq.*

[47 FR 38676, Sept. 2, 1982, as amended at 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 64 FR 15642, Apr. 1, 1999]

Subpart C--Procedures

[Top of File]

§ 10.20 Purpose of the procedures.

These procedures establish methods for the conduct of hearings and administrative review of questions concerning an individual's eligibility for an access authorization and/or an employment clearance pursuant to the Atomic Energy Act of 1954, as amended, and Executive Orders 10450, 10865, and 12968 when a resolution favorable to the individual cannot be made on the basis of the interview or other investigation.

[64 FR 15642, Apr. 1, 1999]

§ 10.21 Suspension of access authorization and/or employment clearance.

[Top of File]

In those cases where information is received which raises a question concerning the continued eligibility of an individual for an access authorization and/or an employment clearance, the Director, Division of Facilities and Security, through the Director, Office of Administration, shall forward to the Deputy Executive Director for Information Services and Administration and Chief Information Officer or other Deputy Executive Director, his or her recommendation as to whether the individual's access authorization and/or employment clearance should be suspended pending the final determination resulting from the operation of the procedures provided in this part. In making this recommendation the Director, Division of Facilities and Security, shall consider factors such as the seriousness of the derogatory information developed, the degree of access of the individual to classified information, and the individual's opportunity by reason of his or her position to commit acts adversely affecting the national security. An individual's access authorization and/or employment clearance may not be suspended except by the direction of the Executive Director for Operations, Deputy Executive Director for Information Services and Administration and Chief Information Officer or other Deputy Executive Director.

[64 FR 15642, Apr. 1, 1999]

§ 10.22 Notice to individual.

[Top of File]

A notification letter, prepared by the Division of Facilities and Security, approved by the Office of the General Counsel, and signed by the Director, Office of Administration, must be presented to each individual whose eligibility for an access authorization and/or an employment clearance is in question. Where practicable, the letter will be presented to the individual in person. The letter will be accompanied by a copy of this part and must state:

(a) That reliable information in the possession of the NRC has created a substantial doubt concerning the individual's eligibility for an access authorization and/or an employment clearance;

(b) The information that creates a substantial doubt regarding the individual's eligibility for an access authorization and/or an employment clearance, that must be as comprehensive and detailed as the national security interests and other applicable law permit;

(c) That the individual has the right to be represented by counsel or other representative at their own expense;

(d) That the individual may request within 20 days of the date of the notification letter, any documents, records and reports which form the basis for the question of their eligibility for an access authorization and/or an employment clearance. The individual will be provided within 30 days all such documents, records and reports to the extent they are unclassified and do not reveal a confidential source. The individual may also request the entire investigative file, which will be promptly provided, as permitted by the national security interests and other applicable law;

(e) That unless the individual files with the Director, Office of Administration, a written request for a hearing within 20 days of the individual's receipt of the notification letter or 20 days after receipt of the information provided in response to a request made under paragraph (d) of this section, whichever is later, the Director, Division of Facilities and Security, through the Director, Office of Administration, will submit a recommendation as to the final action to the Deputy Executive Director for Information Services and Administration and Chief Information Officer on the basis of the information in the possession of the NRC;

(f) That if the individual files a written request for a hearing with the Director, Office of Administration, the individual shall file with that request a written answer under oath or affirmation that admits or denies specifically each allegation and each supporting fact contained in the notification letter. A general denial is not sufficient to controvert a specific allegation. If the individual is without knowledge, he or she shall so state and that statement will operate as a denial. The answer must also state any additional facts and information that the individual desires to have considered in explanation or mitigation of allegations in the notification letter. Failure to specifically deny or explain or deny knowledge of any allegation or supporting fact will be deemed an admission that the allegation or fact is true.

(g) That if the individual does not want to exercise his or her right to a hearing, but does want to submit an answer to the allegations in the notification letter, the individual may do so by filing with the Director, Office of Administration, within 20 days of receipt of the notification letter or 20 days after receipt of the information provided in response to a request made under paragraph (d) of this section, whichever is later, a written answer in accordance with the requirements of paragraph (f) of this section;

(h) That the procedures in § 10.24 *et seq.* will apply to any hearing and review.

[64 FR 15642, Apr. 1, 1999]

§ 10.23 Failure of individual to request a hearing.

[Top of File]

(a) In the event the individual fails to file a timely written request for a hearing pursuant to § 10.22, a recommendation as to the final action to be taken will be made by the Director, Division of Facilities and Security, through the Director, Office of Administration, to the Deputy Executive Director for Information Services and Administration and Chief Information Officer on the basis of the information in the possession of the NRC, including any answer filed by the individual.

(b) The Director, Office of Administration, may for good cause shown, at the request of the individual, extend the time for filing a written request for a hearing or for filing a written answer to the matters contained in the notification letter.

[47 FR 38676, Sept. 2, 1982, as amended at 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 64 FR 15642, Apr. 1, 1999]

§ 10.24 Procedures for hearing and review.

[Top of File]

(a) Upon receipt of a timely filed request for a hearing and answer complying with the requirements set forth in § 10.22, the Director, Office of Administration, shall forthwith appoint a Hearing Examiner, and the General Counsel shall forthwith assign an NRC attorney to act as Hearing Counsel. The Director, Office of Administration, shall promptly notify the individual of the identity of the Hearing Examiner and proposed hearing date, which shall be selected with due regard for the convenience of the parties and their representatives.

(b) Within 72 hours of being notified of the identity of the Hearing Examiner, the individual may request that the Hearing Examiner be disqualified for cause by filing with the Director, Office of Administration, a written statement of the individual's reasons for seeking disqualification. The time for filing the request may be extended by the Director, Office of Administration, for good cause shown. If the Director, Office of Administration, grants the request the procedures of paragraph (a) of this section and this paragraph shall be followed just as though there had been no prior appointment.

(c) The individual shall have the right to appear at the hearing before the Hearing Examiner, to be represented by counsel or other representative, to introduce documentary or other evidence, and to call, examine, and cross-examine witnesses, subject to the provisions and limitations set forth in this part.

[47 FR 38676, Sept. 2, 1982, as amended at 51 FR 35999, Oct. 8, 1986; 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989]

§ 10.25 NRC Hearing Counsel.

[Top of File]

(a) Hearing Counsel assigned pursuant to § 10.24 will, before the scheduling of the hearing, review the information in the case and will request the presence of witnesses and the production of documents and other physical evidence relied upon by the Director, Division of Facilities and Security, in making a finding that a question exists regarding the eligibility of the individual for an NRC access authorization and/or an employment clearance in accordance with the provisions of this part. When the presence of a witness and the production of documents and other physical evidence is deemed by the Hearing Counsel to be necessary or desirable for a determination of the issues, the Director, Division of Facilities and Security, will make arrangements for the production of evidence and for witnesses to appear at the hearing by subpoena or otherwise.

(b) Hearing Counsel is authorized to consult directly with individual's counsel or representative or the individual, if the individual is not so represented, for purposes of reaching mutual agreement upon arrangements for expeditious hearing of the case. Such arrangements may include clarification of issues and stipulations with respect to testimony and contents of documents and other physical evidence. Such stipulations when entered into shall be binding upon the individual and the NRC for the purposes of this part. Prior to any consultation with the individual, the Hearing Counsel shall advise the individual of his or her rights under this part, of his or her right to counsel or other representation, and of the possibility that any statement made by the individual to the Hearing Counsel may be used in subsequent proceedings.

(c) The individual is responsible for producing witnesses in his or her own behalf and/or presenting other evidence before the Hearing Examiner to support the individual's answer and defense to the allegations contained in the notification letter. When requested by the individual, however, the Hearing Counsel may assist the individual to the extent practicable and necessary. The Hearing Counsel may at his or her discretion request the Director, Division of Facilities and Security, to arrange for the issuance of subpoenas for witnesses to attend the hearing in the individual's behalf, or for the production of specific documents or other physical evidence, provided a showing of the necessity for assistance has been made.

[47 FR 38676, Sept. 2, 1982, as amended at 64 FR 15643, Apr. 1, 1999]

§ 10.26 Appointment of Hearing Examiner.

[Top of File]

The appointment of a Hearing Examiner, pursuant to § 10.24 of this part, shall be from a list of qualified attorneys possessing the highest degree of integrity, ability, and good judgment. To qualify, an attorney shall have an NRC "Q" access authorization and may be an employee of the NRC, its contractors, agents or licensees. However, no employee or consultant of the NRC shall serve as Hearing Examiner hearing the case of an employee (including a consultant) or applicant for employment with the NRC; nor shall any employee or consultant of an NRC contractor, agent or licensee serve as Hearing Examiner hearing the case of an employee (including a consultant) or an applicant for employment of that contractor, agent, or licensee. No Hearing Examiner shall be selected who has knowledge of the case or of any information relevant to the disposition of it, or who for any reason would be unable to issue a fair and unbiased recommendation.

§ 10.27 Prehearing proceedings.

[Top of File]

(a) After the appointment of the Hearing Examiner, he or she shall be furnished the record in the case, which shall consist of the letter of notification, the request for hearing and its supporting answer, and the notice of hearing, if it has been issued, and any stipulations agreed to by the individual and the Hearing Counsel.

(b) The Hearing Examiner may on his or her own motion, or on that of either party, convene a prehearing conference with the Hearing Counsel and the individual and his or her counsel or representative, if any, for the purpose of clarifying the issues, identifying witnesses who may be called, identifying documents and other physical evidence that may be offered into evidence, and entering into stipulations of fact.

(c) The parties will be notified by the Hearing Examiner at least ten days in advance of the hearing of the time and place of the hearing. For good cause shown, the Hearing Examiner may order postponements or continuances from time to time. If, after due notice, the individual fails to appear at the hearing, or appears but is not prepared to proceed, the Hearing Examiner shall, unless good cause is shown, return the case to the Director, Division of Facilities and Security, who shall make a recommendation on final action to be taken, through the Director, Office of Administration, to the Deputy Executive Director for Information Services and Administration and Chief Information Officer on the basis of the information in the possession of the NRC.

[47 FR 38676, Sept. 2, 1982, as amended at 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 64 FR 15643, Apr. 1, 1999]

§ 10.28 Conduct of hearing.

[Top of File]

(a) The Hearing Examiner shall conduct the hearing in an orderly, impartial and decorous manner. Technical rules of evidence may be relaxed so that a full evidentiary record may be made based on all material and relevant facts. Hearsay evidence may for good cause shown be received at the discretion of the Hearing Examiner and accorded such weight as the circumstances warrant.

(b) The proceedings shall be open only to duly authorized representatives of the staff of the NRC, the individual, his or her counsel or representative, and such persons as may be officially authorized by the Hearing Examiner. Witnesses shall not testify in the presence of other witnesses except that the Hearing Examiner may, at his or her discretion, allow for expert witnesses to be present during testimony relevant to their own testimony.

(c) Witnesses, including the individual, shall be examined under oath or affirmation by the party who called them and may be cross-examined by the other. The Hearing Examiner shall rule on all evidentiary matters, may further examine any witness, and may call for additional witnesses or the production of documentary or other physical evidence if, in the exercise of his or her discretion, such additional evidence is deemed necessary to the resolution of an issue.

(d) If it appears during the hearing that Restricted Data or national security information may be disclosed, the Hearing Examiner shall

assure that disclosure is made only to persons authorized to receive it.

(e) The Hearing Examiner may, at any time during the hearing, permit the Hearing Counsel to amend the notification letter to add or modify allegations to be considered. In the event of such an amendment to the notification letter, the individual shall be given an opportunity to answer the amended allegations. If the changes are of such a substantial nature that the individual cannot answer the amended allegations without additional time, the Hearing Examiner shall grant such additional time as he or she deems necessary.

(f) The Hearing Examiner may receive and consider evidence in the form of depositions or responses to interrogatories upon a showing that the witness is not available for good reason such as death, serious illness or similar cause, or in the form of depositions, interrogatories, affidavits or statements with agreement of the parties. The Hearing Examiner may take official notice at any stage of the proceeding, where appropriate, of any fact not subject to reasonable dispute in that it is either (1) generally known within the United States or (2) capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned. A party is entitled upon timely request to an opportunity to be heard as to the propriety of taking such official notice. In the absence of prior notification the request may be made after notice is taken.

(g) Hearing Counsel shall examine and cross-examine witnesses and otherwise assist the Hearing Examiner in such a manner as to bring out a full and true disclosure of all facts, both favorable and unfavorable, having a bearing on the issues before the Hearing Examiner. In performing these duties, the Hearing Counsel shall avoid the attitude of a prosecutor and shall always bear in mind that the proceeding is an administrative hearing and not a trial.

(h) Hearing Counsel shall not participate in the deliberations of the Hearing Examiner, and shall express no opinion to the Hearing Examiner concerning the merits of the case. Hearing Counsel shall also, during the course of the hearing, advise the individual of his or her rights under these procedures when the individual is not represented by counsel or other representative.

(i) The individual shall be afforded an opportunity to cross-examine persons who have made oral or written statements adverse to the individual relating to a controverted issue except that any such statement may be received and considered by the Hearing Examiner without affording such opportunity in either of the following circumstances:

(1) The head of the department or agency supplying the statement certifies that the person who furnished the information is a confidential informant who has been engaged in obtaining intelligence information for the Government and that disclosure of the informant's identity would substantially harm the national interest or would endanger the well-being of the informant.

(2) The Commission has determined, after considering the information furnished by the investigative agency concerning the reliability of the person who furnished the information and the accuracy of the statement concerned, that the statement appears to be reliable and material, and that failure of the Hearing Examiner to receive and consider such statement would, in view of the fact that access authorization and/or employment clearance is being sought, be substantially harmful to the national security and that the person who furnished the information cannot appear to testify due to death, serious illness, or similar cause.

(j)(1) Whenever the procedure under paragraph (i)(1) of this section is used, the individual shall be given a summary of the information which shall be as comprehensive and detailed as the national security permits.

(2) Whenever the procedure under paragraph (i)(2) is used, the individual shall be provided the identity of the person and the information to be considered.

(3) In both paragraph (i) (1) and (2) procedures, appropriate consideration shall be accorded to the fact that the individual did not have an opportunity to cross-examine such informant or person.

(k) Records provided by investigative agencies that were compiled as a regular or routine procedure by the business or agency from which obtained, or other physical evidence other than investigative reports, may be received and considered subject to rebuttal without authenticating witnesses, provided that the investigative agency furnished such information to the NRC pursuant to its responsibilities in connection with assisting the NRC in determining the individual's eligibility for access authorization and/or employment clearance.

(l) Records compiled in the regular course of business, or other physical evidence other than investigative reports, relating to a controverted issue which, because they are classified, may not be inspected by the individual, may be received and considered provided that:

(1) The Commission has made a determination that such records or other physical evidence appears to be material;

(2) The Commission has made a determination that failure to receive and consider such records or other physical evidence would, in view of the fact that access authorization and/or employment clearance is being sought, be substantially harmful to the national security; and

(3) To the extent that national security permits, a summary or description of such records or other physical evidence is made available to the individual. In every such case, information as to the authenticity and accuracy of such physical evidence furnished by the investigative agency shall be considered.

(m) If the Hearing Examiner determines that additional investigation of any material information is required, he or she shall request in writing that the Director, Office of Administration, arrange for the investigation and shall specify those issues upon which more evidence is requested and identify, where possible, any persons or sources that might provide the evidence sought.

(n) A written transcript of the entire proceeding must be made by a person possessing appropriate NRC access authorization and/or employment clearance and, except for portions containing Restricted Data or National Security Information, or other lawfully withholdable

information, a copy of the transcript will be furnished the individual without cost. The transcript or recording will be made part of the applicant's or employee's personnel security file.

[47 FR 38676, Sept. 2, 1982, as amended at 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 64 FR 15643, Apr. 1, 1999]

§ 10.29 Recommendation of the Hearing Examiner.

[Top of File]

(a) The Hearing Examiner's findings and recommendation shall be based upon the entire record consisting of the transcript of the hearing, the documentary and other evidence adduced therein, and the letter of notification and answer. The Hearing Examiner shall also consider the circumstances of the receipt of evidence pursuant to § 10.28, the individual's record of past employment, and the nature and sensitivity of the job the individual is or may be expected to perform.

(b) The Hearing Examiner shall make specific findings on each allegation in the notification letter including the reasons for his or her findings, and shall make a recommendation as to the action which should be taken in the case.

(c) The Hearing Examiner's recommendation shall be predicated upon his or her findings. If, after considering all the factors in light of the criteria in this part, the Hearing Examiner is of the opinion that granting or continuing access authorization and/or employment clearance to the individual will not endanger the common defense and security and will be clearly consistent with the national interest, a favorable recommendation shall be made; otherwise, an adverse recommendation shall be made.

(d) The Hearing Examiner shall submit his or her findings and recommendation in a signed report together with the record of the case to the Director, Office Administration, with the least practical delay.

(e) The Hearing Examiner shall not consider the possible impact of the loss of the individual's services upon the NRC program.

[47 FR 38676, Sept. 2, 1982, as amended at 52 FR 31609, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989]

§ 10.30 New evidence.

[Top of File]

After the close of the hearing, in the event the individual discovers new evidence not previously available or known to him or her, the individual may petition the Hearing Examiner if the Hearing Examiner's recommendation has not yet been issued, or thereafter, the Director, Office of Administration, to reopen the record to receive that evidence. If the Hearing Examiner or the Director, respectively, deem it material and appropriate, the record may be reopened to accept the evidence either by stipulation, with the agreement of the Hearing Counsel, or in a reconvened hearing.

[47 FR 38676, Sept. 2, 1982, as amended at 52 FR 31610, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989]

§ 10.31 Actions on the recommendations.

[Top of File]

(a) Upon receipt of the findings and recommendation from the Hearing Examiner, and the record, the Director, Office of Administration, shall forthwith transmit it to the Deputy Executive Director for Information Services and Administration and Chief Information Officer who has the discretion to return the record to the Director, Office of Administration, for further proceedings by the Hearing Examiner with respect to specific matters designated by the Deputy Executive Director for Information Services and Administration and Chief Information Officer.

(b)(1) In the event of a recommendation by the Hearing Examiner that an individual's access authorization and/or employment clearance be denied or revoked, the Deputy Executive Director for Information Services and Administration and Chief Information Officer shall immediately notify the individual in writing of the Hearing Examiner's findings with respect to each allegation contained in the notification letter, and that the individual has a right to request a review of his or her case by the NRC Personnel Security Review Panel and of the right to submit a brief in support of his or her contentions. The request for a review must be submitted to the Deputy Executive Director for Information Services and Administration and Chief Information Officer within five days after the receipt of the notice. The brief will be forwarded to the Deputy Executive Director for Information Services and Administration and Chief Information Officer, for transmission to the NRC Personnel Security Review Panel not later than 10 days after receipt of the notice.

(2) In the event the individual fails to request a review by the NRC Personnel Security Review Panel of an adverse recommendation within the prescribed time, the Deputy Executive Director for Information Services and Administration and Chief Information Officer may at his or her discretion request a review of the record of the case by the NRC Personnel Security Review Panel. The request will set forth those matters at issue in the hearing on which the Deputy Executive Director for Information Services and Administration and Chief Information Officer desires a review by the NRC Personnel Security Review Panel.

(c) Where the Hearing Examiner has made a recommendation favorable to the individual, the Deputy Executive Director for Information Services and Administration and Chief Information Officer may at his or her discretion request a review of the record of the case by the NRC Personnel Security Review Panel. If this request is made, the Deputy Executive Director for Information Services and Administration and

Chief Information Officer shall immediately cause the individual to be notified of that fact and of those matters at issue in the hearing on which the Deputy Executive Director for Information Services and Administration and Chief Information Officer desires a review by the NRC Personnel Security Review Panel. The Deputy Executive Director for Information Services and Administration and Chief Information Officer will further inform the individual that within 10 days of receipt of this notice, the individual may submit a brief concerning those matters at issue for the consideration of the NRC Personnel Security Review Panel. The brief must be forwarded to the Deputy Executive Director for Information Services and Administration and Chief Information Officer for transmission to the NRC Personnel Security Review Panel.

(d) In the event of a request for a review pursuant to paragraphs (b) and (c) of this section, the Hearing Counsel may file a brief within 10 days of being notified by the Deputy Executive Director for Information Services and Administration and Chief Information Officer that a review has been requested. The brief will be forwarded to the Deputy Executive Director for Information Services and Administration and Chief Information Officer for transmission to the NRC Personnel Security Review Panel.

(e) The Hearing Counsel may also request a review of the case by the NRC Personnel Security Review Panel. The request for review, which will set forth those matters at issue in the hearing on which the Hearing Counsel desires a review, will be submitted to the Deputy Executive Director for Information Services and Administration and Chief Information Officer within five days after receipt of the Hearing Examiner's findings and recommendation. Within 10 days of the request for review, the Hearing Counsel may file a brief which will be forwarded to the Deputy Executive Director for Information Services and Administration and Chief Information Officer for transmission to the NRC Personnel Security Review Panel. A copy of the request for review, and a copy of any brief filed, will be immediately sent to the individual. If the Hearing Counsel's request is for a review of a recommendation favorable to the individual, the individual may, within 10 days of receipt of a copy of the request for review, submit a brief concerning those matters at issue for consideration of the NRC Personnel Security Review Panel. The brief will be forwarded to the Deputy Executive Director for Information Services and Administration and Chief Information Officer for transmission to the NRC Personnel Security Review Panel and Hearing Counsel. A copy of the brief will be made a part of the applicant's personnel security file.

(f) The time limits imposed by this section for requesting reviews and the filing of briefs may be extended by the Deputy Executive Director for Information Services and Administration and Chief Information Officer for good cause shown.

(g) In the event a request is made for a review of the record by the NRC Personnel Security Review Panel, the Deputy Executive Director for Information Services and Administration and Chief Information Officer shall send the record, with all findings and recommendations and any briefs filed by the individual and the Hearing Counsel, to the NRC Personnel Security Review Panel. If neither the individual, the Deputy Executive Director for Information Services and Administration and Chief Information Officer, nor the Hearing Counsel requests a review, the final determination will be made by the Deputy Executive Director for Information Services and Administration and Chief Information Officer on the basis of the record with all findings and recommendations.

[64 FR 15643, Apr. 1, 1999]

§ 10.32 Recommendation of the NRC Personnel Security Review Panel.

[Top of File]

(a) The Deputy Executive Director for Information Services and Administration and Chief Information Officer shall designate an NRC Personnel Security Review Panel to conduct a review of the record of the case. The NRC Personnel Security Review Panel shall be comprised of three members, two of whom shall be selected from outside the security field. To qualify as an NRC Personnel Security Review Panel member, the person designated shall have an NRC "Q" access authorization and may be an employee of the NRC, its contractors, agents, or licensees. However, no employee or consultant of the NRC shall serve as an NRC Personnel Security Review Panel member reviewing the case of an employee (including a consultant) or applicant for employment with the NRC; nor shall any employee or consultant of an NRC contractor, agent or licensee serve as an NRC Personnel Security Review Panel member reviewing the case of an employee (including a consultant) or an applicant for employment of that contractor, agent, or licensee. No NRC Personnel Security Review Panel member shall be selected who has knowledge of the case or of any information relevant to the disposition of it, or who for any reason would be unable to issue a fair and unbiased recommendation.

(b) The NRC Personnel Security Review Panel shall consider the matter under review based upon the record supplemented by any brief submitted by the individual or the Hearing Counsel. The NRC Personnel Security Review Panel may request additional briefs as the Panel deems appropriate. When the NRC Personnel Security Review Panel determines that additional evidence or further proceedings are necessary, the record may be returned to the Deputy Executive Director for Information Services and Administration and Chief Information Officer with a recommendation that the case be returned to the Director, Office of Administration, for appropriate action, which may include returning the case to the Hearing Examiner and reconvening the hearing to obtain additional testimony. When additional testimony is taken by the Hearing Examiner, a written transcript of the testimony will be made a part of the record and will be taken by a person possessing an appropriate NRC access authorization and/or employment clearance and, except for portions containing Restricted Data or National Security Information, or other lawfully withholdable information, a copy of the transcript will be furnished the individual without cost.

(c) In conducting the review, the NRC Personnel Security Review Panel shall make its findings and recommendations as to the eligibility or continued eligibility of an individual for an access authorization and/or an employment clearance on the record supplemented by additional testimony or briefs, as has been previously determined by the NRC Personnel Security Review Panel as appropriate.

(d) The NRC Personnel Security Review Panel shall not consider the possible impact of the loss of the individual's services upon the NRC program.

(e) If, after considering all the factors in light of the criteria set forth in this part, the NRC Personnel Security Review Panel is of the opinion that granting or continuing an access authorization and/or an employment clearance to the individual will not endanger the common defense and security and will be clearly consistent with the national interest, the NRC Personnel Security Review Panel shall make a favorable recommendation; otherwise, the NRC Personnel Security Review Panel shall make an adverse recommendation. The NRC

Personnel Security Review Panel shall prepare a report of its findings and recommendations and submit the report in writing to the Deputy Executive Director for Information Services and Administration and Chief Information Officer, who shall furnish a copy to the individual. The findings and recommendations must be fully supported by stated reasons.

[64 FR 15644, Apr. 1, 1999]

§ 10.33 Action by the Deputy Executive Director for Information Services and Administration and Chief Information Officer.

[Top of File]

(a) The Deputy Executive Director for Information Services and Administration and Chief Information Officer, on the basis of the record accompanied by all findings and recommendations, shall make a final determination whether access authorization and/or employment clearance shall be granted, denied, or revoked, except when the provisions of § 10.28 (i), (j), or (l) have been used and the Deputy Executive Director for Information Services and Administration and Chief Information Officer determination is adverse, the Commission shall make the final agency determination.

(b) In making the determination as to whether an access authorization and/or an employment clearance shall be granted, denied, or revoked, the Deputy Executive Director for Information Services and Administration and Chief Information Officer or the Commission shall give due recognition to the favorable as well as the unfavorable information concerning the individual and shall take into account the value of the individual's services to the NRC's program and the consequences of denying or revoking access authorization and/or employment clearance.

(c) In the event of an adverse determination, the Deputy Executive Director for Information Services and Administration and Chief Information Officer shall promptly notify the individual through the Director, Office of Administration, of his or her decision that an access authorization and/or an employment clearance is being denied or revoked and of his or her findings with respect to each allegation contained in the notification letter for transmittal to the individual.

(d) In the event of a favorable determination, the Deputy Executive Director for Information Services and Administration and Chief Information Officer shall promptly notify the individual through the Director, Office of Administration.

[64 FR 15644, Apr. 1, 1999 as amended at 70 FR 30896, May 31, 2005]

§ 10.34 Action by the Commission.

[Top of File]

(a) Whenever, under the provisions of § 10.28(i), (j), or (l) an individual has not been afforded an opportunity to confront and cross-examine witnesses who have furnished information adverse to the individual and an adverse recommendation has been made by the Deputy Executive Director for Information Services and Administration and Chief Information Officer, the Commission shall review the record and determine whether an access authorization and/or an employment clearance should be granted, denied, or revoked, based upon the record.

(b) When the Commission determines to deny or revoke access authorization and/or employment clearance, the individual shall promptly be notified through the Director, Office of Administration, of its decision that access authorization and/or employment clearance is being denied or revoked and of its findings and conclusions with respect to each allegation contained in the notification letter for transmittal to the individual.

(c) Nothing contained in these procedures shall be deemed to limit or affect the responsibility and powers of the Commission to deny or revoke access to Restricted Data or national security information if the security of the nation so requires. Such authority may not be delegated and may be exercised when the Commission determines that invocation of the procedures prescribed in this part is inconsistent with the national security. Such determination shall be conclusive.

[47 FR 38676, Sept. 2, 1982, as amended at 52 FR 31610, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 64 FR 15645, Apr. 1, 1999]

§ 10.35 Reconsideration of cases.

[Top of File]

(a) Where, pursuant to the procedures set forth in §§ 10.20 through 10.34, the Deputy Executive Director for Information Services and Administration and Chief Information Officer or the Commission has made a determination granting an access authorization and/or an employment clearance to an individual, the individual's eligibility for an access authorization and/or an employment clearance will be reconsidered only when subsequent to the time of that determination, new derogatory information has been received or the scope or sensitivity of the Restricted Data or National Security Information to which the individual has or will have access has significantly increased. All new derogatory information, whether resulting from the NRC's reinvestigation program or other sources, will be evaluated relative to an individual's continued eligibility in accordance with the procedures of this part.

(b) Where, pursuant to these procedures, the Commission or Deputy Executive Director for Information Services and Administration and Chief Information Officer has made a determination denying or revoking an access authorization and/or an employment clearance to an

individual, the individual's eligibility for an access authorization and/or an employment clearance may be reconsidered when there is a bona fide offer of employment and/or a bona fide need for access to Restricted Data or National Security Information and either material and relevant new evidence is presented, which the individual and his or her representatives are without fault in failing to present before, or there is convincing evidence of reformation or rehabilitation. Requests for reconsideration must be submitted in writing to the Deputy Executive Director for Information Services and Administration and Chief Information Officer through the Director, Office of Administration. Requests must be accompanied by an affidavit setting forth in detail the information referred to above. The Deputy Executive Director for Information Services and Administration and Chief Information Officer shall cause the individual to be notified as to whether his or her eligibility for an access authorization and/or an employment clearance will be reconsidered and if so, the method by which a reconsideration will be accomplished.

(c) Where an access authorization and/or an employment clearance has been granted to an individual by the Director, Division of Facilities and Security, without recourse to the procedures set forth in §§ 10.20 through 10.34, the individual's eligibility for an access authorization and/or an employment clearance will be reconsidered only in a case where, subsequent to the granting of the access authorization and/or employment clearance, new derogatory information has been received or the scope or sensitivity of the Restricted Data or National Security Information to which the individual has or will have access has significantly increased. All new derogatory information, whether resulting from the NRC's reinvestigation program or other sources, will be evaluated relative to an individual's continued eligibility in accordance with the procedures of this part.

[64 FR 15645, Apr. 1, 1999]

Subpart D--Miscellaneous

[Top of File]

§ 10.36 Terminations.

In the event the individual is no longer an applicant for access authorization and/or employment clearance or no longer requires such, the procedures of this part shall be terminated without a final determination as to the individual's eligibility for access authorization and/or employment clearance.

§ 10.37 Attorney representation.

[Top of File]

In the event the individual is represented by an attorney or other representative, the individual shall file with the Director, Office of Administration, a document designating such attorney or representative and authorizing such attorney or representative to receive all correspondence, transcripts, and other documents pertaining to the proceeding under this part.

[47 FR 38676, Sept. 2, 1982, as amended at 52 FR 31610, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989]

§ 10.38 Certifications.

[Top of File]

Whenever information is made a part of the record under the exceptions authorized by § 10.28 (i), (j), or (l), the record shall contain certificates evidencing that the required determinations have been made.

PART 11--CRITERIA AND PROCEDURES FOR DETERMINING ELIGIBILITY FOR ACCESS TO OR CONTROL OVER SPECIAL NUCLEAR MATERIAL

[Top of File]

General Provisions

[Top of File]

§ 11.1 Purpose.

This part establishes the requirements for special nuclear material access authorization, and the criteria and procedures for resolving questions concerning the eligibility of individuals to receive special nuclear material access authorization for conduct of certain activities, licensed or otherwise, which involve access to or control over special nuclear material.

§ 11.3 Scope.

[Top of File]

(a) The requirements, criteria, and procedures of this part apply to the establishment of and eligibility for special nuclear material access authorization for employees, contractors, consultants of, and applicants for employment with licensees or contractors of the Nuclear Regulatory Commission. This employment, contract, service, or consultation may involve any duties or assignments within the criteria of § 11.11 or § 11.13 requiring access to, or control over, formula quantities of special nuclear material (as defined in part 73 of this chapter).

(b) The requirements, criteria, and procedures of this part are in addition to and not in lieu of any requirements, criteria, or procedures for access to or control over classified special nuclear material.

[45 FR 76970, Nov. 21, 1980, as amended at 64 FR 15645, Apr. 1, 1999]

§ 11.5 Policy.

[Top of File]

It is the policy of the Nuclear Regulatory Commission to carry out its authority to establish and administer, in a manner consistent with traditional American concepts of justice, a personnel security program in the interests of the common defense and security for the purpose of safeguarding special nuclear material and preventing sabotage which would endanger the public by exposure to radiation. To this end, the Commission has established criteria for determining eligibility for special nuclear material access authorization and will afford affected individuals the opportunity for administrative review of questions concerning their eligibility for special nuclear material access authorization.

§ 11.7 Definitions.

[Top of File]

As used in this part:

Terms defined in parts 10, 25, 50, 70, 72, 73, and 95 of this chapter have the same meaning when used in this part.

NRC-"R" special nuclear material access authorization means an administrative determination based upon a national agency check with law and credit investigation that an individual in the course of employment is eligible to work at a job falling within the criterion of § 11.11(a)(2).

NRC-"U" special nuclear material access authorization means an administrative determination based upon a single scope background investigation, normally conducted by the Office of Personnel Management, that an individual in the course of employment is eligible to work at a job falling within the criterion of 11.11(a)(1) or 11.13.

Special nuclear material access authorization means an administrative determination that an individual (including a contractor or consultant) who is employed by or is an applicant for employment with an affected Commission contractor, licensee of the Commission, or contractor of a licensee of the Commission may work at a job which affords access to or control over special nuclear material and that permitting the individual to work at that job would not be inimical to the common defense and security.

[45 FR 76970, Nov. 21, 1980, as amended at 46 FR 58282, Dec. 1, 1981; 50 FR 39077, Sept. 27, 1985; 55 FR 11574, Mar. 29, 1990; 64 FR 15645, Apr. 1, 1999]

§ 11.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0062.

(b) The approved information collection requirements contained in this part appear in §§ 11.9, 11.11, 11.13, 11.15, and 11.16.

[62 FR 52185, Oct. 6, 1997]

§ 11.9 Specific exemptions.

[Top of File]

The Commission may, upon application of any interested party, grant an exemption from the requirements of this part. Exemptions will be granted only if they are authorized by law and will not constitute an undue risk to the common defense and security. Documentation related to the request, notification and processing of an exemption shall be maintained for three years beyond the period covered by the exemption.

[45 FR 76970, Nov. 21, 1980, as amended at 53 FR 19245, May 27, 1988]

§ 11.10 Maintenance of records.

[Top of File]

Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawing, specification, must include all pertinent information such as stamps, initials, and signatures etc. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[53 FR 19245, May 27, 1988]

Requirements for Special Nuclear Material Access Authorization

[Top of File]

§ 11.11 General requirements.

(a) Each licensee who uses, processes, stores, transports, or delivers to a carrier for transport, formula quantities of special nuclear material (as defined in part 73 of this chapter) subject to the physical protection requirements of §§ 73.20, 73.25, 73.26, 73.45, and 73.46, and each person subject to the general licensing requirements of § 70.20a, shall identify at its facility or plant (excluding all non-power reactor facilities and storage of fuel incident thereto and facilities and plants in which the licensee possesses or uses only irradiated special nuclear material subject to the exemption of § 73.6(b)), describe, and if not already provided, provide to the Commission, by December 26, 1985 by amendment to its security plan:

(1) All jobs in which an individual could steal or divert special nuclear material, or commit sabotage which would endanger the public by exposure to radiation, by working alone or in cooperation with an individual who does not possess an NRC - U special nuclear material access authorization, or by directing or coercing any individual to assist in the theft, diversion, or sabotage. Such jobs include but are not limited to:

(i) All positions in the licensee's security force,

(ii) Management positions with the authority to:

(A) Direct the actions of members of the security force or alter security procedures, or

(B) Direct routine movements of special nuclear material, or

(C) Direct the routine status of vital equipment.

(iii) All jobs which require unescorted access within onsite alarm stations.

(iv) All jobs which require unescorted access[2] to special nuclear material or within vital areas.

(2) All jobs which require unescorted access within protected areas and which do not fall within the criterion of paragraph (a)(1) of this section.

(b) After 365 days following Commission approval of the amended security plan submitted in accordance with paragraph (a) of this section, no individual may be permitted to work at any job determined by the Commission to fall within the criterion of paragraph (a)(1) of this section without an NRC -U special nuclear material access authorization, and no individual may be permitted unescorted access to any protected area at any site subject to this Part without either an NRC-U or NRC-R special nuclear material access authorization. The exceptions to the requirement for an NRC-U and NRC-R special nuclear material access authorization are as follows:

(1) Exceptions to the requirement for an NRC-U special nuclear material access authorization for an individual to work at a job within the criteria of paragraph (a)(1) are provided for

(i) Any individual employed in such a job on October 28, 1985, who is not yet in receipt of an NRC-U special nuclear material access authorization from the Commission, provided that a complete application has been submitted to and is pending before the NRC for processing for that employee in accordance with § 11.15 (a) and (b); or

(ii) Any individual in possession of an NRC-L or R access authorization or an equivalent active Federal security clearance but not yet in receipt of the NRC-U special nuclear material access authorization, provided that a complete application has been submitted to and is pending before the NRC for processing for that employee in accordance with § 11.15 (a) or (b), or both.

(2) Exceptions to the requirement for an NRC-R special nuclear material access authorization for an individual to have unescorted access to a protected area are provided for

(i) Any individual employed in such a job on October 28, 1985 who is not yet in receipt of an NRC-R special nuclear material access authorization from the Commission, provided that a complete application has been submitted to and is pending before the NRC for processing for that employee in accordance with § 11.15 (a) and (b); or

(ii) Any individual in possession of an NRC-L access authorization or an equivalent active Federal security clearance, provided that a complete application has been submitted to the NRC for processing for that employee in accordance with § 11.15 (a) or (b), or both.

[45 FR 76970, Nov. 21, 1980, as amended at 46 FR 56599, Nov. 18, 1981; 50 FR 39077, Sept. 27, 1985]

[2] This does not alter the requirement for methods to observe individuals within material access areas as stated in § 73.46(e)(9) of this chapter.

§ 11.13 Special requirements for transportation.

[Top of File]

(a) All individuals who, after 365 days following approval of the amended security plan submitted in accordance with § 11.11(a), transport, arrange for transport, drive motor vehicles in road shipments of special nuclear material, pilot aircraft in air shipments of special nuclear material, act as monitors at transfer points, or escort road, rail, sea, or air shipments of special nuclear material subject to the appropriate physical protection requirements of §§ 73.20, 73.25, 73.26, or 73.27 of this chapter, or who are authorized to alter the scheduling and routing of such transport shall have NRC- U special nuclear material access authorization. Exceptions are provided for:

(1) Any individual who is employed in such a job on October 28, 1985 and who is not yet in receipt of an NRC-U special nuclear material access authorization from the Commission, provided that a complete application has been submitted to and is pending before the NRC for processing for that employee in accordance with § 11.15 (a) and (b) or

(2) Any individual in possession of an NRC-L or R access authorization or equivalent active Federal security clearance but not yet in receipt of the NRC-U special nuclear material access authorization, provided that a complete application has been submitted to and is pending before the NRC for processing for that employee in accordance with § 11.15 (a) or (b), or both.

(b) Each licensee who, 365 days after Commission approval of the amended security plan submitted in accordance with § 11.11(a), transports or delivers to a carrier for transport special nuclear material subject to the physical protection requirement of §§ 73.20, 73.25, 73.26, or 73.27 of this chapter shall confirm and record prior to shipment the name and special nuclear material access authorization number of all individuals identified in paragraph (a) of this section assigned to the shipment. The licensee shall retain this record for three years after the last shipment is made. However, the licensee need not confirm and record the special nuclear material access authorization number in the case of any individual for whom an application has been submitted and is pending before the NRC in accordance with paragraph (a) of this section.

[50 FR 39078, Sept. 27, 1985, as amended at 53 FR 19245, May 27, 1988]

§ 11.15 Application for special nuclear material access authorization.

[Top of File]

(a)(1) Application for special nuclear material access authorization, renewal, or change in level must be filed by the licensee on behalf of the applicant with the Director, Division of Facilities and Security, Mail Stop T7-D57, either by mail addressed to the U.S. Nuclear Regulatory

Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. Applications for affected individuals employed on October 28, 1985, shall be submitted within 60 days of notification of Commission approval of the amended security plan.

(2) Licensees who wish to secure NRC-U or NRC-R special nuclear material access authorizations for individuals in possession of an active NRC Q or L access authorization or other security clearance granted by another Federal agency based on an equivalent investigation shall submit a "Security Acknowledgment" (NRC Form 176) and a "Request for Access Authorization" (NRC Form 237). NRC will process these requests by verifying the data on an NRC-cleared individual, or by contacting the Federal agency that granted the clearance, requesting certification of the security clearance, and determining the investigative basis and level of the clearance. Licensees may directly request the Federal agency that administered the security clearance, if other than NRC, to certify to the NRC that it has on file an active security clearance for an individual and to specify the investigative basis and level of the clearance.

(b) Applications for special nuclear material access authorization for individuals, other than those qualifying under the provisions of § 11.15 (a)(2), must be made on forms supplied by the Commission, including:

(1) Questionnaire for National Security Positions (SF-86, Parts 1 and 2);

(2) Two completed standard fingerprint cards (FD-258);

(3) Security Acknowledgment (NRC Form 176);

(4) Other related forms where specified in accompanying instruction (NRC-254); and

(5) A statement by the employer, prospective employer, or contractor identifying the job to be assigned to or assumed by the individual and the level of authorization needed, justified by appropriate reference to the licensee's security plan.

(c)(1) Except as provided in paragraph (c)(2) of this section, NRC-U special nuclear material access authorizations must be renewed every five years from the date of issuance. Except as provided in paragraph (c)(3) of this section, NRC-R special nuclear material access authorizations must be renewed every ten years from the date of issuance. An application for renewal must be submitted at least 120 days before the expiration of the five-year period for NRC-U and ten-year period for NRC-R, respectively, and must include:

(i) A statement by the licensee that at the time of application for renewal the individual's assigned or assumed job requires an NRC-U or an NRC-R special nuclear material access authorization, justified by appropriate reference to the licensee's security plan;

(ii) The Questionnaire for National Security Positions (SF-86, Parts 1 and 2);

(iii) Two completed standard fingerprint cards (FD-258); and

(iv) Other related forms specified in accompanying NRC instructions (NRC Form 254).

(2) An exception to the time for submission of NRC-U special nuclear material access authorization renewal applications and the paperwork required is provided for individuals who have a current and active DOE-Q access authorization and are subject to DOE Reinvestigation Program requirements. For these individuals, the submission to DOE of the SF-86 pursuant to DOE Reinvestigation Program requirements (generally every five years) will satisfy the NRC renewal submission and paperwork requirements even if less than five years has passed since the date of issuance or renewal of the NRC-U access authorization. Any NRC-U special nuclear material access authorization renewed in response to provisions of this paragraph will not be due for renewal until the date set by DOE for the next reinvestigation of the individual pursuant to DOE's Reinvestigation Program.

(3) An exception to the time for submission of NRC-R special nuclear material access authorization renewal applications and the paperwork required is provided for individuals who have a current and active DOE-L or DOE-Q access authorization and are subject to DOE Reinvestigation Program requirements. For these individuals, the submission to DOE of the SF-86 pursuant to DOE Reinvestigation Program requirements will satisfy the NRC renewal submission and paperwork requirements even if less than ten years have passed since the date of issuance or renewal of the NRC-R access authorization. Any NRC-R special nuclear material access authorization renewed pursuant to this paragraph will not be due for renewal until the date set by DOE for the next reinvestigation of the individual pursuant to DOE's Reinvestigation Program.

(4) Notwithstanding the provisions of paragraph (c)(2) of this section, the period of time for the initial and each subsequent NRC-U renewal application to NRC may not exceed seven years.

(5) Notwithstanding the provisions of paragraph (c)(3) of this section, the period of time for the initial and each subsequent NRC-R renewal application to NRC may not exceed twelve years. Any individual who is subject to the DOE Reinvestigation Program requirements but, for administrative or other reasons, does not submit reinvestigation forms to DOE within seven years of the previous submission, for a NRC-U renewal or twelve years of the previous submission for a NRC-R renewal, shall submit a renewal application to NRC using the forms prescribed in paragraph (c)(1) of this section before the expiration of the seven year period for NRC-U or twelve year period for NRC-R renewal.

(d) If at any time, due to new assignment or assumption of duties, a change in a special nuclear material access authorization level from NRC "R" to "U" is required, the individual shall apply for a change of level of special nuclear material access authorization. The application must include a description of the new duties to be assigned or assumed, justified by appropriate reference to the licensee's security plan.

(e)(1) The Office of Personnel Management (OPM) bills NRC for the cost of each background investigation conducted in support of an application for special nuclear material access authorization. The combined cost of the OPM investigation and NRC's application processing overhead are recovered from the licensee through a material access authorization fee calculated with reference to current OPM personnel investigation billing rates {OPM rate + [(OPM rate × 31.7%), rounded to the nearest dollar] = NRC access authorization fee}. Updated OPM billing rates are published periodically in a Federal Investigations Notice (FIN) issued by OPM's Investigations Service. Copies of the current OPM billing schedule can be obtained by phoning the NRC's Personnel Security Branch, Division of Facilities and Security, Office of Administration at (301–415–7739). Any change in the NRC's access authorization fees will be applicable to each access authorization request received on or after the effective date of OPM's most recently published investigations billing schedule.

(2) Each application for a special nuclear material access authorization, renewal, or change in level must be accompanied by the licensee's remittance, payable to the U.S. Nuclear Regulatory Commission. Applicants shall calculate the access authorization fee according to the stated formula {OPM rate + [(OPM rate × 31.7%), rounded to the nearest dollar] = NRC access authorization fee} and with reference to the following table:

The NRC application fee for an access authorization of type * * *	**Is the sum of the current OPM billing rate charged for an investigation of type * * ***	**Plus the NRC's processing fee (rounded to the nearest dollar), which is equal to the OPM billing rate for the type of investigation referenced multiplied by * * * (percent)**
i. NRC-R[1]	NACLC--National Agency Check with Law and Credit (Standard Service, Code B).	31.7
ii. NRC-R[1] (expedited processing)	NACLC--National Agency Check with Law and Credit (Expedite Handling, Code A).	31.7
iii. NRC-R based on certification of comparable investigation[2]	No fee assessed for most applications.	
iv. NRC-R renewal[1]	NACLC--National Agency Check with Law and Credit (Standard Service, Code B).	31.7
v. NRC-U requiring single scope investigation.	SSBI--Single Scope Background Investigation (120 Day Service, Code C).	31.7
vi. NRC-U requiring single scope investigation (expedited processing).	SSBI--Single Scope Background Investigation (35 Day Service, Code A).	31.7
vii. NRC-U based on certification of comparable investigation[2]	No fee assessed for most applications.	
viii. NRC-U renewal[2]	LBI--Limited Background Investigation (120 Day Service, Code C).	31.7

[1] If the NRC, having reviewed the available data, deems it necessary to perform a single scope investigation, the appropriate NRC-U fee will be assessed before the conduct of the investigation.

[2] If the NRC determines, based on its review of available data, that a single scope investigation is necessary, the appropriate NRC-U fee will be assessed before the conduct of the investigation.

(3) Certain applications from individuals having current Federal access authorizations may be processed expeditiously at no cost to the licensee because the Commission, at its discretion, may decide to accept the certification of access authorizations and investigative data from other Federal government agencies that grant personnel access authorizations.

(f)(1) Any Federal employee, employee of a contractor of a Federal agency, licensee, or other person visiting an affected facility for the purpose of conducting official business, who possesses an active NRC or DOE-Q access authorization or an equivalent Federal security clearance granted by another Federal agency ("Top Secret") based on a comparable single scope background investigation may be permitted, in accordance with § 11.11, the same level of unescorted access that an NRC-U special nuclear material access authorization would afford.

(2) Any Federal employee, employee of a contractor of a Federal agency, licensee, or other person visiting an affected facility for the purpose of conducting official business, who possesses an active NRC or DOE-L access authorization or an equivalent security clearance granted by another Federal agency ("Secret") based on a comparable or greater background investigation consisting of a national agency check with law and credit may be permitted, in accordance with § 11.11, the same level of unescorted access that an NRC-R special nuclear material access authorization would afford. An NRC or DOE-L access authorization or an equivalent security clearance ("Secret"), based on a background investigation or national agency check with credit granted or being processed by another Federal agency before January 1, 1998, is acceptable to meet this requirement.

[64 FR 15645, Apr. 1, 1999; 68 FR 58800, Oct. 10, 2003; 68 FR 62511, Nov. 5, 2003; 68 FR 65765, Nov. 21, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 27408, May 16, 2007; 72 FR 33386, Jun. 18, 2007]

§ 11.16 Cancellation of request for special nuclear material access authorization.

[Top of File]

When a request for an individual's access authorization is withdrawn or canceled, the licensee shall notify the Chief, Personnel Security Branch, NRC Division of Facilities and Security immediately, by telephone, so that the investigation may be discontinued. The caller shall provide the full name and date of birth of the individual, the date of request, and the type of access authorization originally requested ("U" or "R"). The licensee shall promptly submit written confirmation of the telephone notification to the Personnel Security Branch, NRC Division of Facilities and Security. A portion of the fee for the "U" special nuclear material access authorization may be refunded depending upon the status of the single scope investigation at the time of withdrawal or cancellation.

[64 FR 15647, Apr. 1, 1999]

Criteria for Determining Eligibility for Access to, or Control Over, Special Nuclear Material

[Top of File]

§ 11.21 Application of the criteria.

(a) The decision to grant or deny special nuclear material access authorization is a comprehensive, common-sense judgment, made after consideration of all the relevant information, favorable or unfavorable, that to grant or deny special nuclear material access authorization is or is not inimical to the common defense and security and is or is not clearly consistent with the national interest.

(b) To assist in making these determinations, on the basis of all the information in a particular case, there are set forth in § 10.11 of this chapter a number of specific types of derogatory information. These criteria are not exhaustive but contain the principal types of derogatory information which in the opinion of the Commission create a question as to the individual's eligibility for special nuclear material access authorization. These criteria are subject to continuing review and may be revised from time to time as experience and circumstances may make desirable.

(c) When the reports of an investigation of an individual contain information reasonably falling within one or more of the classes of derogatory information listed in § 10.11, it creates a question as to the individual's eligibility for special nuclear material access authorization. In these cases, the application of the criteria must be made in light of and with specific regard to whether the existence of the information supports a reasonable belief that the granting of a special nuclear material access authorization would be inimical to the common defense and security. The Director, Division of Facilities and Security, may authorize the granting of a special nuclear material access authorization on the basis of the information in the case or may authorize the conduct of an interview with the individual and, on the basis of the interview and other investigation as the Director deems appropriate, may authorize the granting of a special nuclear material access authorization. Otherwise, a question concerning the eligibility of an individual for a special nuclear material access authorization must be resolved in accordance with the procedures set forth in §§ 10.20 through 10.38 of this chapter.

(d) In resolving a question concerning the eligibility or continued eligibility of an individual for a special nuclear material access authorization by action of the Hearing Examiner or a Personnel Security Review Panel,[3] the following principle shall be applied by the Examiner and the Personnel Security Review Panel: Where there are sufficient grounds to establish a reasonable belief as to the truth of the information regarded as substantially derogatory and when the existence of this information supports a reasonable belief that granting access would be inimical to the common defense and security, this will be the basis for a recommendation for denying or revoking special nuclear material access authorization if not satisfactorily rebutted by the individual or shown to be mitigated by circumstance.

[45 FR 76970, Nov. 21, 1980, as amended at 47 FR 38683, Sept. 2, 1982; 64 FR 15647, Apr. 1, 1999]

[3] The functions of the Hearing Examiner and the Personnel Security Review Panel are described in part 10 of this chapter.

Violations

[Top of File]

§ 11.30 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of --

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of --

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55070, Nov. 24, 1992]

§ 11.32 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all regulations in part 11 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 11 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 11.1, 11.3, 11.5, 11.7, 11.8, 11.9, 11.16, 11.21, 11.30, and 11.32.

[57 FR 55070, Nov. 24, 1992]

PART 12--IMPLEMENTATION OF THE EQUAL ACCESS TO JUSTICE ACT IN AGENCY PROCEEDINGS

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 12.101 Purpose.

The purpose of this part is to state the regulatory requirements for award of attorney fees to eligible individuals and entities in certain administrative proceedings before the Nuclear Regulatory Commission, in implementation of the Equal Access to Justice Act, 5 U.S.C. 504 (EAJA), which provides for the award of attorney fees and other expenses to parties to "adversary adjudications", as defined in 5 U.S.C. 504 (b)(1)(C). In general, an "adversary adjudication" is an adjudication that is required by statute to be determined on the record after opportunity for hearing before an agency of the United States and in which the position of the agency, or any component of the agency, is presented by an attorney or other representative who enters an appearance and participates in the proceeding. However, some agency adjudications are expressly excluded from coverage by 5 U.S.C. 504 (e.g., an adjudication for the purpose of granting or renewing a license) even though they fall within this general definition, and certain appeals before an agency board of contract appeals and Program Fraud Civil Remedies Act hearings conducted under 31 U.S.C. ch. 38 are expressly covered.

An eligible party may receive an award in an adversary adjudication when the party prevails over the Commission, unless the Commission's position was substantially justified or special circumstances make an award unjust. The regulations in this part describe the parties eligible for awards and the proceedings that are covered. They also explain how to apply for awards, and the procedures and standards that the Commission will use to make them.

§ 12.102 When the EAJA applies.

[Top of File]

The EAJA applies to any covered adversary adjudication pending or commenced before the Commission on or after August 5, 1985.

§ 12.103 Proceedings covered.

[Top of File]

(a) The EAJA applies to the following proceedings:

(1) Hearings under the Program Fraud Civil Remedies Act (31 U.S.C. 3801 - 12);

(2) Any appeal of a decision made pursuant to section 6 of the Contract Disputes Act of 1978 (41 U.S.C. 605) before an agency board of contract appeals as provided in section 8 of that Act (41 U.S.C. 607); and

(3) Adversary adjudications conducted by the Commission pursuant to any other statutory provision that requires a proceeding before the Nuclear Regulatory Commission to be so conducted as to fall within the meaning of "adversary adjudication" under 5 U.S.C. 504(b)(1)(C).

(b) The Commission's failure to identify a type of proceeding as an adversary adjudication shall not preclude the filing of an application by a party who believes the proceeding is covered by the EAJA. Whether the proceeding is covered will then be an issue for resolution in proceedings on the application.

(c) If a proceeding includes both matters covered by the EAJA and matters specifically excluded from coverage, any award made will include only fees and expenses related to covered issues.

§ 12.104 Eligibility of applicants.

[Top of File]

(a) To be eligible for an award of attorney fees and other expenses under the EAJA, the applicant must be a party to the adversary adjudication for which it seeks an award. The term "party" is defined in 5 U.S.C. 551(3). The applicant must show that it meets all conditions of eligibility set out in this subpart and in subpart B.

(b) The types of eligible applicants are as follows:

(1) An individual with a net worth of not more than $2 million;

(2) The sole owner of an unincorporated business who has a net worth of not more than $7 million, including both personal and business interests, and not more than 500 employees;

(3) A charitable or other tax-exempt organization described in section 501(c)(3) of the Internal Revenue Code (26 U.S.C. 501(c)(3)) with not more than 500 employees;

(4) A cooperative association as defined in section 15(a) of the Agricultural Marketing Act (12 U.S.C. 1141j(a)) with not more than 500 employees; and

(5) Any other partnership, corporation, association, unit of local government, or organization with a net worth of not more than $7 million and not more than 500 employees.

(c) For the purpose of eligibility, the net worth and number of employees of an applicant shall be determined as of the date the proceeding was initiated.

(d) An applicant who owns an unincorporated business will be considered as an "individual" rather than a "sole owner of an unincorporated business" if the issues on which the applicant prevails are related primarily to personal interests rather than to business interests.

(e) The employees of an applicant include all persons who regularly perform services for remuneration for the applicant, under the applicant's direction and control. Part-time employees shall be included on a proportional basis.

(f) The net worth and number of employees of the applicant and all of its affiliates shall be aggregated to determine eligibility. Any individual, corporation, or other entity that directly or indirectly controls or owns a majority of the voting shares or other interests of the applicant, or any corporation or other entity of which the applicant directly or indirectly owns or controls a majority of the voting shares or other interest, will be considered an affiliate for purposes of this part, unless the adjudicative officer determines that such treatment would be unjust and contrary to the purposes of the Act in light of the actual relationship between the affiliated entities. In addition, the adjudicative officer may determine that financial relationships of the applicant other than those described in this paragraph constitute special circumstances that would make an award unjust.

(g) An applicant that participates in a proceeding primarily on behalf of one or more other persons or entities that would be ineligible is not itself eligible for an award.

§ 12.105 Standards for awards.

[Top of File]

(a) A prevailing applicant may receive an award for fees and expenses incurred in connection with a proceeding or a significant and discrete substantive portion of the proceeding, unless the position of the Commission over which the applicant has prevailed was substantially justified. The position of the Commission includes, in addition to the position taken by the Commission in the adversary adjudication, the action or failure to act by the Commission upon which the adversary adjudication is based. The burden of proof that an award should not be made to a prevailing applicant because the Commission's position was substantially justified is on the Commission counsel.

(b) An award will be reduced or denied if the applicant has unduly or unreasonably protracted the proceeding or if special circumstances make the award sought unjust.

§ 12.106 Allowable fees and expenses.

[Top of File]

(a) Awards will be based on rates customarily charged by persons engaged in the business of acting as attorneys, agents, and expert witnesses, even if the services were made available without charge or at reduced rate to the applicant.

(b) No award for the fee of an attorney or agent under this part may exceed $75.00 per hour. No award to compensate an expert witness may exceed the highest rate at which the Commission pays expert witnesses. However, an award may also include the reasonable expenses of the attorney, agent, or witness as a separate item, if the attorney, agent, or witness ordinarily charges clients separately for these expenses.

(c) In determining the reasonableness of the fee sought for an attorney, agent, or expert witness, the adjudicative officer shall consider the following:

(1) If the attorney, agent, or witness is in private practice, his or her customary fees for similar services, or, if an employee of the applicant, the fully allocated costs of the services;

(2) The prevailing rate for similar services in the community in which the attorney, agent, or witness ordinarily performs services;

(3) The time actually spent in the representation of the applicant;

(4) The time reasonably spent in light of the difficulty or complexity of the issues in the proceeding; and

(5) Other factors that bear on the value of the services provided.

(d) The reasonable cost of any study, analysis, engineering report, test, project, or similar matter prepared on behalf of a party may be awarded, to the extent that the charge for the services does not exceed the prevailing rate for similar services, and the study or other matter was necessary for preparation of applicant's case.

§ 12.107 Rulemaking on maximum rates for attorney fees.

[Top of File]

(a) If warranted by an increase in the cost of living or by special circumstances (such as limited availability of attorneys qualified to handle certain types of proceedings), the Commission may adopt regulations providing that attorney fees may be awarded at a rate higher than $75 per hour in some, or all of the types of proceedings covered by this part. The Commission will conduct any rulemaking proceedings for this purpose under the informal rulemaking procedures of the Administrative Procedure Act.

(b) Any person may file with the Commission a petition for rulemaking to increase the maximum rate for attorney fees, in accordance with the requirements of 10 CFR 2.802. The petition should identify the rate the petitioner believes the Commission should establish and the types of proceedings in which the rate should be used. It should also explain fully the reasons why the higher rate is warranted. Within 90 days after the petition is filed, the Commission will determine whether it will initiate a rulemaking proceeding, deny the petition, or take other appropriate action on the petition. The Commission will act on the petition in accordance with 10 CFR 2.803.

§ 12.108 Awards against other agencies.

[Top of File]

If an applicant is entitled to an award because it prevails over another agency of the United States that participates in a proceeding before the Commission and takes a position that is not substantially justified, the award or an appropriate portion of the award shall be made against that agency.

§ 12.109 Decisionmaking authority.

[Top of File]

Unless otherwise ordered by the Commission in a particular proceeding, each application under this part shall be assigned for decision to the official or decisionmaking body that entered the decision in the adversary adjudication. That official or decisionmaking body is referred to in this part as the "adjudicative officer."

Subpart B--Information Required From Applicants

[Top of File]

§ 12.201 Contents of application.

(a) An application for an award of fees and expenses under the EAJA shall identify the applicant and the proceeding for which an award is sought. The application shall show that the applicant has prevailed and identify the position of the Commission or other agency that the applicant alleges was not substantially justified. Unless the applicant is an individual, the application shall also state the number of employees of the applicant and describe briefly the type and purpose of its organization or business.

(b) The application shall also include a statement that the applicant's net worth does not exceed $2 million (if an individual) or $7 million (for all other applicants, including their affiliates). However, an applicant may omit this statement if:

(1) The applicant attaches a copy of a ruling by the Internal Revenue Service that it qualifies as an organization described in section 501(c)(3) of the Internal Revenue Code (26 U.S.C. 501(c)(3)) or, in the case of a tax-exempt organization not required to obtain a ruling from the Internal Revenue Service on its exempt status, a statement that describes the basis for the applicant's belief that it qualifies under this section; or

(2) The applicant states that it is a cooperative association as defined in section 15(a) of the Agricultural Marketing Act (12 U.S.C. 1141j(a)).

(c) The application shall state the amount of fees and expenses for which an award is sought.

(d) The application may also include any other matters that the applicant wishes the Commission to consider in determining whether, and in what amount, an award should be made.

(e) The application shall be signed by the applicant or an authorized officer or attorney of the applicant. It shall also contain or be accompanied by a written verification under oath or under penalty of perjury that the information provided in the application is true and correct.

§ 12.202 Net worth exhibit.

[Top of File]

(a) Each applicant, except a qualified tax-exempt organization or cooperative association must provide with its application a detailed exhibit showing the net worth of the applicant and any affiliates (as defined in § 12.104(f) of this part) when the proceeding was initiated. The exhibit may be in any form convenient to the applicant that provides full disclosure of the applicant's and its affiliates' assets and liabilities and is sufficient to determine whether the applicant qualifies under the standards in this part. The adjudicative officer may require an applicant to file additional information to determine its eligibility for an award.

(b) Ordinarily, the net worth exhibit will be included in the public record of the proceeding. However, an applicant that objects to public disclosure of information in any portion of the exhibit and believes there are legal grounds for withholding it from disclosure may submit that portion of the exhibit directly to the adjudicative officer in a sealed envelope labeled "Confidential Financial Information," accompanied by a motion to withhold the information from public disclosure. The motion shall describe the information sought to be withheld and explain, in detail, why it falls within one or more of the specific exemptions from mandatory disclosure under the Freedom of Information Act, 5 U.S. C. 552(b)(1) - (9), why public disclosure of the information would adversely affect the applicant, and why disclosure is not required in the public interest. The material in question shall be served on counsel representing the agency against which the applicant seeks an award, but need not be served on any other party to the proceeding. If the adjudicative officer finds that the information should not be withheld from disclosure, it shall be placed in the public record of the proceeding. Otherwise, any request to inspect or copy the exhibit shall be disposed of in accordance with the Commission's established procedures under the Freedom of Information Act, 10 CFR part 9, subpart A.

§ 12.203 Documentation of fees and expenses.

[Top of File]

The application shall be accompanied by full documentation of the fees and expenses, including the cost of any study, analysis, engineering report, test, project, or similar matter for which an award is sought. A separate itemized statement shall be submitted for each professional firm or individual whose services are covered by the application, showing the hours spent in connection with the proceeding by each individual, a description of the specific services performed, the rates at which each fee has been computed, any expenses for which reimbursement is sought, the total amount claimed, and the total amount paid or payable by the applicant or by any other person or entity for the services provided. The adjudicative officer may require the applicant to provide vouchers, receipts, logs, or other substantiation for any fees or expenses claimed, pursuant to § 12.306 of this part.

§ 12.204 When an application may be filed.

[Top of File]

(a) An application may be filed whenever the applicant has prevailed in the proceeding or in a significant and discrete substantive portion of the proceeding, but in no case later than 30 days after the date on which a decision or order disposing of the merits of the proceeding or any other complete resolution of the proceeding, such as a settlement or voluntary dismissal, becomes final and unappealable, both within the NRC and to the courts.

(b) If after the filing of an application for an award, review or reconsideration is sought or taken of a decision as to which an applicant believes it has prevailed, proceedings for the award of fees shall be stayed pending final disposition of the underlying controversy. When the United States appeals the underlying merits of an adversary adjudication to a court, no decision on an application for fees and other expenses in connection with that adversary adjudication shall be made until a final and unreviewable decision is rendered by the court on the appeal or until the underlying merits of the case have been finally determined pursuant to the appeal.

Subpart C--Procedures for Considering Applications

[Top of File]

§ 12.301 Filing and service of documents.

Any application for an award or other pleading or document related to an application shall be filed and served on all parties to the proceeding in the same manner as other pleadings in the proceeding, except as provided in § 12.202(b) for confidential financial information.

§ 12.302 Answer to application.

[Top of File]

(a) Within 30 days after service of an application, counsel representing the NRC against which an award is sought may file an answer to the application. Unless the NRC counsel requests an extension of time for filing or files a statement of intent to negotiate under paragraph (b) of this section, failure to file an answer within the 30-day period may be treated as a consent to the award requested.

(b) If the NRC counsel and the applicant believe that the issues in the fee application can be settled, they may jointly file a statement of

their intent to negotiate a settlement. The filing of this statement shall extend the time for filing an answer for an additional 30 days, and further extensions may be granted by the adjudicative officer upon request by the NRC counsel and the applicant.

(c) The answer shall explain in detail any objections to the award requested and identify the facts relied on in support of the NRC counsel's position. If the answer is based on any alleged facts not already in the record of the proceeding, the NRC counsel shall include with the answer either supporting affidavits or a request for further proceedings under § 12.306.

§ 12.303 Reply.

[Top of File]

Within 15 days after service of an answer, the applicant may file a reply. If the reply is based on any alleged facts not already in the record of the proceeding, the applicant shall include with the reply either supporting affidavits or a request for further proceedings under § 12.306.

§ 12.304 Comments by other parties.

[Top of File]

Any party to a proceeding other than the applicant and the NRC counsel may file comments on an application within 30 days after it is served, or on an answer within 15 days after it is served. A commenting party may not participate further in proceedings on the application unless the adjudicative officer determines that the public interest requires participation in order to permit full exploration of matters raised in the comments.

§ 12.305 Settlement.

[Top of File]

The applicant and the NRC counsel may agree on a proposed settlement of the award before final action on the application, either in connection with a settlement of the underlying proceeding, or after the underlying proceeding has been concluded, in accordance with the NRC's standard settlement procedure. If a prevailing party and the NRC's counsel agree on a proposed settlement of an award before an application has been filed, the application shall be filed with the proposed settlement.

§ 12.306 Further proceedings.

[Top of File]

(a) Ordinarily, the determination of an award will be made on the basis of the written record. However, on request of either the applicant or the NRC counsel, or on the adjudicative officer's own initiative, the adjudicative officer may order further proceedings, such as an informal conference, oral argument, additional written submissions or, as to issues other than substantial justification (such as the applicant's eligibility or substantiation of fees and expenses), pertinent discovery or an evidentiary hearing. Further proceedings shall be held only when necessary for full and fair resolution of the issues arising from the application, and shall be conducted as promptly as possible. Whether or not the position of the agency was substantially justified shall be determined on the basis of the administrative record, as a whole, which is made in the adversary adjudication for which fees and other expenses are sought.

(b) A request that the adjudicative officer order further proceedings under this section shall specifically identify the information sought or the disputed issues and shall explain why the additional proceedings are necessary to resolve the issues.

§ 12.307 Decision.

[Top of File]

(a) The adjudicative officer shall issue an initial decision on the application within 90 days after completion of proceedings on the application. If the adjudicative officer fails to issue an initial decision within 90 days, he or she shall notify the parties of the reason for the delay and shall set a new deadline.

(b) The initial decision shall include written findings and conclusions on the applicant's eligibility and status as a prevailing party, and an explanation of the reasons for any difference between the amount requested and the amount awarded. The decision shall also include, if at issue, findings on whether the NRC's position was substantially justified, whether the applicant unduly protracted the proceedings, or whether special circumstances make an award unjust. If the applicant has sought an award against more than one agency, the decision shall allocate responsibility for payment of any award made among the agencies, and shall explain the reasons for the allocation made.

§ 12.308 Agency review.

[Top of File]

(a) Either the applicant or the NRC counsel may seek review of the initial decision on the fee application, or the Commission may decide to review the decision on its own initiative, in accordance with the Commission's review procedures set out in 10 CFR 2.786. The filing of a

petition for review is mandatory for a party to exhaust its administrative remedies before seeking judicial review. If neither the applicant nor NRC counsel seeks review and the Commission does not take review on its own initiative, the initial decision on the application shall become a final decision of the NRC forty (40) days after it is issued.

(b) Notwithstanding anything to the contrary in any other part of the Commission's regulations, the initial decision shall be inoperative (i.e., the decision shall not be final and any award made shall not be paid) until the later of--

(1) The expiration of the forty-day period provided in paragraph (a) of this section; or

(2) If within the forty-day period provided in paragraph (a) of this section the Commission elects to review the decision, the Commission's issuance of a final decision on review of the initial decision.

(c) Whether to review a decision on its own motion is a matter within the discretion of the Commission. If review is taken, the Commission will issue a final decision on the application or remand the application to the adjudicative officer for further proceedings.

§ 12.309 Judicial review.

[Top of File]

Judicial review of final agency decisions on awards may be sought as provided in 5 U.S.C. 504(c)(2).

§ 12.310 Payment of award.

[Top of File]

An applicant seeking payment of an award shall submit to the appropriate official of the paying agency a copy of the Commission's final decision granting the award, accompanied by a certification that the applicant will not seek review of the decision in the United States courts. Where the award is granted against the Commission, the applicant shall make the submission to the Director, Division of Accounting and Finance, Office of the Controller, U.S. Nuclear Regulatory Commission, Washington, DC 20555. The NRC will pay the amount awarded to the applicant within 60 days.

PART 13--PROGRAM FRAUD CIVIL REMEDIES

[Top of File]

§ 13.1 Basis and purpose.

[Top of File]

(a) *Basis*. This part implements the Program Fraud Civil Remedies Act of 1986, Public Law No. 99-509, §§ 6101-6104, 100 Stat. 1874 (October 21, 1986) (31 U.S.C. 3801-3812). 31 U.S.C. 3809 requires each authority head to promulgate regulations necessary to implement the provisions of that Act.

(b) *Purpose*. This part (1) establishes administrative procedures for imposing civil penalties and assessments against persons who make, submit, or present, or cause to be made, submitted, or presented, false, fictitious, or fraudulent claims or written statements to authorities or to their agents, and (2) specifies the hearing and appeal rights of persons subject to allegations of liability for such penalties and assessments.

§ 13.2 Definitions.

[Top of File]

As used in this part:

ALJ means an Administrative Law Judge in the authority appointed pursuant to 5 U.S.C. 3105 or detailed to the authority pursuant to 5 U.S. C. 3344.

Authority means the Nuclear Regulatory Commission.

Authority head means the Commission of five members or a quorum thereof sitting as a body, as provided by section 201 of the Energy Reorganization Act of 1974 (88 Stat. 1242).

Benefit means, in the context of "statement", anything of value, including but not limited to any advantage, preference, privilege, license, permit, favorable decision, ruling, status, or loan guarantee.

Claim means any request, demand, or submission--

(a) Made to the authority for property, services, or money (including money representing grants, loans, insurance, or benefits);

(b) Made to a recipient of property, services, or money from the authority or to a party to a contract with the authority--

(1) For property or services if the United States--

(i) Provided such property or services;

(ii) Provided any portion of the funds for the purchase of such property or services; or

(iii) Will reimburse such recipient or party for the purchase of such property or services; or

(2) For the payment of money (including money representing grants, loans, insurance, or benefits) if the United States--

(i) Provided any portion of the money requested or demanded; or

(ii) Will reimburse such recipient or party for any portion of the money paid on such request or demand; or

(c) Made to the authority which has the effect of decreasing an obligation to pay or account for property, services, or money.

Complaint means the administrative complaint served by the reviewing official on the defendant under § 13.7.

Defendant means any person alleged in a complaint under § 13.7 to be liable for a civil penalty or assessment under § 13.3.

Digital ID certificate means a file stored on a participant's computer that contains the participant's name, e-mail address, and participant's digital signature, proves the participant's identity when filing documents and serving participants electronically through the E-Filing system, and contains public keys, which allow for the encryption and decryption of documents so that the documents can be securely transferred over the Internet.

Electronic acknowledgment means a communication transmitted electronically from the E-Filing system to the submitter confirming receipt of electronic filing and service.

Electronic Hearing Docket means the publicly available Web site which houses a visual presentation of the docket and a link to its files.

E-Filing System means an electronic system that receives, stores, and distributes documents filed in proceedings for which an electronic hearing docket has been established.

Government means the United States Government.

Guidance for Electronic Submissions to the NRC means the document issued by the Commission that sets forth the transmission methods and formatting standards for filing and service under E-Filing. The document can be obtained by visiting the NRC's Web site at *http://www.nrc.gov*.

Individual means a natural person.

Initial decision means the written decision of the ALJ required by § 13.10 or § 13.37, and includes a revised initial decision issued following a remand or a motion for reconsideration.

Investigating official means the Inspector General of the Nuclear Regulatory Commission or the Assistant Inspector General for Investigations, Office of the Inspector General.

Knows or has reason to know means that a person, with respect to a claim or statement--

(a) Has actual knowledge that the claim or statement is false, fictitious, or fraudulent;

(b) Acts in deliberate ignorance of the truth or falsity of the claim or statement; or

(c) Acts in reckless disregard of the truth or falsity of the claim or statement.

Makes, wherever it appears, shall include the terms presents, submits, and causes to be made, presented, or submitted. As the context requires, *making* or *made* shall likewise include the corresponding forms of such terms.

Optical Storage Media means any physical computer component that meets E-Filing Guidance standards for storing, saving, and accessing electronic documents.

Participant means an individual or organization that has petitioned to intervene in a proceeding or requested a hearing but that has not yet been granted party status by an Atomic Safety and Licensing Board or other presiding officer. Participant also means a party to a proceeding and any interested State, local governmental body, or affected Federally-recognized Indian Tribe that seeks to participate in a proceeding in accordance with § 2.315(c). For the purpose of service of documents, the NRC staff is considered a participant even if not participating as a party.

Person means any individual, partnership, corporation, association, or private organization and includes the plural of that term.

Representative means any person designated by a party in writing.

Reviewing official means the General Counsel of the Nuclear Regulatory Commission or his or her designee who is--

(a) Not subject to supervision by, or required to report to, the investigating official;

(b) Not employed in the organizational unit of the authority in which the investigating official is employed; and

(c) Serving in a position for which the rate of basic pay is not less than the minimum rate of basic pay for grade GS-16 under the General Schedule.

Statement means any representation, certification, affirmation, document, record, or accounting or bookkeeping entry made--

(a) With respect to a claim or to obtain the approval or payment of a claim (including relating to eligibility to make a claim); or

(b) With respect to (including relating to eligibility for)--

(1) A contract with, or a bid or proposal for a contract with, or

(2) A grant, loan, or benefit from,

(i) The authority, or

(ii) Any State, political subdivision of a State, or other party, if the United States government provides any portion of the money or property under such contract or for such grant, loan, or benefit, or if the Government will reimburse such State, political subdivision, or party for any portion of the money or property under such contract or for such grant, loan, or benefit.

[56 FR 47135, Sept. 18, 1991; 56 FR 49945, Oct. 2, 1991, as amended at 62 FR 40427, July 29, 1997; 65 FR 59272, Oct. 4, 2000; 71 FR 15007, Mar. 27, 2006; 72 FR 49152, Aug. 28, 2007; 72 FR 64529, Nov. 16, 2007]

§ 13.3 Basis for civil penalties and assessments.

[Top of File]

(a) *Claims*.

(1) Any person who makes a claim that the person knows or has reason to know--

(i) Is false, fictitious, or fraudulent;

(ii) Includes or is supported by any written statement which asserts a material fact which is false, fictitious, or fraudulent;

(iii) Includes or is supported by any written statement that--

(A) Omits a material fact;

(B) Is false, fictitious, or fraudulent as a result of such omission; and

(C) Is a statement in which the person making such statement has a duty to include such material fact; or

(iv) Is for payment for the provision of property or services which the person has not provided as claimed, shall be subject, in addition to any other remedy that may be prescribed by law, to a civil penalty of not more than $7,000 for each such claim.

(2) Each voucher, invoice, claim form, or other individual request or demand for property, services, or money constitutes a separate claim.

(3) A claim shall be considered made to the authority, recipient, or party when such claim is actually made to an agent, fiscal intermediary or other entity, including any State or political subdivision thereof, acting for or on behalf of the authority, recipient, or party.

(4) Each claim for property, services, or money is subject to a civil penalty regardless of whether such property, services, or money is actually delivered or paid.

(5) If the Government has made any payment (including transferred property or provided services) on a claim, a person subject to a civil penalty under paragraph (a)(1) of this section shall also be subject to an assessment of not more than twice the amount of such claim or that portion thereof that is determined to be in violation of paragraph (a)(1) of this section. Such assessment shall be in lieu of damages sustained by the Government because of such claim.

(b) *Statements*.

(1) Any person who makes a written statement that--

(i) The person knows or has reason to know--

(A) Asserts a material fact which is false, fictitious, or fraudulent; or

(B) Is false, fictitious, or fraudulent because it omits a material fact that the person making the statement has a duty to include in such statement; and

(ii) Contains or is accompanied by an express certification or affirmation of the truthfulness and accuracy of the contents of the statement, shall be subject, in addition to any other remedy that may be prescribed by law, to a civil penalty of not more than $7,000 for each such statement.

(2) Each written representation, certification, or affirmation constitutes a separate statement.

(3) A statement shall be considered made to the authority when such statement is actually made to an agent, fiscal intermediary, or other entity, including any State or political subdivision thereof, acting for or on behalf of the authority.

(c) No proof of specific intent to defraud is required to establish liability under this section.

(d) In any case in which it is determined that more than one person is liable for making a claim or statement under this section, each such

person may be held liable for a civil penalty under this section.

(e) In any case in which it is determined that more than one person is liable for making a claim under this section on which the Government has made payment (including transferred property or provided services), an assessment may be imposed against any such person or jointly and severally against any combination of such persons.

[56 FR 47135, Sept. 18, 1991, as amended by 61 FR 53555, Oct. 11, 1996; 62 FR 59275, Nov. 3, 1997; 65 FR 59273, Oct. 4, 2000; 71 FR 15007, Mar. 27, 2006; 73 FR 54673, Sep. 23, 2008]

§ 13.4 Investigation.

[Top of File]

(a) If an investigating official concludes that a subpoena pursuant to the authority conferred by 31 U.S.C. 3804(a) is warranted--

(1) The subpoena so issued shall notify the person to whom it is addressed of the authority under which the subpoena is issued and shall identify the records or documents sought;

(2) The investigating official may designate a person to act on his or her behalf to receive the documents sought; and

(3) The person receiving such subpoena shall be required to tender to the investigating official or the person designated to receive the documents a certification that the documents sought have been produced, or that such documents are not available and the reasons therefor, or that such documents, suitably identified, have been withheld based upon the assertion of an identified privilege.

(b) If the investigating official concludes that an action under the Program Fraud Civil Remedies Act may be warranted, the investigating official shall submit a report containing the findings and conclusions of such investigation to the reviewing official. To the extent possible, before initiating an investigation or submitting a report involving a licensee false statement to the reviewing official, the investigating official shall consult with the Executive Director for Operations to ascertain whether any other agency action is under consideration, pending, or may be taken with regard to the licensee, and to allow for coordination between any action under this part and other enforcement action.

(c) Nothing in this section shall preclude or limit an investigating official's discretion to refer allegations directly to the Department of Justice for suit under the False Claims Act or other civil relief, or to refer the matter to the Executive Director for Operations for enforcement action under the Atomic Energy Act, or to defer initiating an investigation or postpone a report or referral to the reviewing official to avoid interference with other enforcement action by the Commission or with a criminal investigation or prosecution.

(d) Nothing in this section modifies any responsibility of an investigating official to report violations of criminal law to the Attorney General.

§ 13.5 Review by the reviewing official.

[Top of File]

(a) If, based on the report of the investigating official under § 13.4(b), the reviewing official determines that there is adequate evidence to believe that a person is liable under § 13.3 of this part, the reviewing official shall transmit to the Attorney General a written notice of the reviewing official's intention to issue a complaint under § 13.7.

(b) Such notice shall include--

(1) A statement of the reviewing official's reasons for issuing a complaint;

(2) A statement specifying the evidence that supports the allegations of liability;

(3) A description of the claims or statements upon which the allegations of liability are based;

(4) An estimate of the amount of money or the value of property, services, or other benefits requested or demanded in violation of § 13.3 of this part;

(5) A statement of any exculpatory or mitigating circumstances that may relate to the claims or statements known by the reviewing official or the investigating official; and

(6) A statement that there is a reasonable prospect of collecting an appropriate amount of penalties and assessments.

§ 13.6 Prerequisities for issuing a complaint.

[Top of File]

(a) The reviewing official may issue a complaint under § 13.7 only if--

(1) The Department of Justice approves the issuance of a complaint in a written statement described in 31 U.S.C. 3803(b)(1), and

(2) In the case of allegations of liability under § 13.3(a) with respect to a claim, the reviewing official determines that, with respect to such claim or a group of related claims submitted at the same time such claim is submitted (as defined in paragraph (b) of this section), the amount of money or the value of property or services demanded or requested in violation of § 13.3(a) does not exceed $150,000.

(b) For the purposes of this section, a related group of claims submitted at the same time shall include only those claims arising from the same transaction (e.g., grant, loan, application, or contract) that are submitted simultaneously as part of a single request, demand, or submission.

(c) Nothing in this section shall be construed to limit the reviewing official's authority to join in a single complaint against a person claims that are unrelated or were not submitted simultaneously, regardless of the amount of money, or the value of property or services, demanded or requested.

[56 FR 47135, Sept. 18, 1991; 56 FR 49945, Oct. 2, 1991]

§ 13.7 Complaint.

[Top of File]

(a) On or after the date the Department of Justice approves the issuance of a complaint in accordance with 31 U.S.C. 3803(b)(1), the reviewing official may serve a complaint on the defendant, as provided in § 13.8.

(b) The complaint shall state--

(1) The allegations of liability against the defendant, including the statutory basis for liability, an identification of the claims or statements that are the basis for the alleged liability, and the reasons why liability allegedly arises from such claims or statements;

(2) The maximum amount of penalties and assessments for which the defendant may be held liable;

(3) Instructions for filing an answer to request a hearing, including a specific statement of the defendant's right to request a hearing by filing an answer and to be represented by a representative; and

(4) That failure to file an answer within 30 days of service of the complaint will result in the imposition of the maximum amount of penalties and assessments without right to appeal, as provided in § 13.10.

(c) At the same time the reviewing official serves the complaint, he or she shall serve the defendant with a copy of these regulations.

§ 13.8 Service of complaint.

[Top of File]

(a) Service of a complaint must be made by certified or registered mail or by delivery in any manner authorized by Rule 4(d) of the Federal Rules of Civil Procedure. Service is complete upon receipt.

(b) Proof of service, stating the name and address of the person on whom the complaint was served, and the manner and date of service, may be made by--

(1) Affidavit of the individual serving the complaint by delivery;

(2) A United States Postal Service return receipt card acknowledging receipt; or

(3) Written acknowledgment of receipt by the defendant or his or her representative.

[71 FR 15007, Mar. 27, 2006]

§ 13.9 Answer.

[Top of File]

(a) The defendant may request a hearing by filing an answer with the reviewing official within thirty (30) days of service of the complaint. Service of an answer shall be made by electronically delivering a copy to the reviewing official in accordance with § 13.26. An answer shall be deemed a request for hearing.

(b) In the answer, the defendant--

(1) Shall admit or deny each of the allegations of liability made in the complaint;

(2) Shall state any defense on which the defendant intends to rely;

(3) May state any reasons why the defendant contends that the penalties and assessments should be less than the statutory maximum; and

(4) Shall state the name, address, and telephone number of the person authorized by the defendant to act as defendant's representative, if any.

(c) If the defendant is unable to file an answer meeting the requirements of paragraph (b) of this section within the time provided, the defendant may, before the expiration of 30 days from service of the complaint, file with the reviewing official a general answer denying liability and requesting a hearing, and a request for an extension of time within which to file an answer meeting the requirements of paragraph (b) of this section. The reviewing official shall file promptly with the ALJ the complaint, the general answer denying liability, and the request for an extension of time as provided in § 13.11. For good cause shown, the ALJ may grant the defendant up to 30 additional days within which to file an answer meeting the requirements of paragraph (b) of this section.

[56 FR 47135, Sept. 18, 1991; 56 FR 64839, Dec. 12, 1991; 72 FR 49152, Aug. 28, 2007]

§ 13.10 Default upon failure to file an answer.

[Top of File]

(a) If the defendant does not file an answer within the time prescribed in § 13.9(a), the reviewing official may refer the complaint to the ALJ.

(b) Upon the referral of the complaint, the ALJ shall promptly serve on defendant in the manner prescribed in § 13.8 a notice that an initial decision will be issued under this section.

(c) The ALJ shall assume the facts alleged in the complaint to be true, and, if such facts establish liability under § 13.3, the ALJ shall issue an initial decision imposing the maximum amount of penalties and assessments allowed under the statute.

(d) Except as otherwise provided in this section, by failing to file a timely answer, the defendant waives any right to further review of the penalties and assessments imposed under paragraph (c) of this section and the initial decision shall become final and binding upon the parties 30 days after it is issued.

(e) If, before such an initial decision becomes final, the defendant files a motion with the ALJ seeking to reopen on the grounds that extraordinary circumstances prevented the defendant from filing an answer, the initial decision shall be stayed pending the ALJ's decision on the motion.

(f) If, on such motion, the defendant can demonstrate extraordinary circumstances excusing the failure to file a timely answer, the ALJ shall withdraw the initial decision in paragraph (c) of this section if such a decision has been issued, and shall grant the defendant an opportunity to answer the complaint.

(g) A decision of the ALJ denying a defendant's motion under paragraph (e) of this section is not subject to reconsideration under § 13.38.

(h) The defendant may appeal to the authority head the decision denying a motion to reopen by filing a notice of appeal with the authority head within 15 days after the ALJ denies the motion. The timely filing of a notice of appeal shall stay the initial decision until the authority head decides the issue.

(i) If the defendant files a timely notice of appeal with the authority head, the ALJ shall forward the record of the proceeding to the authority head.

(j) The authority head shall decide expeditiously whether extraordinary circumstances excuse the defendant's failure to file a timely answer based solely on the record before the ALJ.

(k) If the authority head decides that extraordinary circumstances excused the defendant's failure to file a timely answer, the authority head shall remand the case to the ALJ with instructions to grant the defendant an opportunity to answer.

(l) If the authority head decides that the defendant's failure to file a timely answer is not excused, the authority head shall reinstate the initial decision of the ALJ, which shall become final and binding upon the parties 30 days after the authority head issues such decision.

§ 13.11 Referral of complaint and answer to the ALJ.

[Top of File]

Upon receipt of an answer, the reviewing official shall file the complaint and answer with the ALJ.

§ 13.12 Notice of hearing.

[Top of File]

(a) When the ALJ receives the complaint and answer, the ALJ shall promptly serve a notice of hearing upon the defendant in the manner prescribed by § 13.8. At the same time, the ALJ shall send a copy of such notice to the representative of the authority.

(b) Such notice shall include--

(1) The tentative time and place, and the nature of the hearing;

(2) The legal authority and jurisdiction under which the hearing is to be held;

(3) The matters of fact and law to be asserted;

(4) A description of the procedures for the conduct of the hearing;

(5) The name, address, and telephone number of the representative of the authority and of the defendant, if any; and

(6) Such other matters as the ALJ deems appropriate.

§ 13.13 Parties to the hearing.

[Top of File]

(a) The parties to the hearing shall be the defendant and the authority.

(b) Pursuant to 31 U.S.C. 3730(c)(5), a private plaintiff under the False Claims Act may participate in these proceedings to the extent authorized by the provisions of that Act.

§ 13.14 Separation of functions.

[Top of File]

(a) The investigating official, the reviewing official, and any employee or agent of the authority who takes part in investigating, preparing, or presenting a particular case may not, in such case or a factually related case--

(1) Participate in the hearing as the ALJ;

(2) Participate or advise in the initial decision or the review of the initial decision by the authority head, except as a witness or a representative in public proceedings; or

(3) Make the collection of penalties and assessments under 31 U.S.C. 3806.

(b) The ALJ shall not be responsible to, or subject to the supervision or direction of, the investigating official or the reviewing official.

(c) Except as provided in paragraph (a) of this section, the representative for the Government may be employed anywhere in the authority, including in the offices of either the investigating official or the reviewing official.

[56 FR 47135, Sept. 18, 1991; 56 FR 64839, Dec. 12, 1991]

§ 13.15 Ex parte contacts.

[Top of File]

No party or person (except employees of the ALJ's office) shall communicate in any way with the ALJ on any matter at issue in a case, unless on notice and opportunity for all parties to participate. This provision does not prohibit a person or party from inquiring about the status of a case or asking routine questions concerning administrative functions or procedures.

§ 13.16 Disqualification of reviewing official or ALJ.

[Top of File]

(a) A reviewing official or ALJ in a particular case may disqualify himself or herself at any time.

(b) A party may file with the ALJ a motion for disqualification of a reviewing official or an ALJ. Such motion shall be accompanied by an

affidavit alleging personal bias or other reason for disqualification.

(c) Such motion and affidavit shall be filed promptly upon the party's discovery of reasons requiring disqualification, or such objections, shall be deemed waived.

(d) Such affidavit shall state specific facts that support the party's belief that personal bias or other reason for disqualification exists and the time and circumstances of the party's discovery of such facts. It shall be accompanied by a certificate of the representative of record that it is made in good faith.

(e) Upon the filing of such a motion and affidavit, the ALJ shall proceed no further in the case until he or she resolves the matter of disqualification in accordance with paragraph (f) of this section.

(f)(1) If the ALJ determines that a reviewing official is disqualified, the ALJ shall dismiss the complaint without prejudice.

(2) If the ALJ disqualifies himself or herself, the case shall be reassigned promptly to another ALJ.

(3) If the ALJ denies a motion to disqualify, the authority head may determine the matter only as part of its review of the initial decision upon appeal, if any.

§ 13.17 Rights of parties.

[Top of File]

Except as otherwise limited by this part, all parties may--

(a) Be accompanied, represented, and advised by a representative;

(b) Participate in any conference held by the ALJ;

(c) Conduct discovery;

(d) Agree to stipulation of fact or law, which shall be made part of the record;

(e) Present evidence relevant to the issues at the hearing;

(f) Present and cross-examine witnesses;

(g) Present oral arguments at the hearing as permitted by the ALJ; and

(h) Submit written briefs and proposed findings of fact and conclusions of law after the hearing.

§ 13.18 Authority of the ALJ.

[Top of File]

(a) The ALJ shall conduct a fair and impartial hearing, avoid delay, maintain order, and assure that a record of the proceeding is made.

(b) The ALJ has the authority to--

(1) Set and change the date, time, and place of the hearing upon reasonable notice to the parties;

(2) Continue or recess the hearing in whole or in part for a reasonable period of time;

(3) Hold conferences to identify or simplify the issues, or to consider other matters that may aid in the expeditious disposition of the proceeding;

(4) Administer oaths and affirmations;

(5) Issue subpoenas requiring the attendance of witnesses and the production of documents at depositions or at hearings;

(6) Rule on motions and other procedural matters;

(7) Regulate the scope and timing of discovery;

(8) Regulate the course of the hearing and the conduct of representatives and parties;

(9) Examine witnesses;

(10) Receive, rule on, exclude, or limit evidence;

(11) Upon motion of a party, take official notice of facts;

(12) Upon motion of a party, decide cases, in whole or in part, by summary judgment where there is no disputed issue of material fact;

(13) Conduct any conference, argument, or hearing on motions in person or by telephone; and

(14) Exercise such other authority as is necessary to carry out the responsibilities of the ALJ under this part.

(c) The ALJ does not have the authority to find Federal statutes or regulations invalid.

§ 13.19 Prehearing conferences.

[Top of File]

(a) The ALJ may schedule prehearing conferences as appropriate.

(b) Upon the motion of any party, the ALJ shall schedule at least one prehearing conference at a reasonable time in advance of the hearing.

(c) The ALJ may use prehearing conferences to discuss the following:

(1) Simplification of the issues;

(2) The necessity or desirability of amendments to the pleadings, including the need for a more definite statement;

(3) Stipulations and admissions of fact or as to the contents and authenticity of documents;

(4) Whether the parties can agree to submission of the case on a stipulated record;

(5) Whether a party chooses to waive appearance at an oral hearing and to submit only documentary evidence (subject to the objection of other parties) and written argument;

(6) Limitation of the number of witnesses;

(7) Scheduling dates for the exchange of witness lists and of proposed exhibits;

(8) Discovery;

(9) The time and place for the hearing; and

(10) Such other matters as may tend to expedite the fair and just disposition of the proceedings.

(d) The ALJ may issue an order containing all matters agreed upon by the parties or ordered by the ALJ at a prehearing conference.

§ 13.20 Disclosure of documents.

[Top of File]

(a) Upon written request to the reviewing official, the defendant may review any relevant and material documents, transcripts, records, and other materials that relate to the allegations set out in the complaint and upon which the findings and conclusions of the investigating official under § 13.4(b) are based, unless such documents are subject to a privilege under Federal law. Upon payment of fees for duplication, the defendant may obtain copies of such documents.

(b) Upon written request to the reviewing official, the defendant also may obtain a copy of all exculpatory information in the possession of the reviewing official or investigating official relating to the allegations in the complaint, even if it is contained in a document that would otherwise be privileged. If the document would otherwise be privileged, only that portion containing exculpatory information must be disclosed.

(c) The notice sent to the Attorney General from the reviewing official as described in § 13.5 is not discoverable under any circumstances.

(d) The defendant may file a motion to compel disclosure of the documents subject to the provisions of this section. Such a motion may

only be filed with the ALJ following the filing of an answer pursuant to § 13.9.

§ 13.21 Discovery.

[Top of File]

(a) The following types of discovery are authorized:

(1) Requests for production of documents for inspection and copying;

(2) Requests for admissions of the authenticity of any relevant document or of the truth of any relevant fact;

(3) Written interrogatories; and

(4) Depositions.

(b) For the purpose of this section and §§ 13.22 and 13.23, the term "documents" includes information, documents, reports, answers, records, accounts, papers, and other data and documentary evidence. Nothing contained herein shall be interpreted to require the creation of a document.

(c) Unless mutually agreed to by the parties, discovery is available only as ordered by the ALJ. The ALJ shall regulate the timing of discovery.

(d) *Motions for discovery.*

(1) A party seeking discovery may file a motion with the ALJ. Such a motion shall be accompanied by a copy of the requested discovery, or in the case of depositions, a summary of the scope of the proposed deposition.

(2) Within ten days of service, a party may file an opposition to the motion and/or a motion for protective order as provided in § 13.24.

(3) The ALJ may grant a motion for discovery only if he or she finds that the discovery sought--

(i) Is necessary for the expeditious, fair, and reasonable consideration of the issues;

(ii) Is not unduly costly or burdensome;

(iii) Will not unduly delay the proceeding; and

(iv) Does not seek privileged information.

(4) The burden of showing that discovery should be allowed is on the party seeking discovery.

(5) The ALJ may grant discovery subject to a protective order under § 13.24.

(e) *Depositions*. (1) If a motion for deposition is granted, the ALJ shall issue a subpoena for the deponent, which may require the deponent to produce documents. The subpoena shall specify the time and place at which the deposition will be held.

(2) The party seeking to depose shall serve the subpoena in the manner prescribed in § 13.8.

(3) The deponent may file with the ALJ a motion to quash the subpoena or a motion for a protective order within ten days of service.

(4) The party seeking to depose shall provide for the taking of a verbatim transcript of the deposition, which it shall make available to all other parties for inspection and copying.

(f) Each party shall bear its own costs of discovery.

§ 13.22 Exchange of witness lists, statements, and exhibits.

[Top of File]

(a) At least 15 days before the hearing or at such other times as may be ordered by the ALJ, the parties shall exchange witness lists, copies of prior statements of proposed witnesses, and copies of proposed hearing exhibits, including copies of any written statements that the party intends to offer in lieu of live testimony in accordance with § 13.33(b). At the time the above documents are exchanged, any party that intends to rely on the transcript of deposition testimony in lieu of live testimony at the hearing, if permitted by the ALJ, shall provide each party with a copy of the specific pages of the transcript it intends to introduce into evidence.

(b) If a party objects, the ALJ shall not admit into evidence the testimony of any witness whose name does not appear on the witness list or any exhibit not provided to the opposing party as provided above unless the ALJ finds good cause for the failure or that there in no prejudice to the objecting party.

(c) Unless another party objects within the time set by the ALJ, documents exchanged in accordance with paragraph (a) of this section shall be deemed to be authentic for the purpose of admissibility at the hearing.

§ 13.23 Subpoenas for attendance at hearing.

[Top of File]

(a) A party wishing to procure the appearance and testimony of any individual at the hearing may request that the ALJ issue a subpoena.

(b) A subpoena requiring the attendance and testimony of an individual may also require the individual to produce documents at the hearing.

(c) A party seeking a subpoena shall file a written request therefor not less than 15 days before the date fixed for the hearing unless otherwise allowed by the ALJ for good cause shown. Such request shall specify any documents to be produced and shall designate the witnesses and describe the address and location thereof with sufficient particularity to permit such witnesses to be found.

(d) The subpoena shall specify the time and place at which the witness is to appear and any documents the witness is to produce.

(e) The party seeking the subpoena shall serve it in the manner prescribed in § 13.8. A subpoena on a party or upon an individual under the control of a party may be served by first class mail.

(f) A party or the individual to whom the subpoena is directed may file with the ALJ a motion to quash the subpoena within ten days after service or on or before the time specified in the subpoena for compliance if it is less than ten days after service.

§ 13.24 Protective order.

[Top of File]

(a) A party or a prospective witness or deponent may file a motion for a protective order with respect to discovery sought by an opposing party or with respect to the hearing, seeking to limit the availability or disclosure of evidence.

(b) In issuing a protective order, the ALJ may make any order which justice requires to protect a party or person from annoyance, embarrassment, oppression, or undue burden or expense, including one or more of the following:

(1) That the discovery not be had;

(2) That the discovery may be had only on specified terms and conditions, including a designation of the time or place;

(3) That the discovery may be had only through a method of discovery other than that requested;

(4) That certain matters not be inquired into, or that the scope of discovery be limited to certain matters;

(5) That discovery be conducted with no one present except persons designated by the ALJ;

(6) That the contents of discovery or evidence by sealed;

(7) That a deposition after being sealed be opened only by order of the ALJ;

(8) That a trade secret or other confidential research, development, commercial information, or facts pertaining to any criminal investigation, proceeding, or other administrative investigation not be disclosed or be disclosed only in a designated way; or

(9) That the parties simultaneously file specified documents or information enclosed in sealed envelopes to be opened as directed by the ALJ.

§ 13.25 Fees.

[Top of File]

The party requesting a subpoena shall pay the cost of the fees and mileage of any witness subpoenaed in the amounts that would be payable to a witness in a proceeding in United States District Court. A check for witness fees and mileage shall accompany the subpoena when served, except that when a subpoena is issued on behalf of the authority, a check for witness fees and mileage need not accompany the subpoena.

§ 13.26 Filing and service of papers.

[Top of File]

(a) *Filing*. (1) Unless otherwise provided by order, all filings must be made as electronic submissions in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions may be found in the E-Filing Guidance and on the NRC Web site at *http://www.nrc.gov/site-help/e-submittals.html*. If a filing contains sections of information or electronic formats that may not be transmitted electronically for security or other reasons, portions not containing those sections will be transmitted electronically to the E-Filing system. In addition, optical storage media (OSM)
containing the entire filing must be physically delivered or mailed. In such cases, the submitter does not need to apply to the Commission for an exemption to deviate from the requirements in paragraph (a) of this section.

(2) Electronic transmission exemption. The ALJ may relieve a participant who is filing electronic documents of the transmission requirements in paragraph (a) of this section. Such a participant will file electronic documents by physically delivering or mailing an OSM containing the documents. The electronic formatting requirement in paragraph (a) of this section must be met.

(3) Electronic document exemption. The ALJ may relieve a participant of both the electronic (computer file) formatting and transmission requirements in paragraph (a)(1) of this section. Such a participant will file paper documents physically or by mail to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, Attention: Rulemakings and Adjudications Staff. Filing by mail is complete upon deposit in the mail.

(4) Requesting an exemption. A participant seeking an exemption under paragraphs (a)(2) or (a)(3) of this section
must submit the exemption request with its first filing in the proceeding. In the request, the requestor must show good cause as to why it cannot file electronically. The filer may not change its formats and delivery methods for filing until a ruling on the exemption request is issued. Exemption requests submitted after the first filing in the proceeding will be granted only if the requestor shows that the interests of fairness so require.

(5) Every pleading and document filed in the proceeding shall contain a caption setting forth the title of the action, the case number assigned by the presiding officer, and a designation of the document (*e.g.*, motion to quash subpoena).

(6) Filing is complete when the filer performs the last act that it must perform to submit a document, such as hitting the send/submit/ transmit button for an electronic transmission or depositing the document, in its entirety, in a mailbox.

(b) *Signatures*. The original of each document must be signed by the participant or its authorized representative, or by an attorney having authority with respect to it. The document must state the capacity of the person signing; his or her address, phone number, and e-mail address; and the date of signature. The signature of a person signing a pleading or other similar document submitted by a participant is a representation that the document has been subscribed in the
capacity specified with full authority, that he or she has read it and knows the contents, that to the best of his or her knowledge, information, and belief the statements made in it are true, and that it is not interposed for delay. The signature of a person signing an affidavit or similar document, which should be submitted in accord with the form outlined in 28 U.S.C. 1746, is a representation that, under penalty of perjury, the document is true and correct to the best of that individual's knowledge and belief. If a document is not signed, or is signed with intent to defeat the purpose of this section, it may be struck.

(1) An electronic document must be signed using a participant's or a participant representative's digital ID certificate. Additional signatures can be added to the electronic document, including to any affidavits that accompany the document, by a typed-in designation that indicates the signer understands and acknowledges that he or she is assenting to the representations in paragraph (d) of this section.

(i) When signing an electronic document using a digital ID certificate, the signature page for the electronic document should contain a typed signature block that includes the phrase "Signed (electronically) by" typed onto the signature line; the name and the capacity of the person signing; the person's address, phone number, and email address; and the date of signature.

(ii) If additional individuals need to sign an electronic document, including any affidavits that accompany the document, these individuals must sign by inserting a typed signature block in the electronic document that includes the phrase "Executed in Accord with 10 CFR 2.304 (d)" or its equivalent typed on the signature line as well as the name and the capacity of the person signing; the person's address, phone number, and e-mail address; and the date of signature to the extent any of these items are different from the information provided for the digital ID certificate signer.

(2) Paper documents must be signed in ink.

(c) *Service*. A participant filing a document with the ALJ shall at the time of filing, serve a copy of such document on every other participant. Service upon any participant of any document other than those required to be served as prescribed in § 13.8 shall be made electronically to the E-Filing system. When a participant is represented by a
representative, service shall be made upon such representative in lieu of the actual participant. Upon an order from the ALJ permitting alternative filing methods under paragraphs (a)(2) or (a)(3) of this section, service may be made by physical delivery or mail. As to each participant that cannot serve electronically, the ALJ shall require service by the most expeditious means permitted under this paragraph that are available to the participant, unless the ALJ finds that this requirement would impose undue burden or expense on the participant.

(1) Unless otherwise provided in this paragraph, a participant will serve documents on the other participants by the same method that those participants filed.

(2) A participant granted an exemption under paragraph (a)(2) of this section will serve the participants in the proceeding that filed electronically by physically delivering or mailing an OSM containing the electronic document.

(3) A participant granted an exemption under paragraph (a)(3) will serve the other participants in the proceeding by physically delivering or mailing a paper copy.

(4) A certificate of service stating the names and addresses of the persons served as well as the method and date of service must accompany any paper served upon participants to the proceeding.

(5) Proof of service, which states the name and address of the person served as well as the method and date of service, may be made as required by law, by rule, or by order of the Commission.

[72 FR 49152, Aug. 28, 2007]

§ 13.27 Computation of time.

[Top of File]

(a) In computing any period of time under this part or in an order issued thereunder, the time begins with the day following the act, event, or default, and includes the last day of the period, unless it is a Saturday or Sunday, a Federal legal holiday at the place where the action or event is to occur, or a day on which, because of emergency closure of the federal government in Washington, DC, NRC Headquarters does not open for business, in which event it includes the next day that is not a Saturday, Sunday, holiday or emergency closure.

(b) When the period of time allowed is less than seven (7) days, intermediate Saturdays, Sundays, Federal legal holidays, and emergency closures shall be excluded from the computation.

(c) Whenever an action is required within a prescribed period by a document served pursuant to § 13.26, no additional time is added to the prescribed period except in the following circumstances:

(1) If a notice or document is served upon a participant, by first-class mail only, three (3) calendar days will be added to the prescribed period for all the participants in the proceeding.

(2) If a notice or document is served upon a participant, by express mail or other expedited service only, two (2) calendar days will be added to the prescribed period for all the participants in the proceeding.

(3) If a document is to be served by multiple service methods, such as partially electronic and entirely on an OSM, the additional number of days is computed according to the service method used to deliver the entire document, excluding courtesy copies, to all of the other participants in the proceeding. The presiding officer may determine the calculation of additional days when a participant is not entitled to receive an entire filing served by multiple methods.

(4) In mixed service proceedings where all participants are not using the same filing and service method, the number of days for service will be determined by the presiding officer based on considerations of fairness and efficiency. The same number of additional days will be added to the prescribed period for all the participants in the proceeding with the number of days being determined by the slowest method of service being used in the proceeding.

(d) To be considered timely, a document must be served:

(1) By 5 p.m. Eastern Time for a document served in person or by expedited service; and

(2) By 11:59 p.m. Eastern Time for a document served by the E-Filing system.

[72 FR 49153, Aug. 28, 2007]

§ 13.28 Motions.

[Top of File]

(a) Any application to the ALJ for an order or ruling shall be by motion. Motions shall state the relief sought, the authority relied upon, and the facts alleged, and shall be filed with the ALJ and served on all other parties.

(b) Except for motions made during a prehearing conference or at the hearing, all motions shall be in writing. The ALJ may require that oral motions be reduced to writing.

(c) Within 15 days after a written motion is served, or such other time as may be fixed by the ALJ, any party may file a response to such motion.

(d) The ALJ may not grant a written motion before the time for filing responses thereto has expired, except upon consent of the parties or following a hearing on the motion, but may overrule or deny such motion without awaiting a response.

(e) The ALJ shall make a reasonable effort to dispose of all outstanding motions prior to the beginning of the hearing.

§ 13.29 Sanctions.

[Top of File]

(a) The ALJ may sanction a person, including any party or representative for--

(1) Failing to comply with an order, rule, or procedure governing the proceeding;

(2) Failing to prosecute or defend an action; or

(3) Engaging in other misconduct that interferes with the speedy, orderly, or fair conduct of the hearing.

(b) Any such sanction, including but not limited to those listed in paragraphs (c), (d), and (e) of this section, shall reasonably relate to the severity and nature of the failure or misconduct.

(c) When a party fails to comply with an order, including an order for taking a deposition, the production of evidence within the party's control, or a request for admission, the ALJ may--

(1) Draw an inference in favor of the requesting party with regard to the information sought;

(2) In the case of requests for admission, deem each matter of which an admission is requested to be admitted;

(3) Prohibit the party failing to comply with such order from introducing evidence concerning, or otherwise relying upon testimony relating to the information sought; and

(4) Strike any part of the pleadings or other submissions of the party failing to comply with such request.

(d) If a party fails to prosecute or defend an action under this part commenced by service of a notice of hearing, the ALJ may dismiss the action or may issue an initial decision imposing penalties and assessments.

(e) The ALJ may refuse to consider any motion, request, response, brief or other document which is not filed in a timely fashion.

§ 13.30 The hearing and burden of proof.

[Top of File]

(a) The ALJ shall conduct a hearing on the record in order to determine whether the defendant is liable for a civil penalty or assessment under § 13.3 and, if so, the appropriate amount of any such civil penalty or assessment considering any aggravating or mitigating factors.

(b) The authority shall prove defendant's liability and any aggravating factors by a preponderance of the evidence.

(c) The defendant shall prove any affirmative defenses and any mitigating factors by a preponderance of the evidence.

(d) The hearing shall be open to the public unless otherwise ordered by the ALJ for good cause shown.

§ 13.31 Determining the amount of penalties and assessments.

[Top of File]

(a) In determining an appropriate amount of civil penalties and assessments, the ALJ and the authority head, upon appeal, should evaluate any circumstances that mitigate or aggravate the violation and should articulate in their opinions the reasons that support the penalties and assessments they impose. Because of the intangible costs of fraud, the expense of investigating such conduct, and the need to deter others who might be similarly tempted, ordinarily double damages and a significant civil penalty should be imposed.

(b) Although not exhaustive, the following factors are among those that may influence the ALJ and the authority head in determining the amount of penalties and assessments to impose with respect to the misconduct (i.e., the false, fictitious, or fraudulent claims or statements) charged in the complaint:

(1) The number of false, fictitious, or fraudulent claims or statements;

(2) The time period over which such claims or statements were made;

(3) The degree of the defendant's culpability with respect to the misconduct;

(4) The amount of money or the value of the property, services, or benefit falsely claimed;

(5) The value of the Government's actual loss as a result of the misconduct, including foreseeable consequential damages and the costs of investigation;

(6) The relationship of the amount imposed as civil penalties to the amount of the Government's loss;

(7) The potential or actual impact of the misconduct upon national defense, public health or safety, or public confidence in the management of Government programs and operations, including particularly the impact on the intended beneficiaries of such programs;

(8) Whether the defendant has engaged in a pattern of the same or similar misconduct;

(9) Whether the defendant attempted to conceal the misconduct;

(10) The degree to which the defendant has involved others in the misconduct or in concealing it;

(11) Where the misconduct of employees or agents is imputed to the defendant, the extent to which the defendant's practices fostered or attempted to preclude such misconduct;

(12) Whether the defendant cooperated in or obstructed an investigation of the misconduct;

(13) Whether the defendant assisted in identifying and prosecuting other wrongdoers;

(14) The complexity of the program or transaction, and the degree of the defendant's sophistication with respect to it, including the extent of the defendant's prior participation in the program or in similar transactions;

(15) Whether the defendant has been found, in any criminal, civil, or administrative proceeding to have engaged in similar misconduct or to have dealt dishonestly with the Government of the United States or of a State, directly or indirectly; and

(16) The need to deter the defendant and others from engaging in the same or similar misconduct.

(c) Nothing in this section shall be construed to limit the ALJ or the authority head from considering any other factors that in any given case may mitigate or aggravate the offense for which penalties and assessments are imposed.

§ 13.32 Location of hearing.

[Top of File]

(a) The hearing may be held--

(1) In any judicial district of the United States in which the defendant resides or transacts business;

(2) In any judicial district of the United States in which the claim or statement in issue was made; or

(3) In such other place as may be agreed upon by the defendant and the ALJ.

(b) Each party shall have the opportunity to present argument with respect to the location of the hearing.

(c) The hearing shall be held at the place and at the time ordered by the ALJ.

§ 13.33 Witnesses.

[Top of File]

(a) Except as provided in paragraph (b) of this section, testimony at the hearing shall be given orally by witnesses under oath or affirmation.

(b) At the discretion of the ALJ, testimony may be admitted in the form of a written statement or deposition. Any such written statement must be provided to all other parties along with the last known address of such witness, in a manner which allows sufficient time for other parties to subpoena such witness for cross-examination at the hearing. Prior written statements of witnesses proposed to testify at the hearing and deposition transcripts shall be exchanged as provided in § 13.22(a).

(c) The ALJ shall exercise reasonable control over the mode and order of interrogating witnesses and presenting evidence so as to--

(1) Make the interrogation and presentation effective for the ascertainment of the truth;

(2) Avoid needless consumption of time; and

(3) Protect witnesses from harassment or undue embarrassment.

(d) The ALJ shall permit the parties to conduct such cross-examination as may be required for a full and true disclosure of the facts.

(e) At the discretion of the ALJ, a witness may be cross-examined on matters relevant to the proceeding without regard to the scope of his or her direct examination. To the extent permitted by the ALJ, cross-examination on matters outside the scope of direct examination shall be conducted in the manner of direct examination and may proceed by leading questions only if the witness is a hostile witness, an adverse party, or a witness identified with an adverse party.

(f) Upon motion of any party, the ALJ shall order witnesses excluded so that they cannot hear the testimony of other witnesses. This rule does not authorize exclusion of--

(1) A party who is an individual;

(2) In the case of a party that is not an individual, an officer or employee of the party appearing for the entity pro se or designated by the party's representative; or

(3) An individual whose presence is shown by a party to be essential to the presentation of its case, including an individual employed by the Government engaged in assisting the representative for the Government.

§ 13.34 Evidence.

[Top of File]

(a) The ALJ shall determine the admissibility of evidence.

(b) Except as provided in this part, the ALJ shall not be bound by the Federal Rules of Evidence. However, the ALJ may apply the Federal Rules of Evidence where appropriate, *e.g.*, to exclude unreliable evidence.

(c) The ALJ shall exclude irrelevant and immaterial evidence.

(d) Although relevant, evidence may be excluded if its probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or by considerations of undue delay or needless presentation of cumulative evidence.

(e) Although relevant, evidence may be excluded if it is privileged under Federal law.

(f) Evidence concerning offers of compromise or settlement shall be inadmissible to the extent provided in Rule 408 of the Federal Rules of Evidence.

(g) The ALJ shall permit the parties to introduce rebuttal witnesses and evidence.

(h) All documents and other evidence offered or taken for the record shall be open to examination by all parties, unless otherwise ordered by the ALJ pursuant to § 13.24.

§ 13.35 The record.

[Top of File]

(a) The hearing will be recorded and transcribed. Transcripts may be obtained following the hearing from the ALJ at a cost not to exceed the actual cost of duplication.

(b) The transcript of testimony, exhibits and other evidence admitted at the hearing, and all papers and requests filed in the proceeding constitute the record for the decision by the ALJ and the authority head.

(c) The record may be inspected and copied (upon payment of a reasonable fee) by anyone, unless otherwise ordered by the ALJ pursuant to § 13.24.

§ 13.36 Post-hearing briefs.

[Top of File]

The ALJ may require the parties to file post-hearing briefs. In any event, any party may file a post-hearing brief. The ALJ shall fix the time for filing such briefs, not to exceed 60 days from the date the parties receive the transcript of the hearing or, if applicable, the stipulated record. Such briefs may be accompanied by proposed findings of fact and conclusions of law. The ALJ may permit the parties to file reply briefs.

§ 13.37 Initial decision.

[Top of File]

(a) The ALJ shall issue an initial decision based only on the record, which shall contain findings of fact, conclusions of law, and the amount of any penalties and assessments imposed.

(b) The findings of fact shall include a finding on each of the following issues:

(1) Whether the claims or statements identified in the complaint, or any portions thereof, violate § 13.3; and

(2) If the person is liable for penalties or assessments, the appropriate amount of any such penalties or assessments considering any mitigating or aggravating factors that he or she finds in the case, such as those described in § 13.31.

(c) The ALJ shall promptly serve the initial decision on all parties within 90 days after the time for submission of post-hearing briefs and reply briefs (if permitted) has expired. The ALJ shall at the same time serve all parties with a statement describing the right of any defendant determined to be liable for a civil penalty or assessment to file a motion for reconsideration with the ALJ or a notice of appeal with the authority head. If the ALJ fails to meet the deadline contained in this paragraph, he or she shall notify the parties of the reason for the delay and shall set a new deadline.

(d) Unless the initial decision of the ALJ is timely appealed to the authority head, or a motion for reconsideration of the initial decision is timely filed, the initial decision shall constitute the final decision of the authority head and shall be final and binding on the parties 30 days after it is issued by the ALJ.

§ 13.38 Reconsideration of initial decision.

[Top of File]

(a) Except as provided in paragraph (d) of this section, any party may file a motion for reconsideration of the initial decision within 20 days of receipt of the initial decision. If service was made by mail, receipt will be presumed to be five days from the date of mailing in the absence of contrary proof.

(b) Every such motion must set forth the matters claimed to have been erroneously decided and the nature of the alleged errors. Such motion shall be accompanied by a supporting brief.

(c) Responses to such motions shall be allowed only upon request of the ALJ.

(d) No party may file a motion for reconsideration of an initial decision that has been revised in response to a previous motion for reconsideration.

(e) The ALJ may dispose of a motion for reconsideration by denying it or by issuing a revised initial decision.

(f) If the ALJ denies a motion for reconsideration, the initial decision shall constitute the final decision of the authority head and shall be final and binding on the parties 30 days after the ALJ denies the motion, unless the initial decision is timely appealed to the authority head in accordance with § 13.39.

(g) If the ALJ issues a revised initial decision, that decision shall constitute the final decision of the authority head and shall be final and binding on the parties 30 days after it is issued, unless it is timely appealed to the authority head in accordance with § 13.39.

§ 13.39 Appeal to authority head.

[Top of File]

(a) Any defendant who has filed a timely answer and who is determined in an initial decision to be liable for a civil penalty or assessment may appeal such decision to the authority head by filing a notice of appeal with the authority head in accordance with this section.

(b)(1) A notice of appeal may be filed at any time within 30 days after the ALJ issues an initial decision. However, if another party files a motion for reconsideration under § 13.38, consideration of the appeal shall be stayed automatically pending resolution of the motion for reconsideration.

(2) If a motion for reconsideration is timely filed, a notice of appeal may be filed within 30 days after the ALJ denies the motion or issues a

revised initial decision, whichever applies.

(3) The authority head may extend the initial 30 day period for an additional 30 days if the defendant files with the authority head a request for an extension within the initial 30 day period and shows good cause.

(c) If the defendant files a timely notice of appeal with the authority head and the time for filing motions for reconsideration under § 13.38 has expired, the ALJ shall forward the record of the proceeding to the authority head.

(d) A notice of appeal shall be accompanied by a written brief specifying exceptions to the initial decision and reasons supporting the exceptions.

(e) The representative for the Government may file a brief in opposition to exceptions within 30 days of receiving the notice of appeal and accompanying brief.

(f) There is no right to appear personally before the authority head.

(g) There is no right to appeal any interlocutory ruling by the ALJ.

(h) In reviewing the initial decision, the authority head shall not consider any objection that was not raised before the ALJ unless a demonstration is made of extraordinary circumstances causing the failure to raise the objection.

(i) If any party demonstrates to the satisfaction of the authority head that additional evidence not presented at each hearing is material and that there were reasonable grounds for the failure to present such evidence at such hearing, the authority head shall remand the matter to the ALJ for consideration of such additional evidence.

(j) The authority head may affirm, reduce, reverse, compromise, remand, or settle any penalty or assessment, determined by the ALJ in any initial decision.

(k) The authority head shall promptly serve each party to the appeal with a copy of the decision of the authority head and a statement describing the right of any person determined to be liable for a penalty or assessment to seek judicial review.

(l) Unless a petition for review is filed as provided in 31 U.S.C. 3805 after a defendant has exhausted all administrative remedies under this part and within 60 days after the date on which the authority head serves the defendant with a copy of the authority head's decision, a determination that a defendant is liable under § 13.3 is final and is not subject to judicial review.

§ 13.40 Stays ordered by the Department of Justice.

[Top of File]

If at any time the Attorney General or an Assistant Attorney General designated by the Attorney General transmits to the authority head a written finding that continuation of the administrative process described in this part with respect to a claim or statement may adversely affect any pending or potential criminal or civil action related to such claim or statement, the authority head shall stay the process immediately. The authority head may order the process resumed only upon receipt of the written authorization of the Attorney General.

§ 13.41 Stay pending appeal.

[Top of File]

(a) An initial decision is stayed automatically pending disposition of a motion for reconsideration or of an appeal to the authority head.

(b) No administrative stay is available following a final decision of the authority head.

§ 13.42 Judicial review.

[Top of File]

Section 3805 of title 31, United States Code, authorizes judicial review by an appropriate United States District Court of a final decision of the authority head imposing penalties or assessments under this part and specifies the procedures for such review.

§ 13.43 Collection of civil penalties and assessments.

[Top of File]

Sections 3806 and 3808(b) of title 31, United States Code, authorize actions for collection of civil penalties and assessments imposed under this part and specify the procedures for such actions.

§ 13.44 Right to administrative offset.

[Top of File]

The amount of any penalty or assessment which has become final, or for which a judgment has been entered under § 13.42 or § 13.43, or any amount agreed upon in a compromise or settlement under § 13.46, may be collected by administrative offset under 31 U.S.C. 3716, except that an administrative offset may not be made under this subsection against a refund of an overpayment of Federal taxes, then or later owing by the United States to the defendant.

§ 13.45 Deposit in Treasury of United States.

[Top of File]

All amounts collected pursuant to this part shall be deposited as miscellaneous receipts in the Treasury of the United States, except as provided in 31 U.S.C. 3806(g).

§ 13.46 Compromise or settlement.

[Top of File]

(a) Parties may make offers of compromise or settlement at any time.

(b) The reviewing official has the exclusive authority to compromise or settle a case under this part at any time after the date on which the reviewing official is permitted to issue a complaint and before the date on which the ALJ issues an initial decision.

(c) The authority head has exclusive authority to compromise or settle a case under this part at any time after the date on which the ALJ issues an initial decision, except during the pendency of any review under § 13.42 or during the pendancy of any action to collect penalties and assessments under § 13.43.

(d) The Attorney General has exclusive authority to compromise or settle a case under this part during the pendancy of any review under § 13.42 or of any action to recover penalties and assessments under 31 U.S.C. 3806.

(e) The investigating officer may recommend settlement terms to the reviewing official, the authority head, or the Attorney General, as appropriate. The reviewing official may recommend settlement terms to the authority head, or the Attorney General, as appropriate.

(f) Any compromise or settlement must be in writing.

§ 13.47 Limitations.

[Top of File]

(a) The notice of hearing with respect to a claim or statement must be served in the manner specified in § 13.8 within 6 years after the date on which such claim or statement is made.

(b) If the defendant fails to serve a timely answer, service of a notice under § 13.10(b) shall be deemed a notice of hearing for purposes of this section.

(c) The statute of limitations may be extended by agreement of the parties.

PART 14--ADMINISTRATIVE CLAIMS UNDER FEDERAL TORT CLAIMS ACT

[Top of File]

Subpart A--General

[Top of File]

§ 14.1 Scope of regulations.

(a) The terms "Nuclear Regulatory Commission" and "NRC" as used in this part mean the agency established by section 201(a) of the Energy Reorganization Act of 1974, but do not include any contractor with the Nuclear Regulatory Commission.

(b) The regulations in this part supplement the Department of Justice's regulations in 28 CFR parts 14 and 15.

(c) These regulations apply to administrative claims under the Federal Tort Claims Act, as amended, asserted on or after the effective date of this rule, for money damages against the United States for damage to or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the NRC while acting within the scope of his or her office or employment, under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred.

(d) These regulations also set forth the procedures when lawsuits are commenced against an employee of the NRC resulting from the operation of a motor vehicle while acting within the scope of his or her employment.

§ 14.3 Limit on attorney fees; penalty.

[Top of File]

(a) An attorney may not charge or receive fees in excess of:

(1) 25 percent of any judgment rendered under 28 U.S.C. 1346(b);

(2) 25 percent of any settlement made under 28 U.S.C. 2677; or

(3) 20 percent of any award, compromise, or settlement made under 28 U.S.C. 2672.

(b) Any attorney who charges or receives any amount in excess of that allowed under this section is subject to a fine of not more than $2,000 or imprisonment for not more than one year, or both. (28 U.S.C. 2678)

Subpart B--Filing Procedures and Requirements

[Top of File]

§ 14.11 Who may file a claim.

(a) A claim for damage to or loss of property may be presented by the owner of the property interest which is the subject of the claim, his or her duly authorized agent, or his or her legal representative.

(b) A claim for personal injury may be presented by the injured person, his or her duly authorized agent, or his or her legal representative.

(c) A claim based on death may be presented by the executor or administrator of the decedent's estate, or by any other person legally entitled to assert the claim under applicable State law.

(d) A claim for loss wholly compensated by an insurer with the rights of a subrogee may be presented by the insurer. A claim for loss partially compensated by an insurer with the rights of a subrogee may be presented by the insurer or the insured individually, to the extent of their respective interests, or jointly. Whenever an insurer presents a claim asserting the rights of a subrogee, the insurer shall present with the claim appropriate evidence that the insurer has the rights of a subrogee.

(e) If a claim is presented by an agent or legal representative that person shall:

(1) Present the claim in the name of the claimant;

(2) Sign the claim;

(3) Show the title or legal capacity of the person signing the claim; and

(4) Include with the claim evidence of his or her authority to present a claim on behalf of the claimant as agent, executor, administrator, parent, guardian, or other representative.

§ 14.13 When is a claim presented to NRC.

[Top of File]

For purposes of the provisions of 28 U.S.C. 2672, a claim is presented when NRC receives from a claimant, or the claimant's duly authorized agent or legal representative, an executed Standard Form 95 or other written notification of an incident. An executed Standard Form 95 or written notification must be accompanied by a claim for money damages in a sum certain for damage to or loss of property, personal injury, or death alleged to have occurred by reason of the incident.

§ 14.15 Where to present a claim to NRC.

[Top of File]

A claimant shall mail or deliver the claim to the office of employment of the NRC employee whose negligent or wrongful act or omission is alleged to have caused the loss or injury. If the office of employment is not known, the claimant shall file the claim with the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

[47 FR 8983, Mar. 3, 1982, as amended at 51 FR 35999, Oct. 8, 1986]

§ 14.17 A claim must be presented to the appropriate agency.

[Top of File]

A claimant shall present the claim to the Federal agency whose activities gave rise to the claim. If a claim is erroneously presented to the NRC, the NRC shall transfer it to the appropriate agency, if the proper agency can be identified from the claim, and shall advise the claimant of the transfer. If transfer is not feasible, the NRC shall return the claim to the claimant. The fact of transfer does not, in itself, preclude further transfer, return of the claim to the claimant, or other appropriate disposition of the claim. A claim shall be presented, as required by 28 U.S.C. 2401(b), as of the date it is received by the appropriate agency.

§ 14.19 When a claim is filed with more than one agency.

[Top of File]

(a) If the NRC and one or more other Federal agencies is or may be involved in the events giving rise to the claim, and if the claim is filed with the NRC, the NRC shall contact all other affected agencies in order to designate the single agency which will investigate and decide the merits of the claim.

(1) In the event that an agreed upon designation cannot be made by the affected agencies, the Department of Justice will be consulted and will designate a primary agency to investigate and decide the merits of the claim. If the NRC is designated as the primary agency, it shall notify the claimant that all future correspondence concerning the claim shall be directed to the NRC.

(2) All involved Federal agencies can agree either to conduct their own administrative reviews and to coordinate the results or to have the investigations conducted by the primary agency. In either event, the primary agency is responsible for the final determination of the claim.

(b) A claimant presenting a claim arising from an incident to more than one agency should identify each agency to which the claim is submitted at the time each claim is presented. If a claim arising from an incident is presented to more than one Federal agency without any indication that more than one agency is involved, and any one of the concerned Federal agencies takes final action on that claim, the final action is conclusive on the claims presented to the other agencies in regard to the time required for filing suit set forth in 28 U.S.C. 2401 (b). However, if NRC, as a subsequently involved Federal agency, desires to take further action with a view towards settling the claim, the NRC may treat the matter as a request for reconsideration of the final denial under 10 CFR 14.39, unless suit has been filed in the interim, and advise the claimant of the action.

§ 14.21 Filing a claim after an agency final denial.

[Top of File]

If, after a final denial by another agency, the claimant files with the NRC a claim arising out of the same incident on which the claim filed with the other agency was based, the submission of the claim to NRC will not toll the requirement of 28 U.S.C. 2401(b) that suit must be filed within six months of the final denial by the other agency, unless the other agency specifically and explicitly treats the submission to NRC as a request for reconsideration under 10 CFR 14.39 and advises the claimant of the action.

§ 14.23 Evidence and information to be submitted.

(a) *Death*. In support of a claim based on death, the claimant may be required to submit the following evidence or information:

(1) An authenticated death certificate or other competent evidence showing cause of death, date of death, and age of decedent.

(2) Decedent's employment or occupation at time of death, including his or her monthly or yearly salary or earnings (if any), and the duration of his or her last employment or occupation.

(3) Full names, addresses, birth dates, kinship, and marital status of the decedent's survivors, including identification of those survivors who were dependent for support upon the decedent at the time of death.

(4) Degree of support afforded by the decedent to each survivor dependent upon him or her for support at the time of death.

(5) Decedent's general physical and mental condition before death.

(6) Itemized bills for medical and burial expenses incurred by reason of the incident causing death, or itemized receipts of payment for these expenses.

(7) If damages for pain and suffering prior to death are claimed, a physician's detailed statement specifying the injuries suffered, duration of pain and suffering, any drugs administered for pain, and the decedent's physical condition in the interval between injury and death.

(8) Any other evidence or information which may have a bearing on either the responsibility of the United States for the death or the amount of damages claimed.

(b) *Personal injury*. In support of a claim for personal injury, including pain and suffering, the claimant may be required to submit the following evidence or information:

(1) A written report by the attending physician or dentist setting forth the nature and extent of the injury, nature and extent of treatment, any degree of temporary or permanent disability and prognosis, period of hospitalization, and any diminished earning capacity. In addition, the claimant may be required to submit to a physical or mental examination by a physician employed by the NRC or another Federal agency. The claimant may request in writing a copy of the report of the examining physician if the claimant has:

(i) Furnished the report referred to in paragraph (a)(1) of this section on request; and

(ii) Made or agrees to make available to the NRC all other reports of the claimant's physical or mental condition which have been or are made by any physician.

(2) Itemized bills for medical, dental, and hospital expenses incurred, or itemized receipts of payment for these expenses.

(3) If the prognosis reveals the necessity for future treatment, a statement of expected expenses for the treatment.

(4) If a claim is made for loss of time from employment, a written statement from his or her employer showing actual time lost from employment, whether he or she is a full- or part-time employee, and wages or salary actually lost.

(5) If a claim is made for loss of income and the claimant is self-employed, documentary evidence showing the amount of earnings actually lost.

(6) Any other evidence or information which may have a bearing on either the responsibility of the United States for the personal injury or the damages claimed.

(c) *Property damage*. In support of a claim for damage to or loss of property, real or personal, the claimant may be required to submit the following evidence or information:

(1) Proof of ownership of the property interest which is the subject of the claim.

(2) A detailed statement of the amount claimed with respect to each item of property.

(3) An itemized receipt of payment for necessary repairs or itemized written estimates of the cost of these repairs.

(4) A statement listing date of purchase, purchase price, and salvage value, where repair is not economical.

(5) Any other evidence or information which may have a bearing on either the responsibility of the United States for the injury to or loss of property or the damages claimed.

§ 14.25 Amending a claim.

[Top of File]

The claimant may amend a claim presented in compliance with 10 CFR 14.13 at any time prior to final agency action or prior to the exercise of the claimant's option under 28 U.S.C. 2675(a). The claimant or his or her duly authorized agent or legal representative shall sign each amendment and submit it in writing. Upon the timely filing of an amendment to a pending claim, the agency shall have six months in which to make a final disposition of the claim as amended and the claimant's option under 28 U.S.C. 2675(a) does not accrue until six months after the filing of an amendment.

§ 14.27 Time limit.

[Top of File]

The claimant shall furnish evidence and information of the types described in 10 CFR 14.23, to the extent reasonably practicable, when the claim is initially presented. If the claimant fails to furnish sufficient evidence and information within six months after the claim was initially presented to enable NRC to adjust, determine, compromise and settle the claim, NRC may consider the claim a nullity.

Subpart C--Commission Action and Authority

[Top of File]

§ 14.31 Investigation.

The NRC may:

(a) Require the claimant to furnish any evidence or information which is relevant to its consideration of the claim;

(b) Examine the claimant; or

(c) Investigate, or request any other Federal agency to investigate, a claim filed under this part.

§ 14.33 Officials authorized to act.

[Top of File]

The General Counsel or the General Counsel's designee shall exercise the authority to adjust, determine, compromise and settle a claim under the provisions of 28 U.S.C. 2672.

[51 FR 35999, Oct. 8, 1986]

§ 14.35 Limitation on NRC's authority.

[Top of File]

(a) The NRC shall effect an award, compromise, or settlement of a claim hereunder in excess of $25,000 only with the prior written approval of the Attorney General or his designee. For the purposes of this paragraph, a principal claim and any derivative or subrogated claim are treated as a single claim.

(b) The NRC may adjust, determine, compromise, or settle a claim under this part only after consultation with the Department of Justice if, in the opinion of the Office of the General Counsel:

(1) A new precedent or a new point of law is involved;

(2) A question of policy is or may be involved;

(3) The United States is or may be entitled to indemnity or contribution from a third party and the NRC is unable to adjust the third party claim; or

(4) The compromise of a particular claim, as a practical matter, will or may control the disposition of a related claim in which the amount to be paid may exceed $25,000.

(c) The NRC may adjust, determine, compromise, or settle a claim under this part only after consultation with the Department of Justice if the NRC is informed or is otherwise aware that the United States, or an employee, agent, or cost-plus contractor of the United States, is involved in litigation based on a claim arising out of the same incident or transaction.

(d) When Department of Justice approval or consultation is required under this section or the advice of the Department of Justice is otherwise requested, the NRC shall direct the referral or request to the Assistant Attorney General, Civil Division, Department of Justice, in writing. The NRC shall ensure that the referral or request contains:

(1) A short and concise statement of the facts and the reasons for the referral or request;

(2) Copies of relevant portions of NRC's claim file; and

(3) A statement of the recommendations or views of the NRC.

A referral or request to the Department of Justice may be made at any time after presentment of a claim to the NRC.

[47 FR 8983, Mar. 3, 1982, as amended at 51 FR 51 FR 35999, Oct. 8, 1986]

§ 14.37 Final denial of claim.

[Top of File]

The NRC shall send notice of a final denial of a claim in writing to the claimant, his or her attorney or legal representative, by certified or registered mail. The notification of final denial may include a statement of the reasons for the denial. The NRC shall include a statement in the notification of final denial that, if the claimant is dissatisfied with NRC's action, he or she may file suit in an appropriate U.S. District Court not later than 6 months after the date of mailing of the notification.

§ 14.39 Reconsideration of a claim.

[Top of File]

Prior to the commencement of suit and prior to the expiration of the 6-month period provided in 28 U.S.C. 2401(b), a claimant, or his or her duly authorized agent, or legal representative, may file a written request with the NRC for reconsideration of a final denial of a claim. Upon the timely filing of a request for reconsideration, the NRC shall have 6 months from the date of filing in which to make a final disposition of the claim, and the claimant's option under 28 U.S.C. 2675(a) does not accrue until 6 months after the filing of a request for reconsideration. Final NRC action on a request for reconsideration shall be effected in accordance with the provisions of 10 CFR 14.37.

§ 14.41 Payment of approved claims.

[Top of File]

(a) The NRC shall pay any award, compromise, or settlement in an amount of $2,500 or less made under the provisions of 28 U.S.C. 2672 out of the appropriations available to it. The NRC shall obtain payment of any award, compromise, or settlement in excess of $2,500 from the Department of the Treasury by forwarding Standard Form 1145 to the Payment Branch, Claims Group, General Accounting Office. If an award, compromise, or settlement is in excess of $25,000, Standard Form 1145 must be accompanied by evidence that the award, compromise, or settlement has been approved by the Attorney General or the Attorney General's designee. When the use of Standard Form 1145 is required, it must be executed by the claimant or it must be accompanied by either a claims settlement agreement or a Standard Form 95 executed by the claimant.

(b) If a claimant is represented by an attorney, the voucher for payment must designate both the claimant and his or her attorney as payees, and the check must be delivered to the attorney whose address appears on the voucher.

§ 14.43 Acceptance of payment constitutes release.

[Top of File]

Acceptance by the claimant, his agent, or legal representative, of any award, compromise, or settlement made under the provisions of 28 U.S.C. 2672 or 2677, is final and conclusive on the claimant, his or her agent or legal representative and any other person on whose behalf or for whose benefit the claim has been presented. Acceptance constitutes a complete release of any claim against the United States and against any employee of the Government whose act or omission gave rise to the claim.

Subpart D--Employee Drivers

[Top of File]

§ 14.51 Procedures when employee drivers are sued.

(a) Any NRC employee against whom a civil action or proceeding is brought for damage to property, or for personal injury or death, on account of the employee's operation of a motor vehicle in the scope of his or her office or employment with the NRC, shall promptly deliver all process and pleadings served upon the employee, or an attested true copy, to the Office of the General Counsel. If the action is brought against an employee's estate, this procedure applies to the employee's personal representative.

(b) In addition, upon the employee's receipt of any process or pleadings, or any prior information regarding the commencement of a civil action or proceeding, the employee shall immediately advise the Office of the General Counsel by telephone or telegraph.

(c) [removed]

[47 FR 8983, Mar. 3, 1982, as amended at 51 FR 35999, Oct. 8, 1986]

§ 14.53 Scope of employment report.

[Top of File]

A report containing all data bearing upon the question whether the employee was acting within the scope of his or her office or employment will be furnished by the General Counsel or designee to the United States Attorney for the district encompassing the place where the civil action or proceeding is brought. A copy of the report also will be furnished to the Director of the Torts Branch, Civil Division, Department of Justice, at the earliest possible date, or within the time specified by the United States Attorney.

[51 FR 35999, Oct. 8, 1986]

§ 14.55 Removal of State court proceedings.

[Top of File]

Upon a certification by the United States Attorney that the defendant employee was acting within the scope of his or her office or employment at the time of the incident out of which the suit arose, any civil action or proceeding commenced in a State court may be removed to the district court of the United States for the district and division encompassing the place where the action or proceeding is pending in accordance with 28 U.S.C. 2679.

§ 14.57 Suit against United States exclusive remedy.

[Top of File]

The remedy against the United States provided by 28 U.S.C. 1346(b) and 2672 for damage to or loss of property or personal injury or death, resulting from the operation by an employee of the Government of any motor vehicle while acting within the scope of his or her office or employment, is exclusive of any other civil action or proceeding by reason of the same subject matter against the employee or his or her estate whose act or omission gave rise to the claim.

PART 15--DEBT COLLECTION PROCEDURES

[Top of File]

Subpart A--Application and Coverage

[Top of File]

§ 15.1 Application.

(a) This part applies to claims for the payment of debts owed to the United States Government in the form of money or property and; unless a different procedure is specified in a statute, regulation, or contract; prescribes procedures by which the NRC --

(1) Collects, compromises, suspends, offsets, and terminates collection actions for claims;

(2) Determines and collects interest and other charges on these claims; and

(3) Refers unpaid claims over 180 days delinquent to Treasury for offset and collection and to the DOJ for litigation.

(b) The following are examples of kinds of debts to which special statutory and administrative procedures apply:

(1) A claim against an employee for erroneous payment of pay and allowances subject to waiver under 5 U.S.C. 5584 are covered by the provisions of 10 CFR part 16.

(2) A claim against an applicant for, or a holder or former holder of, an NRC license involving the payment of civil penalties imposed by the NRC under 10 CFR 2.205.

(3) A claim involved in a case pending before any Federal Contract Appeals Board or Grant Appeals Board. However, nothing in this part prevents negotiation and settlement of a claim pending before a Board.

(c) The NRC is not limited to collection remedies contained in the revised Federal Claims Collection Standards (FCCS). The FCCS is not intended to impair common law remedies.

[47 FR 7616, Feb. 22, 1982, as amended at 55 FR 32377, Aug. 9, 1990; 56 FR 51830, Oct. 16, 1991; 67 FR 30318, May 6, 2002]

§ 15.2 Definitions.

[Top of File]

Administrative offset means withholding money payable by the United States Government to, or held by the Government for, a person to satisfy a debt the person owes the United States Government.

Administrative wage garnishment is the process of withholding amounts from an employee's disposable pay and the paying of those amounts to a creditor in satisfaction of a withholding order.

Claim and debt are used synonymously to refer to an amount of money, funds, or property that has been determined by an agency official to be owed to the United States from any person, organization, or entity, except another Federal agency. For the purposes of administrative offset under 31 U.S.C. 3716, the terms claim and debt include an amount of money, funds, or property owed by a person to a State (including past-due support being enforced by a State), the District of Columbia, American Samoa, Guam, the United States Virgin Islands, the Commonwealth of the Northern Mariana Islands, or the Commonwealth of Puerto Rico.

Cross-servicing means that the Treasury or another debt collection center is taking appropriate debt collection action on behalf of one or more Federal agencies or a unit or subagency thereof.

Delinquent. A debt is considered delinquent if it has not been paid by the date specified in the initial written demand for payment or applicable contractual agreement with the NRC unless other satisfactory payment arrangements have been made by that date. If the debtor fails to satisfy obligations under a payment agreement with the NRC after other payment arrangements have been made, the debt becomes a delinquent debt.

Federal agencies include agencies of the executive, legislative, and judicial branches of the Government, including Government corporations.

License means any license, permit, or other approval issued by the Commission.

Payment in full means payment of the total debt due the United States, including any interest, penalty, and administrative costs of collection assessed against the debtor.

Recoupment is a special method for adjusting debts arising under the same transaction or occurrence. For example, obligations arising under the same contract generally are subject to recoupment.

Salary offset means an administrative offset to collect a debt under 5 U.S.C. 5514 by deduction(s) at one or more officially established pay intervals from the current pay account of an employee without his/her consent.

Tax refund offset means withholding or reducing a tax refund payment by an amount necessary to satisfy a debt owed by the payee(s) of a tax refund payment.

Treasury as used in 10 CFR part 15 means the Department of the Treasury.

Withholding order means any order for withholding or garnishment of pay issued by an agency, or judicial or administrative body.

[55 FR 32377, Aug. 9, 1990, as amended at 56 FR 51830, Oct. 16, 1991; 67 FR 30318, May 6, 2002]

§ 15.3 Communications.

[Top of File]

Unless otherwise specified, communications concerning the regulations in this part may be addressed to the Secretary of the Nuclear Regulatory Commission and sent either by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff; by hand delivery to the NRC's offices at 11555 Rockville Pike, One White Flint North, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at http://www.nrc.gov/site-help/e-submittals.html, by calling (301) 415-0439, by e-mail to EIE@nrc.gov, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[63 FR 15743, Apr. 1, 1998 as amended at 68 FR 58801, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 15.5 Claims that are covered.

[Top of File]

(a) These procedures generally apply to any claim for payment of a debt which:

(1) Results from activities of the NRC, including fees imposed under part 170 and part 171; or

(2) Is referred to the NRC for collection.

(b) These procedures do not apply to:

(1) A claim based on a civil monetary penalty for violation of a licensing requirement unless § 2.205 of this chapter provides otherwise;

(2) A claim as to which there is an indication of fraud, the presentation of a false claim, or misrepresentation on the part of the debtor or any other party having an interest in the claim;

(3) A claim based in whole or in part on conduct in violation of the antitrust laws;

(4) A claim under the Internal Revenue Code of 1986.

(5) A claim between Federal agencies. Federal agencies should attempt to resolve interagency claims as referenced in Executive Order 12146 (3 CFR, 1980 Comp., pp. 409-412).

(6) A claim once it becomes subject to salary offset under 5 U.S.C. 5514. These claims are subject to the provisions of 10 CFR part 16.

(7) A claim involving bankruptcy is covered by Title 11 of the United States Code.

[47 FR 7616, Feb. 22, 1982, as amended at 55 FR 32377, Aug. 9, 1990; 56 FR 51830, Oct. 16, 1991; 67 FR 30318, May 6, 2002]

§ 15.7 Monetary limitation on NRC's authority.

[Top of File]

The NRC's authority to compromise a claim, or to terminate or suspend collection action on a claim covered by these procedures, is limited by 31 U.S.C. 3711(a) to claims that --

(a) Have not been referred to another Federal Agency for further collection actions; and

(b) Do not exceed $100,000 (exclusive of interest, penalties, and administrative charges) or such higher amount as the Attorney General shall from time to time prescribe for purposes of compromise or suspension or termination of collection activity.

[47 FR 7616, Feb. 22, 1982, as amended at 55 FR 32378, Aug. 9, 1990; 67 FR 30318, May 6, 2002]

§ 15.8 Information Collection Requirements: OMB approval.

[Top of File]

This part contains no information collection requirements, and therefore, is not subject to the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.).

[67 FR 30319, May 6, 2002]

§ 15.9 No private rights created.

[Top of File]

(a) The failure of NRC to include in this part any provision of the FCCS, 31 CFR Chapter IX, parts 900-904, does not prevent the NRC from applying these provisions.

(b) A debtor may not use the failure of the NRC to comply with any provision of this part or of the Federal Claims Collections Standards as a defense.

[47 FR 7616, Feb. 22, 1982, as amended at 55 FR 32378, Aug. 9, 1990; 67 FR 30319, May 6, 2002]

§ 15.11 Form of payment.

[Top of File]

These procedures are directed primarily to the recovery of money on behalf of the Government. The NRC may demand:

(a) The return of specific property; or

(b) The performance of specific services.

[47 FR 7616, Feb. 22, 1982, as amended at 67 FR 30319, May 6, 2002]

§ 15.13 Subdivision of claims.

[Top of File]

The NRC shall consider a debtor's liability arising from a particular transaction or contract as a single claim in determining whether the claim is less than the monetary limitation for the purpose of compromising or suspending or terminating collection action. A claim may not be subdivided to avoid the monetary limitation established by 31 U.S.C. 3711(a)(2) and § 15.7.

[55 FR 32378, Aug. 9, 1990]

Subpart B--Administrative Collection of Claims

[Top of File]

§ 15.20 Aggressive agency collection activity.

(a) The NRC shall take aggressive action to collect all debts. These collection activities will be undertaken promptly and follow-up action will be taken as appropriate. These regulations do not require the Department of Justice, Department of the Treasury (Treasury), or any other Treasury-designated collection center to duplicate collection activities previously undertaken by NRC.

(b) Debt referred or transferred to Treasury or to a Treasury-designated debt collection center under the authority of 31 U.S.C. 3711(g) must be serviced, collected, or compromised, or the collection action will be suspended or terminated, in accordance with the statutory

requirements and authorities applicable to the collection of the debts.

(c) The NRC shall cooperate with other agencies in their debt collection activities.

(d) The NRC will consider referring debts that are less than 180 days delinquent to Treasury or to a Treasury-designated debt collection center to accomplish efficient, cost-effective debt collection. Referrals to debt collection centers are at the discretion of, and for a time period acceptable to, Treasury.

(e) The NRC shall transfer any debt that has been delinquent for 180 days or more to Treasury so that it may take appropriate action to collect the debt or terminate collection actions. This requirement does not apply to any debt that--

(1) Is in litigation or foreclosure;

(2) Will be disposed of under an approved asset sale program;

(3) Has been referred to a private collection contractor for a period of time acceptable to Treasury;

(4) Is at a debt collection center for a period of time acceptable to Treasury;

(5) Will be collected under internal offset procedures within 3 years after the date the debt first became delinquent; or

(6) Is exempt from this requirement based on a determination by Treasury that exemption for a certain class of debt is in the best interest of the United States.

(f) Agencies operating Treasury-designated debt collection centers are authorized to charge a fee for services rendered regarding referred or transferred debts. The fee may be paid out of amounts collected and may be added to the debt as an administrative cost.

[67 FR 30319, May 6, 2002]

§ 15.21 Written demands for payment.

[Top of File]

(a) The NRC shall make appropriate written demands upon the debtor for payment of money or the return of specific property in terms which specify:

(1) The basis of the indebtedness and the right of the debtor to seek review within the NRC;

(2) The amount claimed;

(3) A description of any property which is to be returned by a date certain;

(4) The date on which payment is to be made (which is normally the date the initial written demand letter statement was mailed or hand delivered, unless otherwise specified by contractual agreement, established by Federal statute or regulation, or agreed to under a payment agreement);

(5) The applicable standards for assessing interest, penalties, and administrative costs under 31 CFR 901.9;

(6) The applicable policy for reporting the delinquent debt to consumer reporting agencies; and

(7) The name, address, and phone number of a contact person or office within the NRC will be included with each demand letter.

(b) The NRC shall normally send two demand letters to debtors. The initial demand letter will be followed approximately 30 days later with a second demand letter, unless circumstances indicate that alternative remedies better protect the Government's interest, that the debtor has explicitly refused to pay, or that sending a further demand letter is futile. Depending upon the circumstances, the first and second demand letters may--

(1) Offer or seek to confer with the debtor;

(2) State the amount of the interest and penalties that will be added on a daily basis as well as the administrative costs that will be added to the debt until the debt is paid; and

(3) State that the authorized collection procedures include any procedure authorized in this part including:

(i) Contacts with the debtor's employer when the debtor is employed by the Federal Government or is a member of the military establishment or the Coast Guard;

(ii) The NRC may report debts to credit bureaus, refer debts to debt collection centers and collection agencies for cross-servicing (including wage garnishment), tax refund offset, administrative offset, and litigation. Any eligible debt that is delinquent for 180 days or more will be transferred to the Treasury for collection. Credit bureau reporting for transferred debts will be handled by Treasury or a Treasury-designated center.

(iii) Possible reporting of the delinquent debt to consumer reporting agencies in accordance with the guidance and standards contained in 31 CFR 901.4.

(iv) The suspension or revocation of a license or other remedy under § 15.29;

(v) Installment payments possibly requiring security; and

(vi) The right to refer the claim to DOJ for litigation.

(c) The NRC shall normally send only one written demand to a debtor who is a current NRC employee. The procedure described in § 15.33 and 10 CFR part 16 will be followed if full payment is not received either 30 days from the date the initial written demand was mailed or hand delivered. If the NRC cannot obtain full payment by following the procedures described in § 15.33 and 10 CFR part 16, the NRC may follow other collection procedures described in this subpart.

(d) The failure to state in a letter of demand a matter described in § 15.21 is not a defense for a debtor and does not prevent the NRC from proceeding with respect to that matter.

(e) When the NRC learns that a bankruptcy petition has been filed with respect to a debtor, the NRC will cease collection action immediately unless it has been determined that under 11 U.S.C. 362, the automatic stay has been lifted or is no longer in effect.

[47 FR 7616, Feb. 22, 1982, as amended at 55 FR 32378, Aug. 9, 1990; 56 FR 51830, Oct. 16, 1991; 67 FR 30319, May 6, 2002]

§ 15.23 Telephone or internet inquiries and investigations.

[Top of File]

(a) If a debtor has not responded to one or more demands, the NRC shall make reasonable efforts by telephone or internet to determine the debtor's intentions.

(b) The NRC may undertake an investigation to locate a debtor if the whereabouts of a debtor is a problem, or if a debtor cannot be contacted by telephone.

(c) The NRC, under 15 U.S.C. 1681(f), may obtain consumer credit information from private firms, including the name, address, former addresses, place of employment, and former places of employment of a debtor.

[47 FR 7616, Feb. 22, 1982, as amended at 67 FR 30319, May 6, 2002]

§ 15.25 Personal interviews.

[Top of File]

(a) The NRC may seek an interview with the debtor at the offices of the NRC when --

(1) A matter involved in the claim needs clarification;

(2) Information is needed concerning the debtor's circumstances; or

(3) An agreement for payment might be negotiated.

(b) The NRC shall grant an interview with a debtor upon the debtor's request. The NRC will not reimburse a debtor's interview expenses.

[47 FR 7616, Feb. 22, 1982, as amended at 55 FR 32378, Aug. 9, 1990]

§ 15.26 Reporting claims.

[Top of File]

(a) In addition to assessing interest, penalties, and administrative costs under § 15.37, the NRC may report a debt that has been delinquent for 90 days to a consumer reporting agency if all the conditions of this paragraph are met.

(1) The debtor has not --

(i) Paid or agreed to pay the debt under a written payment plan that has been signed by the debtor and agreed to by the NRC; or

(ii) Filed for review of the debt under § 15.26 (a)(2)(iv).

(2) The NRC has included a notification in the second written demand (see § 15.21(b)) to the individual debtor stating--

(i) That the payment of the debt is delinquent;

(ii) That within not less than 60 days after the date of the notification, the NRC intends to disclose to a consumer reporting agency that the individual debtor is responsible for the debt;

(iii) The specific information to be disclosed to the consumer reporting agency; and

(iv) That the debtor has a right to a complete explanation of the debt (if that has not already been given), to dispute information in NRC records about the debt, and to request reconsideration of the debt by administrative appeal or review of the debt.

(3) The NRC has reconsidered its initial decision on the debt when the debtor has requested a review under paragraph (a)(2)(iv) of this section.

(4) The NRC has taken reasonable action to locate a debtor for whom the NRC does not have a current address to send the notification provided for in paragraph (a)(2) of this section.

(b) If there is a substantial change in the condition or amount of the debt, the NRC shall --

(1) Promptly disclose that fact(s) to each consumer reporting agency to which the original disclosure was made;

(2) Promptly verify or correct information about a debt on request of a consumer reporting agency for verification of information disclosed by the NRC; and,

(3) Obtain assurances from the consumer reporting agency that the agency is complying with all applicable Federal, state and local laws relating to its use of consumer credit information.

(c) The information the NRC discloses to the consumer reporting agency is limited to --

(1) Information necessary to establish the identity of the individual debtor, including name, address, and taxpayer identification number;

(2) The amount, status, and history of the debt; and

(3) The NRC activity under which the debt arose.

[55 FR 32378, Aug. 9, 1990 as amended at 67 FR 30319, May 6, 2002]

§ 15.27 Contact with debtor's employing agency.

[Top of File]

If the debtor is employed by the Federal government or is a member of the military establishment or the Coast Guard, collection by offset must be accomplished in accordance with 5 U.S.C. 5514 and the provisions of 10 CFR part 16.

[56 FR 51830, Oct. 16, 1991]

§ 15.29 Suspension or revocation of license.

[Top of File]

In non-bankruptcy cases, the NRC may suspend or revoke any license, permit, or approval which the NRC has granted to the debtor for any inexcusable, prolonged, or repeated failure of the debtor to pay a delinquent debt. Before suspending or revoking any license, permit, or approval for failure to pay a debt, the NRC shall issue to the debtor (by certified mail) an order or a demand for information as to why the license, permit, or approval should not be suspended or revoked. The NRC shall allow the debtor no more than 30 days to pay the debt in full, including applicable interest, penalties, and administrative costs of collection of the delinquent debt. The NRC may revoke the license, permit, or approval at the end of this period. If a license is revoked under authority of this part, a new application, with appropriate fees, must be made to the NRC. The NRC may not consider an application unless all previous delinquent debts of the debtor to the NRC have been paid in full. The suspension or revocation of a license, permit, or approval is also applicable to Federal programs or activities that are administered by the states on behalf of the Federal Government to the extent that they affect the Federal Government's ability to collect money or funds owed by debtors. In bankruptcy cases, before advising the debtor of NRC's intention to suspend or revoke licenses,

permits, or approvals, the NRC will seek legal advice from its Office of the General Counsel concerning the impact of the Bankruptcy Code which may restrict such action.

[67 FR 30320, May 6, 2002]

§ 15.31 Disputed debts.

[Top of File]

(a) A debtor who disputes a debt shall explain why the debt is incorrect in fact or in law within 30 days from the date that the initial demand letter was mailed or hand-delivered. The debtor may support the explanation by affidavits, cancelled checks, or other relevant evidence.

(b) If the debtor's arguments appear to have merit, the NRC may extend the interest waiver period as described in § 15.37(j) pending a final determination of the existence or amount of the debt.

(c) The NRC may investigate the facts involved in the dispute and, if it considers it necessary, arrange for a conference at which the debtor may present evidence and any arguments in support of the debtor's position.

[47 FR 76716, Feb. 22, 1982, as amended at 55 FR 32379, Aug. 9, 1990]

§ 15.32 Contracting for collection services.

[Top of File]

The NRC may contract for collection services in order to recover delinquent debts only if the debts are not subject to the DCIA requirement to transfer debts to Treasury for debt collection services, e.g. debts that are less than 180 days delinquent. However, the NRC retains the authority to resolve disputes, compromise claims, suspend or terminate collection action, and initiate enforced collection through litigation. When appropriate, the NRC shall contract for collection services in accordance with the guidance and standards contained in 31 CFR chapter IX, parts 900-904.

[67 FR 30320, May 6, 2002]

§ 15.33 Collection by administrative offset.

[Top of File]

(a) Application. (1) The NRC may administratively undertake collection by centralized offset on each claim which is liquidated or certain in amount in accordance with the guidance and standards in 31 CFR Chapter IX, parts 900-904 and 5 U.S.C. 5514.

(2) This section does not apply to:

(i) Debts arising under the Social Security Act, except as provided in 42 U.S.C. 404;

(ii) Payments made under the Social Security Act, except as provided for in 31 U.S.C. 3716(c) (see 31 CFR 285.4, Federal Benefit Offset);

(iii) Debts arising under, or payments made under, the Internal Revenue Code (see 31 CFR 285.2, Tax Refund Offset) or the tariff laws of the United States;

(iv) Offsets against Federal salaries to the extent these standards are inconsistent with regulations published to implement such offsets under 5 U.S.C. 5514 and 31 U.S.C. 3716 (see 5 CFR part 550, subpart K, and 31 CFR 285.7, Federal Salary Offset);

(v) Offsets under 31 U.S.C. 3728 against a judgment obtained by a debtor against the United States;

(vi) Offsets or recoupments under common law, State law, or Federal statutes specifically prohibiting offsets or recoupments of particular types of debts; or

(vii) Offsets in the course of judicial proceedings, including bankruptcy.

(3) Unless otherwise provided for by contract or law, debts or payments that are not subject to administrative offset under 31 U.S.C. 3716 may be collected by administrative offset under the common law or their applicable statutory authority.

(4) Unless otherwise provided by law, the NRC may not initiate administrative offset of payments under the authority of 31 U.S.C. 3716 to collect a debt more than 10 years after the Government's right to collect the debt first accrued, unless facts material to the Government's right to collect the debt were not known and could not reasonably have been known to the NRC, or collection of "approval" fees has been deferred under 10 CFR part 170. If the collection of "approval" fees has been deferred, the ten-year period begins to run at the end of the deferral period.

(5) In bankruptcy cases, the NRC will seek legal advice from its Office of the General Counsel concerning the impact of the Bankruptcy Code on pending or contemplated collections by offset.

(b) Mandatory centralized offset. (1) The NRC is required to refer past due, legally enforceable, nontax debts that are over 180 days delinquent to Treasury for collection by centralized administrative offset. A debt is legally enforceable if there has been a final NRC determination that the debt, in the amount stated, is due and there are no legal bars to collection action. Debts that are less than 180 days delinquent also may be referred to Treasury for this purpose.

(2) The names and taxpayer identifying numbers (TINs) of debtors who owe debts referred to Treasury as described in paragraph (b)(1) of this section must be compared to the names and TINs on payments to be made by Federal disbursing officials. Federal disbursing officials include disbursing officials of Treasury, the Department of Defense, the United States Postal Service, other Government corporations, and disbursing officials of the United States designated by Treasury. When the name and TIN of a debtor match the name and TIN of a payee and all other requirements for offset have been met, the payment will be offset to satisfy the debt.

(3) Federal disbursing officials will notify the debtor/payee in writing that an offset has occurred to satisfy, in part or in full, a past due, legally enforceable delinquent debt. The notice must include a description of the type and amount of the payment from which the offset was taken, the amount of offset that was taken, the identity of the creditor agency (NRC) requesting the offset, and a contact point within NRC who will respond to questions regarding the offset.

(c) NRC administrative offset. (1) Before referring a delinquent debt to Treasury for administrative offset, the NRC adopts the following administrative offset procedures:

(i) Offsets may be initiated only after the debtor has been sent written notice of the type and amount of the debt, the intention of the NRC to use administrative offset to collect the debt, and an explanation of the debtor's rights under 31 U.S.C. 3716; and

(ii) The debtor has been given--

(A) The opportunity to inspect and copy NRC records related to the debt;

(B) The opportunity for a review within the NRC of the determination of indebtedness; and

(C) The opportunity to make a written agreement to repay the debt.

(iii) The procedures set forth in paragraph (c)(1)(i) of this section may be omitted when--

(A) The offset is in the nature of a recoupment;

(B) The debt arises under a contract as set forth in Cecile Industries, Inc. v. Cheney, 995 F.2d 1052 (Fed. Cir. 1993) (notice and other procedural protections set forth in 31 U.S.C. 3716(a) do not supplant or restrict established procedures for contractual offsets accommodated by the Contracts Disputes Act); or

(C) The NRC first learns of the existence of the amount owed by the debtor when there is insufficient time before payment would be made to the debtor/payee to allow for prior notice and an opportunity for review. This applies to non-centralized offsets conducted under paragraph (d) of this section. When prior notice and an opportunity for review are omitted, the NRC shall give the debtor notice and an opportunity for review as soon as practicable and shall refund any money ultimately found not to have been owed to the NRC.

(iv) When an agency previously has given a debtor any of the required notice and review opportunities with respect to a particular debt (31 CFR 901.2), the NRC need not duplicate the notice and review opportunities before administrative offset may be initiated.

(2) When referring delinquent debts to Treasury, the NRC shall certify, in a form acceptable to Treasury, that:

(i) The debt is past due and legally enforceable; and

(ii) The NRC has complied with all due process requirements under 31 U.S.C. 3716(a) and the NRC's regulations.

(3) Payments that are prohibited by law from being offset are exempt from centralized administrative offset. The Treasury shall exempt payments under means-tested programs from centralized administrative offset when requested in writing by the head of the payment-certifying or authorizing agency. Also, the Treasury may exempt other classes of payments from centralized offset upon the written request of the head of the payment-certifying or authorizing agency.

(4) Benefit payments made under the Social Security Act (42 U.S.C. 301 et seq.), part B of the Black Lung Benefits Act (30 U.S.C. 921 et seq.), and any law administered by the Railroad Retirement Board (other than tier 2 benefits), may be offset only in accordance with Treasury regulations, issued in consultation with the Social Security Administration, the Railroad Retirement Board, and the Office of Management and Budget (31 CFR 285.4).

(5) In accordance with 31 U.S.C. 3716(f), the Treasury may waive the provisions of the Computer Matching and Privacy Protection Act of 1988 concerning matching agreements and post-match notification and verification (5 U.S.C. 552a(o) and (p)) for centralized administrative offset upon receipt of a certification from the NRC that the due process requirements enumerated in 31 U.S.C. 3716(a) have been met. The

certification of a debt in accordance with paragraph (c)(2) of this section will satisfy this requirement. If a waiver is granted, only the Data Integrity Board of the Department of the Treasury is required to oversee any matching activities, in accordance with 31 U.S.C. 3716(g). This waiver authority does not apply to offsets conducted under paragraphs (c) and (d) of this section.

(d) Non-centralized administrative offset. (1) Generally, non-centralized administrative offsets are ad hoc case-by-case offsets that NRC would conduct, at its discretion, internally or in cooperation with the agency certifying or authorizing payments to the debtor. Unless otherwise prohibited by law, when centralized administrative offset is not available or appropriate, past due, legally enforceable, nontax delinquent debts may be collected through non-centralized administrative offset. In these cases, the NRC may make a request directly to a payment-authorizing agency to offset a payment due a debtor to collect a delinquent debt. For example, the NRC will request the Office of Personnel Management (OPM) to offset a Federal employee's lump sum payment upon leaving Government service to satisfy an unpaid advance.

(2) Before requesting Treasury to conduct a non-centralized administrative offset, the NRC adopts the following procedures, which provide that such offsets may occur only after:

(i) The debtor has been provided due process as set forth in paragraph (c)(1) of this section; and

(ii) The Treasury has received written certification from NRC that the debtor owes the past due, legally enforceable delinquent debt in the amount stated, and that the NRC has fully complied with its regulations concerning administrative offset.

(3) Treasury shall comply with offset requests by NRC to collect debts owed to the United States, unless the offset would not be in the best interests of the United States with respect to the Treasury's program, or would otherwise be contrary to law. Appropriate use should be made of the cooperative efforts of other agencies in effecting collection by administrative offset.

(4) When collecting multiple debts by non-centralized administrative offset, the NRC will apply the recovered amounts to those debts in accordance with the best interests of the United States, as determined by the facts and circumstances of the particular case, particularly the applicable statute of limitations.

(e) Requests to OPM to offset a debtor's anticipated or future benefit payment under the Civil Service Retirement and Disability Fund. Upon providing OPM written certification that a debtor has been afforded the procedures provided in paragraph (c)(1) of this section, the NRC will request OPM to offset a debtor's anticipated or future benefit payments under the Civil Service Retirement and Disability Fund (Fund) in accordance with regulations codified at 5 CFR 831.1801-831.1808. Upon receipt of such a request, OPM will identify and "flag" a debtor's account in anticipation of the time when the debtor requests, or becomes eligible to receive, payments from the Fund. This will satisfy any requirement that offset be initiated prior to the expiration of the time limitations referenced in paragraph (a)(4) of this section.

(f) Review requirements. (1) For purposes of this section, whenever the NRC is required to afford a debtor a review within the agency, the NRC shall provide the debtor with a reasonable opportunity for an oral hearing in accordance with 10 CFR 16.9, when the debtor requests reconsideration of the debt, and the NRC determines that the question of the indebtedness cannot be resolved by review of the documentary evidence, for example, when the validity of the debt turns on an issue of credibility or veracity.

(2) Unless otherwise required by law, an oral hearing under this section is not required to be a formal evidentiary hearing, although the NRC should carefully document all significant matters discussed at the hearing.

(3) This section does not require an oral hearing with respect to debt collection systems in which a determination of indebtedness rarely involves issues of credibility or veracity, and the NRC has determined that review of the written record is ordinarily an adequate means to correct prior mistakes.

(4) In those cases in which an oral hearing is not required by this section, the NRC shall accord the debtor a "paper hearing," that is, a determination of the request for reconsideration based upon a review of the written record.

[67 FR 30320, May 6, 2002]

§ 15.35 Payments.

[Top of File]

(a) *Payment in full*. The NRC shall make every effort to collect a claim in full before it becomes delinquent. If a claim is paid in one lump sum after it becomes delinquent, the NRC shall impose charges for interest, penalties, and administrative costs as specified in § 15.37.

(b) *Payment in installment*. If a debtor furnishes satisfactory evidence of inability to pay a claim in one lump sum, payment in regular installments may be arranged. Evidence may consist of a financial statement or a signed statement that the debtor's application for a loan to enable the debtor to pay the claim in full was rejected. Except for a claim described in 5 U.S.C. 5514 and codified in 10 CFR part 16, all installment payment arrangements must be in writing and require the payment of interest and administrative charges.

(1) Installment note forms may be used. The written installment agreement must contain a provision accelerating the debt payment in the event the debtor defaults. If the debtor's financial statement discloses the ownership of assets which are free and clear of liens or security interests, or assets in which the debtor owns an equity, the debtor may be asked to secure the payment of an installment note by executing a Security Agreement and Financing Statement transferring to the United States a security interest in the asset until the debt is discharged.

(2) If the debtor owes more than one debt, the NRC will apply the payment to the various debts in accordance with the best interests of the

United States, as determined by the facts and circumstances of the particular case.

(c) To whom payment is made. Payment of a debt is made by check, electronic transfer, draft, credit card, or money order and should be payable to the United States Nuclear Regulatory Commission, License Fee and Accounts Receivable Branch, P.O. Box 954514, St. Louis, MO. 63195-4514, unless payment is--

(1) Made pursuant to arrangements with DOJ;

(2) Ordered by a Court of the United States; or

(3) Otherwise directed in any other part of this chapter.

[47 FR 7616, Feb. 22, 1982, as amended at 52 FR 31610, Aug. 21, 1987; 54 FR 53316, Dec. 28, 1989; 55 FR 32379, Aug. 9, 1990; 56 FR 51830, Oct. 16, 1991; 63 FR 15743, Apr. 1, 1998; 67 FR 30322, May 6, 2002]

§ 15.37 Interest, penalties, and administrative costs.

[Top of File]

(a) The NRC shall assess interest, penalties, and administrative costs on debts owed to the United States Government in accordance with the guidance provided under the FCCS, 31 CFR 901.9.

(b) Before assessing any charges on delinquent debt, the NRC shall mail or hand-deliver a written notice to the debtor explaining its requirements concerning these charges under 31 CFR 901.2 and 901.9, except where these charges are included in a contractual or repayment agreement.

(c) Interest begins to accrue from the date on which the initial written demand, advising the debtor of the interest requirements, is first mailed or hand delivered to the debtor unless a different date is specified in a statute, regulation, or contract.

(d) The NRC shall assess interest based upon the rate of the current value of funds to the United States Treasury (the Treasury tax and loan account rate) prescribed for the current quarter and published in the Federal Register and the Treasury Financial Manual Bulletins, unless a different rate is prescribed by statute, regulation, or contract.

(e) Interest is computed only on the principal of the debt and the interest rate remains fixed for the duration of the indebtedness, unless a debtor defaults on a repayment agreement and seeks to enter into a new agreement.

(f) The NRC shall assess against a debtor charges to cover administrative costs incurred as a result of a delinquent debt. Administrative costs may include costs incurred in obtaining a credit report or in using a private debt collector, to the extent they are attributable to the delinquency.

(g) The NRC shall assess a penalty charge of 6 percent a year on any portion of a debt that is delinquent for more than 90 days. The charge accrues retroactively to the date that the debt became delinquent.

(h) Amounts received by the NRC as partial or installment payments are applied first to outstanding penalty and administrative cost charges, second to accrued interest, and third to outstanding principal.

(i) The NRC shall waive collection of interest on the debt or any portion of the debt which is paid in full within 30 days after the date on which interest began to accrue.

(j) The NRC may waive interest during the period a debt disputed under § 15.31 is under investigation or review by the NRC. However, this additional waiver is not automatic and must be requested before the expiration of the initial 30-day waiver period. The NRC may grant the additional waiver only when it finds merit in the explanation the debtor has submitted under § 15.31.

(k) The NRC may waive the collection of interest, penalties, and administrative costs if it finds that one or more of the following conditions exist:

(1) The debtor is unable to pay any significant sum toward the debt within a reasonable period of time;

(2) Collection of interest, penalties, and administrative costs will jeopardize collection of the principal of the debt;

(3) The NRC is unable to enforce collection in full within a reasonable time by enforced collection proceedings; or

(4) Collection would be against equity and good conscience or not in the best interests of the United States, including the situation in which an administrative offset or installment payment agreement is in effect.

(l) The NRC is authorized to impose interest and related charges on debts not subject to 31 U.S.C. 3717, in accordance with common law.

[55 FR 32380, Aug. 9, 1990, as amended at 67 FR 30322, May 6, 2002]

§ 15.38 Use of credit reports.

[Top of File]

The NRC may institute a credit investigation of the debtor at any time following receipt of knowledge of the debt in order to aid NRC in making appropriate determinations as to:

(a) The collection and compromise of a debt;

(b) The collection of interest, penalties, and administrative costs;

(c) The use of administrative offset;

(d) The use of other collection methods; and

(e) The likelihood of collecting the debt.

[55 FR 32380, Aug. 9, 1990]

§ 15.39 Bankruptcy claims.

[Top of File]

When the NRC learns that a bankruptcy petition has been filed with respect to a debtor, before proceeding with further collection action, the NRC will immediately seek legal advice from its Office of the General Counsel concerning the impact of the Bankruptcy Code on any pending or contemplated collection activities. Unless the NRC determines that the automatic stay imposed at the time of filing pursuant to 11 U.S.C. 362 has been lifted or is no longer in effect, collection activity against the debtor will in most cases stop immediately.

(a) After seeking legal advice from its Office of the General Counsel, a proof of claim usually will be filed with the bankruptcy court or the Trustee.

(b) If the NRC is a secured creditor, it may seek relief from the automatic stay regarding its security, subject to the provisions and requirements of 11 U.S.C. 362.

(c) Offset is stayed in most cases by the automatic stay. However, the NRC will seek legal advice from its Office of the General Counsel to determine whether its payments to the debtor and payments of other agencies available for offset may be frozen by the agency until relief from the automatic stay can be obtained from the bankruptcy court. The NRC will seek legal advice from its Office of the General Counsel to determine if recoupment is available.

[67 FR 30322, May 6, 2002]

Subpart C--Compromise of a Claim

[Top of File]

§ 15.41 When a claim may be compromised.

(a) The NRC may compromise a claim not in excess of the monetary limitation if it has not been referred to DOJ for litigation.

(b) Unless otherwise provided by law, when the principal balance of a debt, exclusive of interest, penalties, and administrative costs, exceeds $100,000 or any higher amount authorized by the Attorney General, the authority to accept the compromise rests with the DOJ. The NRC will evaluate the compromise offer, using the factors set forth in this part. If an offer to compromise any debt in excess of $100,000 is acceptable to the NRC, the NRC shall refer the debt to the Civil Division or other appropriate litigating division in the DOJ using a CCLR. The referral must include appropriate financial information and a recommendation for the acceptance of the compromise offer. DOJ approval is not required if the compromise offer is rejected by NRC.

[67 FR 30322, May 6, 2002]

§ 15.43 Reasons for compromising a claim.

[Top of File]

A claim may be compromised for one or more of the reasons set forth below:

(a) The full amount cannot be collected because:

(1) The debtor is unable to pay the full amount within a reasonable time; or

(2) The debtor refuses to pay the claim in full and the Government is unable to enforce collection in full within a reasonable time by enforced collection proceedings.

(b) There is a real doubt concerning the Government's ability to prove its case in Court for the full amount claimed, either because of the legal issues involved or a bona fide dispute as to the facts.

(c) The cost of collecting the claim does not justify the enforced collection of the full amount. The NRC shall apply this reason for compromise in accordance with the guidance in 31 CFR 902.2.

(d) The NRC shall determine the debtor's inability to pay, the Government's ability to enforce collection, and the amounts that are acceptable in compromise in accordance with the FCCS, 31 CFR part 902.

(e) Compromises payable in installments are discouraged, but, if necessary, must be in the form of a legally enforceable agreement for the reinstatement of the prior indebtedness less sums paid thereon. The agreement also must provide that in the event of default --

(1) The entire balance of the debt becomes immediately due and payable; and

(2) The Government has the right to enforce any security interest.

[47 FR 7616, Feb. 22, 1982, as amended at 55 FR 32380, Aug. 9, 1990; 67 FR 30322, May 6, 2002]

§ 15.45 Consideration of tax consequences to the Government.

[Top of File]

(a) The NRC may accept a percentage of a debtor's profits or stock in a debtor corporation in compromise of a claim. In negotiating a compromise with a business concern, the NRC should consider requiring a waiver of tax-loss-carry-forward and tax-loss-carry-back rights of the debtor. For information on reporting requirements, see § 15.60.

(b) When two or more debtors are jointly and severally liable, the NRC will pursue collection activity against all debtors, as appropriate. The NRC will not attempt to allocate the burden of payment between the debtors but will proceed to liquidate the indebtedness as quickly as possible. The NRC will ensure that a compromise agreement with one debtor does not release the NRC's claim against the remaining debtors. The amount of a compromise with one debtor shall not be considered a precedent or binding in determining the amount that will be required from other debtors jointly and severally liable on the claim.

[67 FR 30322, May 6, 2002]

§ 15.47 Finality of a compromise.

[Top of File]

An offer of compromise must be in writing and signed by the debtor. An offer of compromise which is accepted by the NRC is final and conclusive on the debtor and on all officials, agencies, and courts of the United States, unless obtained by fraud, misrepresentation, the presentation of a false claim, or mutual mistake of fact.

§ 15.49 Mutual releases of the debtor and the Government.

[Top of File]

(a) In all appropriate instances, a compromise that is accepted by NRC should be implemented by means of a mutual release.

(1) The debtor is released from further non-tax liability on the compromised debt in consideration of payment in full of the compromised amount.

(2) The Government and its officials, past and present, are released and discharged from any and all claims and causes of action arising from the same transaction held by the debtor.

(b) If a mutual release is not executed when a debt is compromised, unless prohibited by law, the debtor is still deemed to have waived any and all claims and causes of action against the Government and its officials related to the transaction giving rise to the compromised debt.

[67 FR 30322, May 6, 2002]

Subpart D--Suspension or Termination of Collection Action

[Top of File]

§ 15.51 When collection action may be suspended or terminated.

The NRC may suspend or terminate collection action on a claim not in excess of the monetary limitation of $100,000 or such other amount as the Attorney General may direct, exclusive of interest, penalties, and administrative costs, after deducting the amount of partial payments or collections, if any of the debt has not been referred to the DOJ for litigation. If, after deducting the amount of any partial payments or collections, the principal amount of a debt exceeds $100,000, or such other amount as the Attorney General may direct, exclusive of interest, penalties, and administrative costs, the authority to suspend or terminate rests solely with the DOJ. If the NRC believes that suspension or termination of any debt in excess of $100,000 may be appropriate, the NRC shall refer the debt to the Civil Division or other appropriate litigating division in the DOJ, using the CCLR. The referral should specify the reasons for the NRC's recommendation. If, prior to referral to the DOJ, the NRC determines that a debt is plainly erroneous or clearly without legal merit, the NRC may terminate collection activity, regardless of the amount involved, without obtaining DOJ concurrence.

[67 FR 30323, May 6, 2002]

§ 15.53 Reasons for suspending collection action.

[Top of File]

The NRC may suspend collection activity when:

(a) The NRC cannot locate the debtor;

(b) The debtor's financial condition is not expected to improve; or

(c) The debtor has requested a waiver or review of the debt.

(d) Based on the current financial condition of the debtor, the NRC may suspend collection activity on a debt when the debtor's future prospects justify retention of the debt for periodic review and collection activity and:

(1) The applicable statute of limitations has not expired; or

(2) Future collection can be effected by administrative offset, notwithstanding the expiration of the applicable statute of limitations for litigation of claims, with due regard to the 10-year limitation for administrative offset prescribed by 31 U.S.C. 3716(e)(1); or

(3) The debtor agrees to pay interest on the amount of the debt on which collection will be suspended, and such suspension is likely to enhance the debtor's ability to pay the full amount of the principal of the debt with interest at a later date.

(e)(1) The NRC shall suspend collection activity during the time required for consideration of the debtor's request for waiver or administrative review of the debt, if the statute under which the request is sought prohibits the NRC from collecting the debt during that time.

(2) If the statute under which the request is sought does not prohibit collection activity pending consideration of the request, the NRC may use discretion, on a case-by-case basis, to suspend collection. Further, the NRC ordinarily should suspend collection action upon a request for waiver or review, if the NRC is prohibited by statute or regulation from issuing a refund of amounts collected prior to NRC consideration of the debtor's request. However, the NRC should not suspend collection when the NRC determines that the request for waiver or review is frivolous or was made primarily to delay collection.

(f) When the NRC learns that a bankruptcy petition has been filed with respect to a debtor, in most cases, the collection activity on a debt must be suspended, pursuant to the provisions of 11 U.S.C. 362, 1201, and 1301, unless the NRC can clearly establish that the automatic stay has been lifted or is no longer in effect. The NRC should seek legal advice immediately from its Office of the General Counsel and, if legally permitted, take the necessary steps to ensure that no funds or money are paid by the NRC to the debtor until relief from the automatic stay is obtained.

[67 FR 30323, May 6, 2002]

§ 15.55 Reasons for terminating collection action.

[Top of File]

The NRC may terminate collection activity when:

(a) The NRC is unable to collect any substantial amount through its own efforts or through the efforts of others;

(b) The NRC is unable to locate the debtor;

(c) Costs of collection are anticipated to exceed the amount recoverable,

(d) The debt is legally without merit or enforcement of the debt is barred by any applicable statute of limitations;

(e) The debt cannot be substantiated; or

(f) The debt against the debtor has been discharged in bankruptcy.

[67 FR 30323, May 6, 2002]

§ 15.57 Termination of collection action.

[Top of File]

(a) Before terminating collection activity, the NRC should have pursued all appropriate means of collection and determined, based upon the results of the collection activity, that the debt is uncollectible. Termination of collection activity ceases active collection of the debt. The termination of collection activity does not preclude the NRC from retaining a record of the account for purposes of:

(1) Selling the debt, if the Treasury determines that such sale is in the best interests of the United States;

(2) Pursuing collection at a subsequent date in the event there is a change in the debtor's status or a new collection tool becomes available;

(3) Offsetting against future income or assets not available at the time of termination of collection activity; or

(4) Screening future applicants for prior indebtedness.

(b) Generally, the NRC will terminate collection activity on a debt that has been discharged in bankruptcy, regardless of the amount. However, the NRC may continue collection activity, subject to the provisions of the Bankruptcy Code, for any payments provided under a plan of reorganization.

[67 FR 30323, May 6, 2002]

§ 15.59 Exception to termination.

[Top of File]

When a significant enforcement policy is involved, or recovery of a judgment is a prerequisite to the imposition of administrative sanctions, the NRC may refer debts for litigation, although termination of collection activity may be appropriate.

[67 FR 30323, May 6, 2002]

§ 15.60 Discharge of indebtedness; reporting requirements.

[Top of File]

(a) Before discharging a delinquent debt (also referred to as a close out of the debt), the NRC shall take all appropriate steps to collect the debt in accordance with 31 U.S.C. 3711(g), including, as applicable, administrative offset; tax refund offset; Federal salary offset; referral to Treasury, Treasury-designated debt collection centers, or private collection contractors; credit bureau reporting; wage garnishment; litigation; and foreclosure. Discharge of indebtedness is distinct from termination or suspension of collection activity under 10 CFR 15.55 and 15.57 and is governed by the Internal Revenue Code. When collection action on a debt is suspended or terminated, the debt remains delinquent, and further collection action may be pursued at a later date. When the NRC discharges a debt in full or in part, further collection action is prohibited. Therefore, the NRC will make the determination that collection action is no longer warranted before discharging a debt. Before discharging a debt, the NRC must terminate debt collection action.

(b) Section 3711(i), title 31, United States Code, requires agencies to sell a delinquent nontax debt upon termination of collection action if Treasury determines such a sale is in the best interests of the United States. Since the discharge of a debt precludes any further collection action (including the sale of a delinquent debt), the NRC may not discharge a debt until the requirements of 31 U.S.C. 3711(i) have been met.

(c) Upon discharge of an indebtedness, the NRC shall report the discharge to the IRS in accordance with the requirements of 26 U.S.C. 6050P and 26 CFR 1.6050P-1. The NRC may request Treasury or a Treasury-designated debt collection center to file a discharge report to the IRS on the NRC's behalf.

(d) When discharging a debt, the NRC shall request that litigation counsel release any liens of record securing the debt.

[67 FR 30323, May 6, 2002]

Subpart E--Referral of a Claim

[Top of File]

§ 15.61 Prompt referral.

(a) The NRC shall promptly refer debts that are subject to aggressive collection activity (as described in subpart B of this part) and that cannot be compromised, or debts on which collection activity cannot be suspended or terminated, to DOJ for litigation. Debts for which the principal amount exceeds $1,000,000, or such other amount as the Attorney General may direct, exclusive of interest and penalties, must be referred to the Civil Division or other division responsible for litigating such debts at DOJ, Washington, DC. Debts for which the principal amount is $1,000,000 or less, or such other amount as the Attorney General may direct, exclusive of interest or penalties, must be referred to the DOJ's Nationwide Central Intake Facility, as required by the CCLR instructions. Debts will be referred as early as possible, consistent with the NRC's aggressive collection activity and well within the one year of the NRC's final determination of the fact and the amount of the debt.

(b) DOJ has exclusive jurisdiction over the debts referred to in paragraph (a) of this section. The NRC shall terminate the use of any administrative collection activities to collect a debt when the debt is referred to DOJ. The NRC shall advise the DOJ of the collection activities it used and the results. The NRC shall refrain from having any contact with the debtor and shall direct all inquiries to DOJ. The NRC shall immediately notify DOJ of any payments credited to the debtor's account after the account has been referred to DOJ. DOJ shall notify NRC in a timely manner of any payments it receives from the debtor.

[67 FR 30324, May 6, 2002]

§ 15.65 Referral of a compromise offer.

[Top of File]

The NRC may refer a debtor's firm written offer of compromise, which is substantial in amount, to the Civil Division or other appropriate litigating division in DOJ using a CCLR accompanied by supporting data and particulars concerning the debt.

[67 FR 30324, May 6, 2002]

§ 15.67 Referral to the Department of Justice.

[Top of File]

(a) Unless excepted by DOJ, the NRC shall complete the CCLR accompanied by a Certificate of Indebtedness, to refer all administratively uncollectible claims to the DOJ for litigation.

(b) The NRC shall indicate the actions it wishes DOJ to take regarding the referred claim on the CCLR.

(c) Before referring a debt to DOJ for litigation, the NRC shall notify each person determined to be liable for the debt that, unless the debt can be collected administratively, litigation may be initiated. This notification must comply with Executive Order 12988 (3 CFR, 1996 Comp., pp 157-163) and may be given as part of a demand letter or as a separate document.

(d) The NRC shall preserve all files and records that DOJ may need to prove the claim in court.

(e) The NRC may ordinarily not refer for litigation claims of less than $2,500, exclusive of interest, penalties, and administrative charges, or such other amount as the Attorney General shall from time to time prescribe.

(f) The NRC may not refer claims of less than the minimum amount unless:

(1) Litigation to collect a smaller claim is important to ensure compliance with NRC's policies and programs;

(2) The claim is being referred solely to secure a judgment against the debtor, which will be filed as a lien against the debtor's property under 28 U.S.C. 3201 and returned to the NRC for enforcement, or

(3) The debtor has the clear ability to pay the claim, and the Government effectively can enforce payment, with due regard for the exemptions available to the debtor under state and Federal law and the judicial remedies available to the Government.

[67 FR 30324, May 6, 2002]

PART 16--SALARY OFFSET PROCEDURES FOR COLLECTING DEBTS OWED BY FEDERAL EMPLOYEES TO THE FEDERAL GOVERNMENT

[Top of File]

§ 16.1 Purpose and scope.

[Top of File]

(a) This part provides procedures for the collection by administrative offset of a Federal employee's salary without his/her consent to satisfy certain debts owed to the Federal Government. This part applies to all Federal employees who owe debts to the Nuclear Regulatory Commission (NRC) and to current employees of the NRC who owe debts to other Federal agencies. This part does not apply when the employee consents to recovery from his/her current pay account.

(b) These procedures do not apply to debts or claims arising under:

(1) The Internal Revenue Code of 1954, as amended, 26 U.S.C. 1 *et seq.*;

(2) The tariff laws of the United States; or

(3) Any case where a collection of a debt by salary offset is explicitly provided for or prohibited by another statute.

(c) These procedures do not apply to any adjustment to pay arising out of an employee's selection of coverage or a change in coverage under a Federal benefits program requiring periodic deductions from pay if the amount to be recovered was accumulated over four pay periods or less.

(d) These procedures do not preclude the compromise, suspension, or termination of collection action where appropriate under the standards implementing the revised Federal Claims Collection Standards (FCCS), 31 U.S.C. 3711 et seq., 31 CFR chapter IX, parts 900 through 904.

(e) This part does not preclude an employee from requesting waiver of an overpayment under 5 U.S.C. 5584, 10 U.S.C. 2774, or 32 U.S.C. 716 or in any way questioning the amount or validity of the debt by submitting a subsequent claim to the NRC. This part does not preclude an employee from requesting a waiver pursuant to other statutory provisions applicable to the particular debt being collected.

(f) The NRC is not limited to collection remedies contained in the revised FCCS. The FCCS is not intended to impair common law remedies.

[56 FR 51830, Oct. 16, 1991, as amended at 63 FR 15743, Apr. 1, 1998; 67 FR 57507, Sept. 11, 2002]

§ 16.3 Definitions.

[Top of File]

For the purposes of this part, the following definitions apply:

Administrative charges are those amounts assessed by NRC to cover the costs of processing and handling delinquent debts due the Government.

Administrative offset means withholding money payable by the United States Government to, or held by the Government for, a person to satisfy a debt the person owes the United States Government.

Agency means any agency of the executive, legislative, and judicial branches of the Federal Government, including Government corporations.

Centralized salary offset computer matching describes the computerized process used to match delinquent debt records with Federal salary payment records when the purpose of the match is to identify Federal employees who owe debt to the Federal Government.

Creditor agency means the agency to which the debt is owed, including a debt collection center when acting in behalf of a creditor agency in matters pertaining to the collection of a debt.

Debt and *claim* are used synonymously to refer to an amount of money, funds, or property that has been determined by an agency official to be owed to the United States from any person, organization, or entity, except another Federal agency. For the purposes of administrative offset under 31 U.S.C. 3716, the terms debt and claim include an amount of money, funds, or property owed by a person to a State (including past-due support being enforced by a State), the District of Columbia, American Samoa, Guam, the United States Virgin Islands, the Commonwealth of the Northern Mariana Islands, or the Commonwealth of Puerto Rico.

Debt collection center means the Department of the Treasury or other Government agency or division designated by the Secretary of the Treasury with authority to collect debts on behalf of creditor agencies.

Delinquent debt record refers to the information about a debt that an agency submits to Treasury when the agency refers the debt for collection by offset in accordance with the provision of 31 U.S.C. 3716.

Disbursing official means an official who has authority to disburse Federal salary payments pursuant to 31 U.S.C. 3321 or another law.

Disposable pay means that part of current basic pay, special pay, incentive pay, retired pay, retainer pay, or in the case of an employee not entitled to basic pay, other authorized pay remaining after the deduction of:

(1) Any amount required by law to be withheld;

(2) Amounts properly withheld for Federal, state or local income tax purposes;

(3) Amounts deducted as health insurance premiums;

(4) Amounts deducted as normal retirement contributions, not including amounts deducted for supplementary coverage; and

(5) Amounts deducted as normal life insurance premiums not including amounts deducted for supplementary coverage.

Employee is any individual employed by any agency of the executive, legislative, and judicial branches of the Federal Government, including Government corporations.

FCCS means the Federal Claims Collection Standards jointly published by the Department of the Treasury and the Department of Justice at 31 CFR Chapter IX, Parts 900 through 904.

Hearing official means an individual responsible for conducting any hearing with respect to the existence or amount of a debt claimed or the repayment schedule if not established by written agreement between the employee and the NRC, and who renders a decision on the basis of this hearing.

Paying agency means the agency that employs the individual who owes the debt and authorizes the payment of his/her current pay.

Salary offset means an administrative offset to collect a debt under 5 U.S.C. 5514 by deduction(s) at one or more officially established pay intervals from the current pay account of an employee without his or her consent.

Treasury as used in 10 CFR part 16 means the Department of the Treasury.

Waiver means the cancellation, remission, forgiveness, or non-recovery of a debt allegedly owed by an employee to an agency as permitted or required by 5 U.S.C. 5584, 10 U.S.C. 2774, 32 U.S.C. 716, 5 U.S.C. 8346(b), or any other law.

[56 FR 51830, Oct. 16, 1991, as amended at 67 FR 57507, Sept. 11, 2002]

§ 16.5 Application.

[Top of File]

The regulations in this part are to be followed when:

(a) The NRC is owed a debt by an individual currently employed by another Federal agency;

(b) The NRC is owed a debt by an individual who is a current employee of the NRC; or

(c) The NRC employs an individual who owes a debt to another Federal agency.

§ 16.7 Notice requirements.

[Top of File]

(a) If the NRC is the creditor agency, deductions will not be made unless the NRC provides the employee with a signed written notice of the debt at least 30 days before salary offset commences. The notice will be delivered in person or by certified or registered mail, return receipt requested, with receipt returned as proof of delivery.

(b) The written notice must contain:

(1) A statement that the debt is owed and an explanation of its origin, nature, and amount;

(2) The NRC's intention to collect the debt by deducting from the employee's current disposable pay account;

(3) The amount and frequency of the intended deduction (stated as a fixed dollar amount or as a percentage of pay, not to exceed 15 percent of disposable pay) and the intention to continue the deduction until the debt is paid in full or otherwise resolved;

(4) An explanation of interest, penalties, and administrative charges, including a statement that these charges will be assessed unless excused in accordance with the Federal Claims Collection Standards at 4 CFR parts 101 - 105;

(5) The employee's right to inspect and copy government records pertaining to the debt or, if the employee or his or her representative cannot personally inspect the records, to request and receive a copy of these records;

(6) If not previously provided, the opportunity (under terms agreeable to the NRC) to establish a schedule for the voluntary repayment of the debt or to enter into a written agreement to establish a schedule for repayment of the debt in lieu of offset (31 CFR Chapter IX, 901.2). The agreement must be in writing, signed by the employee and the NRC, and documented in the NRC's files;

(7) The employee's right to a hearing conducted by an official arranged for by the NRC (an administrative law judge, or alternatively, a hearing official not under the control of the head of the agency) if a petition is filed as prescribed in § 16.9;

(8) The methods and time period for petitioning for hearings;

(9) A statement that the timely filing of a petition for a hearing will stay the commencement of collection proceedings;

(10) A statement that a final decision on the hearing will be issued not later than 60 days after the filing of the petition requesting the hearing unless the employee requests and the hearing official grants a delay in the proceedings;

(11) A statement that knowingly false or frivolous statements, representations, or evidence may subject the employee to appropriate disciplinary procedures under chapter 75 of title 5, United States Code and 5 CFR part 752, penalties under the False Claims Act, sections 3729 - 3731 of title 31, United States Code or other applicable statutory authority, or criminal penalties under section 286, 287, 1001 and 1002 of title 18, United States Code or any other applicable statutory authority;

(12) A statement of other rights and remedies available to the employee under statutes or regulations governing the program for which the collection is being made; and

(13) Unless there are contractual or statutory provisions to the contrary, a statement that amounts paid on or deducted for the debt which are later waived or found not owed to the United States will be promptly refunded to the employee.

[56 FR 51830, Oct. 16, 1991, as amended at 67 FR 57508, Sept. 11, 2002]

§ 16.8 Information collection requirements: OMB approval.

[Top of File]

This part contains no information collection requirements, and, therefore, is not subject to the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 et. seq.).

[67 FR 57508, Sept. 11, 2002]

§ 16.9 Hearing.

[Top of File]

(a) *Request for hearing*. (1) An employee shall file a petition for a hearing in accordance with the instructions outlined in the creditor agency's notice of offset.

(2) If the NRC is the creditor agency, a hearing may be requested by filing a written petition stating why the employee disputes the existence or amount of the debt or the repayment schedule if it was not established by written agreement between the employee and the NRC. The employee shall sign the petition and fully identify and explain with reasonable specificity all the facts, evidence, and witnesses, if any, which the employee believes support his or her position. The petition for a hearing must be received no later than fifteen (15) calendar days after receipt of the notice of offset unless the employee can show that the delay in meeting the deadline date was because of circumstances beyond his or her control or because of failure to receive notice of the time limit (unless otherwise aware of it).

(b) *Hearing procedures*. (1) The hearing will be presided over by a hearing official arranged by NRC (an administrative law judge or, alternatively, a hearing official not under the supervision or control of the head of the agency.)

(2) The hearing must conform to procedures contained in the revised FCCS, 31 CFR Chapter IX, 901.3(e). The burden is on the employee to demonstrate either that the existence or the amount of the debt is in error or that the terms of the repayment schedule would result in undue financial hardship or would be against equity and good conscience.

(3) An employee is entitled to representation of his or her choice at any stage of the proceeding. NRC attorneys may not be provided as representatives for the debtor. The NRC will not compensate the debtor for representation expenses, including hourly fees for attorneys, travel expenses, and costs for reproducing documents.

[56 FR 51830, Oct. 16, 1991, as amended at 67 FR 57508, Sept. 11, 2002]

§ 16.11 Written decision.

[Top of File]

(a) The hearing official will issue a written opinion no later than 60 days after the hearing.

(b) The written opinion must include:

(1) A statement of the facts presented to demonstrate the nature and origin of the alleged debt;

(2) The hearing official's analysis, findings, and conclusions;

(3) The amount and validity of the debt; and

(4) The repayment schedule, where appropriate.

§ 16.13 Procedures for centralized administrative offset.

[Top of File]

(a) The NRC must notify Treasury of all debts that are delinquent as defined in the FCCS (over 180 days old) so that recovery may be made by centralized administrative offset. This includes those debts the NRC seeks to recover from the pay account of an employee of another agency via salary offset. The Treasury and other Federal disbursing officials will match payments, including Federal salary payments, against such debts. When a match occurs, and all the requirements for offset have been met, the payments will be offset to collect the debt. Prior to offset of the pay account of an employee, the NRC must comply with the requirements of 5 U.S.C. 5514, 5 CFR part 550, and 10 CFR part 15. Procedures for notifying Treasury of a debt for purposes of collection by centralized administrative offset are contained in 31 CFR part 285 and 10 CFR 15.33. Procedures for internal salary offset are contained in Sec. 16.15 of this chapter.

(b) When the NRC determines that an employee of another Federal agency owes a delinquent debt to the NRC, the NRC will, as appropriate:

(1) Arrange for a hearing upon the proper petitioning by the employee;

(2) Provide the Federal employee with a notice and an opportunity to dispute the debt as contained in 5 U.S.C. 5514 and 10 CFR 15.26.

(3) Submit the debt to Treasury for centralized administrative offset and certify in writing that the debtor has been afforded the legally required due process notification.

(4) If collection must be made in installments, the NRC must advise the paying agency of the amount or percentage of disposable pay to be collected in each installment.

(c) *Offset amount.* (1) The amount offset from a salary payment under this section shall be the lesser of:

(i) The amount of the debt, including any interest, penalties, and administrative costs; or

(ii) An amount up to 15 percent of the debtor's disposable pay.

(2) Alternatively, the amount offset may be an amount agreed upon, in writing, by the debtor and the NRC.

(3) Offsets will continue until the debt, including any interest, penalties, and administrative costs, is paid in full or otherwise resolved to the satisfaction of the NRC.

(d) *Priorities.* (1) A levy pursuant to the Internal Revenue Code of 1986 shall take precedence over other deductions under this section.

(2) When a salary payment may be reduced to collect more than one debt, amounts offset under this section will be applied to a debt only after amounts offset have been applied to satisfy past due child support debt assigned to a State pursuant 26 U.S.C. 6402(c) and 31 CFR 285.7(h)(2).

(e) *Notice.* (1) Before offsetting a salary payment, the disbursing official, or the paying agency on behalf of the disbursing official, shall notify the Federal employee in writing of the date that deductions from salary will commence and of the amount of such deductions.

(2)(i) When an offset occurs under this section, the disbursing official, or the paying agency on behalf of the disbursing official, shall notify the Federal employee in writing that an offset has occurred including:

(A) A description of the payment and the amount of the offset taken;

(B) Identification of NRC as the agency requesting the offset; and,

(C) A contact point within the NRC that will handle concerns regarding the offset.

(ii) The information described in paragraphs (e)(2)(i)(B) and (e)(2)(i)(C) of this section does not need to be provided to the Federal employee when the offset occurs if such information was included in a prior notice from the disbursing official or paying agency.

(3) The disbursing official will advise the NRC of the names, mailing addresses, and taxpayer identifying numbers of the debtors from whom amounts of past-due, legally enforceable debt were collected and of the amounts collected from each debtor. The disbursing official will not advise the NRC of the source of payment from which such amounts were collected.

(f) *Fees.* Agencies that perform centralized salary offset computer matching services may charge a fee sufficient to cover the full cost of such services. In addition, Treasury or a paying agency acting on behalf of Treasury, may charge a fee sufficient to cover the full cost of implementing the administrative offset program. Treasury may deduct the fees from amounts collected by offset or may bill the NRC. Fees charged for offset shall be based on actual administrative offsets completed.

(g) *Disposition of amounts collected.* The disbursing official conducting the offset will transmit amounts collected for debts, less fees charged under paragraph (f) of this section, to NRC. If an erroneous offset payment is made to the NRC, the disbursing official will notify the NRC that an erroneous offset payment has been made. The disbursing official may deduct the amount of the erroneous offset payment from future amounts payable to the NRC. Alternatively, upon the disbursing official's request, the NRC shall return promptly to the disbursing official or the affected payee an amount equal to the amount of the erroneous payment (without regard to whether any other amounts payable to the agency have been paid). The disbursing official and the NRC shall adjust the debtor records appropriately.

[67 FR 57508, Sept. 11, 2002]

§ 16.15 Procedures for internal salary offset.

[Top of File]

(a) Deductions to liquidate an employee's debt will be by the method and in the amount stated in the NRC's notice of intention to offset as provided in § 16.7. Debts will be collected in one lump sum where possible. If the employee is financially unable to pay in one lump sum, collection must be made in installments.

(b) Debts will be collected by deduction at officially established pay intervals from an employee's current pay account unless alternative arrangements for repayment are made.

(c) Installment deductions will be made over a period not greater than the anticipated period of employment. The size of installment deductions must bear a reasonable relationship to the size of the debt and the employee's ability to pay. The deduction for the pay intervals for any period may not exceed 15% of disposable pay unless the employee has agreed in writing to a deduction of a greater amount.

(d) Offset against any subsequent payment due an employee who retires or resigns or whose employment or period of active duty ends before collection of the debt is completed is provided for in accordance with 31 U.S.C. 3716. These payments include but are not limited to final salary payment or lump-sum leave due the employee from the paying agency as of the date of separation to the extent necessary to liquidate the debt.

§ 16.17 Refunds.

[Top of File]

(a) The NRC will refund promptly any amounts deducted to satisfy debts owed to the NRC when the debt is waived, found not owed to the NRC, or when directed by an administrative or Judicial order.

(b) The creditor agency will promptly return any amounts deducted by NRC to satisfy debts owed to the creditor agency when the debt is waived, found not owed, or when directed by an administrative or judicial order.

(c) Unless required or permitted by law or contract, refunds under this section may not bear interest.

§ 16.19 Statute of limitations.

[Top of File]

If a debt has been outstanding for more than 10 years after the agency's right to collect the debt first accrued, the agency may not collect

by salary offset unless facts material to the Government's right to collect were not known and could not reasonably have been known by the NRC official or officials who were charged with the responsibility for discovery and collection of the debts.

§ 16.21 Non-waiver of rights.

[Top of File]

An employee's involuntary payment of all or any part of a debt collected under these regulations will not be construed as a waiver of any rights that the employee may have under 5 U.S.C. 5514 or any other provision of contract or law, unless there are statutes or contract(s) to the contrary.

§ 16.23 Interest, penalties, and administrative charges.

[Top of File]

Charges may be assessed for interest, penalties, and administrative charges in accordance with the FCCS, 31 CFR Chapter IX, 901.9.

[67 FR 57508, Sept. 11, 2002]

PART 19--NOTICES, INSTRUCTIONS AND REPORTS TO WORKERS: INSPECTION AND INVESTIGATIONS

[Top of File]

§ 19.1 Purpose.

[Top of File]

The regulations in this part establish requirements for notices, instructions, and reports by licensees and regulated entities to individuals participating in NRC-licensed and regulated activities and options available to these individuals in connection with Commission inspections of licensees and regulated entities, and to ascertain compliance with the provisions of the Atomic Energy Act of 1954, as amended, titles II and IV of the Energy Reorganization Act of 1974, and regulations, orders, and licenses thereunder. The regulations in this part also establish the rights and responsibilities of the Commission and individuals during interviews compelled by subpoena as part of agency inspections or investigations under Section 161c of the Atomic Energy Act of 1954, as amended, on any matter within the Commission's jurisdiction.

[55 FR 247, Jan. 4, 1990; 72 FR 49483, Aug. 28, 2007]

§ 19.2 Scope.

[Top of File]

(a) The regulations in this part apply to:

(1) All persons who receive, possess, use, or transfer material licensed by the NRC under the regulations in parts 30 through 36, 39, 40, 60, 61, 63, 70, or 72 of this chapter, including persons licensed to operate a production or utilization facility under parts 50 or 52 of this chapter, persons licensed to possess power reactor spent fuel in an independent spent fuel storage installation (ISFSI) under part 72 of this chapter, and in accordance with 10 CFR 76.60 to persons required to obtain a certificate of compliance or an approved compliance plan under part 76 of this chapter;

(2) All applicants for and holders of licenses (including construction permits and early site permits) under parts 50, 52, and 54 of this chapter;

(3) All applicants for and holders of a standard design approval under subpart E of part 52 of this chapter; and

(4) All applicants for a standard design certification under subpart B of part 52 of this chapter, and those (former) applicants whose designs have been certified under that subpart.

(b) The regulations in this part regarding interviews of individuals under subpoena apply to all investigations and inspections within the jurisdiction of the NRC other than those involving NRC employees or NRC contractors. The regulations in this part do not apply to subpoenas issued under 10 CFR 2.702.

[66 FR 55789, Nov. 2, 2001; 72 FR 49484, Aug. 28, 2007]

§ 19.3 Definitions.

[Top of File]

As used in this part:

Act means the Atomic Energy Act of 1954, (68 Stat. 919) including any amendments thereto.

Commission means the United States Nuclear Regulatory Commission.

Exclusion means the removal of counsel representing multiple interests from an interview whenever the NRC official conducting the interview has concrete evidence that the presence of the counsel would obstruct and impede the particular investigation or inspection.

License means a license issued under the regulations in parts 30 through 36,39, 40, 60, 61, 63, 70, or 72 of this chapter, including licenses to manufacture, construct and/or operate a production or utilization facility under parts 50, 52, or 54 of this chapter.

Licensee means the holder of such a license.

Regulated activities means any activity carried on which is under the jurisdiction of the NRC under the Atomic Energy Act of 1954, as amended, or any title of the Energy Reorganization Act of 1972, as amended.

Regulated entities means any individual, person, organization, or corporation that is subject to the regulatory jurisdiction of the NRC, including (but not limited to) an applicant for or holder of a standard design approval under subpart E of part 52 of this chapter or a standard design certification under subpart B of part 52 of this chapter.

Restricted area means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a restricted area.

Sequestration means the separation or isolation of witnesses and their attorneys from other witnesses and their attorneys during an interview conducted as part of an investigation, inspection, or other inquiry.

Worker means an individual engaged in activities licensed or regulated by the Commission and controlled by a licensee or regulated entity, but does not include the licensee or regulated entity.

[38 FR 22217, Aug. 17, 1973, as amended at 40 FR 8783, Mar. 3, 1975; 53 FR 31680, Aug. 19, 1988; 55 FR 247, Jan. 4, 1990; 56 FR 23470, May 21, 1991; 56 FR 65948, Dec. 19, 1991; 57 FR 61785, Dec. 29, 1992; 58 FR 7736, Feb. 9, 1993; 66 FR 55789, Nov. 2, 2001; 69 FR 76600, Dec. 22, 2004; 72 FR 49484, Aug. 28, 2007]

§ 19.4 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 19.5 Communications.

[Top of File]

Except where otherwise specified in this part, all communications and reports concerning the regulations in this part should be addressed to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in Appendix D of part 20 of this chapter. Communications, reports, and applications may be delivered in person at the Commission's offices at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland.

[67 FR 67098, Nov. 4, 2002]

§ 19.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in the part under control number 3150-0044.

(b) The approved information collection requirements contained in this part appear in §§ 19.13 and 19.16.

[62 FR 52185, Oct. 6, 1997]

§ 19.11 Posting of notices to workers.

[Top of File]

(a) Each licensee (except for a holder of an early site permit under subpart A of part 52 of this chapter, or a holder of a manufacturing license under subpart F of part 52 of this chapter) shall post current copies of the following documents:

(1) The regulations in this part and in part 20 of this chapter;

(2) The license, license conditions, or documents incorporated into a license by reference, and amendments thereto;

(3) The operating procedures applicable to licensed activities;

(4) Any notice of violation involving radiological working conditions, proposed imposition of civil penalty, or order issued pursuant to subpart B of part 2 of this chapter, and any response from the licensee.

(b) Each applicant for and holder of a standard design approval under subpart E of part 52 of this chapter, each applicant for an early site permit under subpart A of part 52 of this chapter, each applicant for a standard design certification under subpart B of part 52 of this chapter, and each applicant for and holder of a manufacturing license under subpart F of part 52 of this chapter shall post:

(1) The regulations in this part;

(2) The operating procedures applicable to the activities regulated by the NRC which are being conducted by the applicant or holder; and

(3) Any notice of violation, proposed imposition of civil penalty, or order issued under subpart B of part 2 of this chapter, and any response from the applicant or holder.

(c) [Reserved]

(d) If posting of a document specified in paragraphs (a)(1), (2) or (3), or (b)(1) or (2) of this section is not practicable, the licensee or regulated entity may post a notice which describes the document and states where it may be examined.

(e)(1) Each licensee, each applicant for a specific license, each applicant for or holder of a standard design approval under subpart E of part 52 of this chapter, each applicant for an early site permit under subpart A of part 52 of this chapter, and each applicant for a standard design certification under subpart B of part 52 of this chapter shall prominently post NRC Form 3, "Notice to Employees," dated August 1997. Later versions of NRC Form 3 that supersede the August 1997 version shall replace the previously posted version within 30 days of receiving the revised NRC Form 3 from the Commission.

(2) Additional copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415–7232, via e-mail to *forms@nrc.gov*, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) Documents, notices, or forms posted under this section shall appear in a sufficient number of places to permit individuals engaged in NRC-licensed or regulated activities to observe them on the way to or from any particular licensed or regulated activity location to which the document applies, shall be conspicuous, and shall be replaced if defaced or altered.

(g) Commission documents posted under paragraphs (a)(4) or (b)(3) of this section shall be posted within 2 working days after receipt of the documents from the Commission; the licensee's or regulated entity's response, if any, shall be posted within 2 working days after dispatch by the licensee or regulated entity. These documents shall remain posted for a minimum of 5 working days or until action correcting the violation has been completed, whichever is later.

[38 FR 22217, Aug. 17, 1973, as amended at 40 FR 8783, Mar. 3, 1975; 47 FR 30454, July 14, 1982; 58 FR 52408, Oct. 8, 1993; 60 FR 24551, May 9, 1995; 61 FR 6764, Feb. 22, 1996; 62 FR 48166, Sept. 15, 1997; 68 FR 58801, Oct. 10, 2003; 72 FR 49484, Aug. 28, 2007]

§ 19.12 Instruction to workers.

[Top of File]

(a) All individuals who in the course of employment are likely to receive in a year an occupational dose in excess of 100 mrem (1 mSv) shall be--

(1) Kept informed of the storage, transfer, or use of radiation and/or radioactive material;

(2) Instructed in the health protection problems associated with exposure to radiation and/or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed;

(3) Instructed in, and required to observe, to the extent within the workers control, the applicable provisions of Commission regulations and licenses for the protection of personnel from exposure to radiation and/or radioactive material;

(4) Instructed of their responsibility to report promptly to the licensee any condition which may lead to or cause a violation of Commission regulations and licenses or unnecessary exposure to radiation and/or radioactive material;

(5) Instructed in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation and/or radioactive material; and

(6) Advised as to the radiation exposure reports which workers may request pursuant to § 19.13.

(b) In determining those individuals subject to the requirements of paragraph (a) of this section, licensees must take into consideration assigned activities during normal and abnormal situations involving exposure to radiation and/or radioactive material which can reasonably be expected to occur during the life of a licensed facility. The extent of these instructions must be commensurate with potential radiological

health protection problems present in the work place.

[60 FR 36043, July 13, 1995]

§ 19.13 Notifications and reports to individuals.

[Top of File]

(a) Radiation exposure data for an individual, and the results of any measurements, analyses, and calculations of radioactive material deposited or retained in the body of an individual, shall be reported to the individual as specified in this section. The information reported shall include data and results obtained pursuant to Commission regulations, orders or license conditions, as shown in records maintained by the licensee pursuant to Commission regulations. Each notification and report shall: be in writing; include appropriate identifying data such as the name of the licensee, the name of the individual, the individual's social security number; include the individual's exposure information; and contain the following statement:

This report is furnished to you under the provisions of the Nuclear Regulatory Commission regulation 10 CFR part 19. You should preserve this report for further reference.

(b) Each licensee shall make dose information available to workers as shown in records maintained by the licensee under the provisions of 10 CFR 20.2106. The licensee shall provide an annual report to each individual monitored under 10 CFR 20.1502 of the dose received in that monitoring year if:

(1) The individual's occupational dose exceeds 1 mSv (100 mrem) TEDE or 1 mSv (100 mrem) to any individual organ or tissue; or

(2) The individual requests his or her annual dose report.

(c)(1) At the request of a worker formerly engaged in licensed activities controlled by the licensee, each licensee shall furnish to the worker a report of the worker's exposure to radiation and/or to radioactive material:

(i) As shown in records maintained by the licensee pursuant to § 20.2106 for each year the worker was required to be monitored under the provisions of § 20.1502; and

(ii) For each year the worker was required to be monitored under the monitoring requirements in effect prior to January 1, 1994.

(2) This report must be furnished within 30 days from the time the request is made or within 30 days after the exposure of the individual has been determined by the licensee, whichever is later. This report must cover the period of time that the worker's activities involved exposure to radiation from radioactive material licensed by the Commission and must include the dates and locations of licensed activities in which the worker participated during this period.

(d) When a licensee is required by §§ 20.2202, 20.2203 or 20.2204 of this chapter to report to the Commission any exposure of an individual to radiation or radioactive material, the licensee shall also provide the individual a report on his or her exposure data included in the report to the Commission. This report must be transmitted no later than the transmittal to the Commission.

(e) At the request of a worker who is terminating employment with the licensee that involved exposure to radiation or radioactive materials, during the current calendar quarter or the current year, each licensee shall provide at termination to each worker, or to the worker's designee, a written report regarding the radiation dose received by that worker from operations of the licensee during the current year or fraction thereof. If the most recent individual monitoring results are not available at that time, a written estimate of the dose must be provided together with a clear indication that this is an estimate.

[38 FR 22217, Aug. 17, 1973, as amended at 40 FR 8783, Mar. 3, 1975; 44 FR 32352, June 6, 1979; 58 FR 67658, Dec. 22, 1993; 59 FR 41642, Aug. 15, 1994; 72 FR 68058, Dec. 4, 2007]

§ 19.14 Presence of representatives of licensees and regulated entities, and workers during inspections.

[Top of File]

(a) Each licensee, applicant for a license, applicant for or holder of a standard design approval under subpart E of part 52 of this chapter, applicant for an early site permit under subpart A of part 52 of this chapter, and applicant for a standard design certification under subpart B of part 52 of this chapter shall afford to the Commission at all reasonable times opportunity to inspect materials, activities, facilities, premises, and records under the regulations in this chapter.

(b) During an inspection, Commission inspectors may consult privately with workers as specified in § 19.15. The licensee, regulated entity, or the licensee's or regulated entity's representative may accompany Commission inspectors during other phrases of an inspection.

(c) If, at the time of inspection, an individual has been authorized by the workers to represent them during Commission inspections, the licensee or regulated entity shall notify the inspectors of such authorization and shall give the workers' representative an opportunity to accompany the inspectors during the inspection of physical working conditions.

(d) Each workers' representative shall be routinely engaged in NRC-licensed or regulated activities under control of the licensee or regulated entity, and shall have received instructions as specified in § 19.12.

(e) Different representatives of licensees or regulated entities, and workers may accompany the inspectors during different phases of an inspection if there is no resulting interference with the conduct of the inspection. However, only one workers' representative at a time may accompany the inspectors.

(f) With the approval of the licensee or regulated entity, and the workers' representative an individual who is not routinely engaged in licensed or regulated activities under control of the license or regulated entity (for example, a consultant to the licensee, the regulated entity, or the workers' representative), shall be afforded the opportunity to accompany Commission inspectors during the inspection of physical working conditions.

(g) Notwithstanding the other provisions of this section, Commission inspectors are authorized to refuse to permit accompaniment by any individual who deliberately interferes with a fair and orderly inspection. With regard to areas containing information classified by an agency of the U.S.Government in the interest of national security, an individual who accompanies an inspector may have access to such information only if authorized to do so. With regard to any area containing proprietary information, the workers' representative for that area shall be an individual previously authorized by the licensee or regulated entity to enter that area.

[72 FR 49484, Aug. 28, 2007]

§ 19.15 Consultation with workers during inspections.

[Top of File]

(a) Commission inspectors may consult privately with workers concerning matters of occupational radiation protection and other matters related to applicable provisions of Commission regulations and licenses to the extent the inspectors deem necessary for the conduct of an effective and thorough inspection.

(b) During the course of an inspection any worker may bring privately to the attention of the inspectors, either orally or in writing, any past or present condition which he has reason to believe may have contributed to or caused any violation of the act, the regulations in this chapter, or license condition, or any unnecessary exposure of an individual to radiation from licensed radioactive material under the licensee's control. Any such notice in writing shall comply with the requirements of § 19.16(a).

(c) The provisions of paragraph (b) of this section shall not be interpreted as authorization to disregard instructions pursuant to § 19.12.

§ 19.16 Requests by workers for inspections.

[Top of File]

(a) Any worker or representative of workers who believes that a violation of the Act, the regulations in this chapter, or license conditions exists or has occurred in license activities with regard to radiological working conditions in which the worker is engaged, may request an inspection by giving notice of the alleged violation to the Administrator of the appropriate Commission Regional Office, or to Commission inspectors. Any such notice shall be in writing, shall set forth the specific grounds for the notice, and shall be signed by the worker or representative of workers. A copy shall be provided the licensee by the Regional Office Administrator, or the inspector no later than at the time of inspection except that, upon the request of the worker giving such notice, his name and the name of individuals referred to therein shall not appear in such copy or on any record published, released or made available by the Commission, except for good cause shown.

(b) If, upon receipt of such notice, the Regional Office Administrator determines that the complaint meets the requirements set forth in paragraph (a) of this section, and that there are reasonable grounds to believe that the alleged violation exists or has occurred, he shall cause an inspection to be made as soon as practicable, to determine if such alleged violation exists or has occurred. Inspections pursuant to this section need not be limited to matters referred to in the complaint.

[38 FR 22217, Aug. 17, 1973, as amended at 40 FR 8783, Mar. 3, 1975; 47 FR 30454, July 14, 1982; 52 FR 31610, Aug. 21, 1987]

§ 19.17 Inspections not warranted; informal review.

[Top of File]

(a) If the Administrator of the appropriate Regional Office determines, with respect to a complaint under § 19.16, that an inspection is not warranted because there are no reasonable grounds to believe that a violation exists or has occurred, he shall notify the complainant in writing of such determination. The complainant may obtain review of this determination by submitting a written statement of position to the Executive Director for Operations, either by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington,

DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. The Executive Director for Operations will provide the licensee with a copy of such statement by certified mail, excluding, at the request of the complainant, the name of the complainant. The licensee may submit an opposing written statement of position with the Executive Director for Operations who will provide the complainant with a copy of such statement by certified mail. Upon the request of the complainant, the Executive Director for Operations or his designee may hold an informal conference in which the complainant and the licensee may orally present their views. An informal conference may also be held at the request of the licensee, but disclosure of the identity of the complainant will be made only following receipt of written authorization from the complainant. After considering all written and oral views presented, the Executive Director for Operations shall affirm, modify, or reverse the determination of the Administrator of the appropriate Regional Office and furnish the complainant and the licensee a written notification of his decision and the reason therefor.

(b) If the Administrator of the appropriate Regional Office determines that an inspection is not warranted because the requirements of § 19.16(a) have not been met, he shall notify the complainant in writing of such determination. Such determination shall be without prejudice to the filing of a new complaint meeting the requirements of § 19.16(a).

[38 FR 22217, Aug. 17, 1973, as amended at 40 FR 8783, Mar. 3, 1975; 52 FR 31610, Aug. 21, 1987; 67 FR 77652, Dec. 19, 2002; 68 FR 58801, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 19.18 Sequestration of witnesses and exclusion of counsel in interviews conducted under subpoena.

[Top of File]

(a) All witnesses compelled by subpoena to submit to agency interviews shall be sequestered unless the official conducting the interviews permits otherwise.

(b) Any witness compelled by subpoena to appear at an interview during an agency inquiry may be accompanied, represented, and advised by counsel of his or her choice. However, when the agency official conducting the inquiry determines, after consultation with the Office of the General Counsel, that the agency has concrete evidence that the presence of an attorney representing multiple interests would obstruct and impede the investigation or inspection, the agency official may prohibit that counsel from being present during the interview.

(c) The interviewing official is to provide a witness whose counsel has been excluded under paragraph (b) of this section and the witness's counsel a written statement of the reasons supporting the decision to exclude. This statement, which must be provided no later than five working days after exclusion, must explain the basis for the counsel's exclusion. This statement must also advise the witness of the witness' right to appeal the exclusion decision and obtain an automatic stay of the effectiveness of the subpoena by filing a motion to quash the subpoena with the Commission within five days of receipt of this written statement.

(d) Within five days after receipt of the written notification required in paragraph (c) of this section, a witness whose counsel has been excluded may appeal the exclusion decision by filing a motion to quash the subpoena with the Commission. The filing of the motion to quash will stay the effectiveness of the subpoena pending the Commission's decision on the motion.

(e) If a witness' counsel is excluded under paragraph (b) of this section, the interview may, at the witness' request, either proceed without counsel or be delayed for a reasonable period of time to permit the retention of new counsel. The interview may also be rescheduled to a subsequent date established by the NRC, although the interview shall not be rescheduled by the NRC to a date that precedes the expiration of the time provided under § 19.18(d) for appeal of the exclusion of counsel, unless the witness consents to an earlier date.

[55 FR 247, Jan. 4, 1990, as amended at 56 FR 65948, Dec. 19, 1991; 57 FR 61785, Dec. 29, 1992]

§ 19.20 Employee protection.

[Top of File]

Employment discrimination by a licensee, a holder of a certificate of compliance issued under part 76 of this chapter or regulated entity subject to the requirements in this part as delineated in § 19.2(a), or a contractor or subcontractor of a licensee, a holder of a certificate of compliance issued under part 76 of this chapter, or regulated entity subject to the requirements in this part as delineated in § 19.2(a), against an employee for engaging in protected activities under this part or parts 30, 40, 50, 52, 54, 60, 61, 63, 70, 72, 76, or 150 of this chapter is prohibited.

[66 FR 55789, Nov. 2, 2001; 72 FR 49485, Aug. 28, 2007]

§ 19.30 Violations.

[Top of File]

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55071, Nov. 24, 1992]

§ 19.31 Application for exemptions.

[Top of File]

The Commission may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law, will not result in undue hazard to life and property.

[72 FR 49485, Aug. 28, 2007]

§ 19.32 Discrimination prohibited.

[Top of File]

No person shall on the grounds of sex be excluded from participation in, be denied a license, be denied the benefit of, or be subjected to discrimination under any program or activity carried on which is under the jurisdiction of the NRC under the Atomic Energy Act of 1954, as amended, or under any title of the Energy Reorganization Act of 1974, as amended. This provision will be enforced through agency provisions and regulations similar to those already
established, with respect to racial and other discrimination, under Title VI of the Civil Rights Act of 1964. This remedy is not exclusive, however, and will not prejudice or cut off any other legal remedies available to a discriminatee.

[65 FR 54949, Sept. 12, 2000; 68 FR 75389, Dec. 31, 2003; 72 FR 49485, Aug. 28, 2007]

§ 19.40 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 19 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 19 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 19.1, 19.2, 19.3, 19.4, 19.5, 19.8, 19.16, 19.17, 19.18, 19.30, 19.31, and 19.40.

[57 FR 55071, Nov. 24, 1992]

PART 20--STANDARDS FOR PROTECTION AGAINST RADIATION

[Top of File]

Subpart A--General Provisions

[Top of File]

Source: 56 FR 23391, May 21, 1991, unless otherwise noted.

§ 20.1001 Purpose.

(a) The regulations in this part establish standards for protection against ionizing radiation resulting from activities conducted under licenses issued by the Nuclear Regulatory Commission. These regulations are issued under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended.

(b) It is the purpose of the regulations in this part to control the receipt, possession, use, transfer, and disposal of licensed material by any licensee in such a manner that the total dose to an individual (including doses resulting from licensed and unlicensed radioactive material and from radiation sources other than background radiation) does not exceed the standards for protection against radiation prescribed in the regulations in this part. However, nothing in this part shall be construed as limiting actions that may be necessary to protect health and safety.

§ 20.1002 Scope.

[Top of File]

The regulations in this part apply to persons licensed by the Commission to receive, possess, use, transfer, or dispose of byproduct, source, or special nuclear material or to operate a production or utilization facility under parts 30 through 36, 39, 40, 50, 52, 60, 61, 63, 70, or 72 of this chapter, and in accordance with 10 CFR 76.60 to persons required to obtain a certificate of compliance or an approved compliance plan under part 76 of this chapter. The limits in this part do not apply to doses due to background radiation, to exposure of patients to radiation for the purpose of medical
diagnosis or therapy, to exposure from individuals administered radioactive material and released under § 35.75, or
to exposure from voluntary participation in medical research programs.

[67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002, as amended at 67 FR 77652, Dec. 19, 2002; 72 FR 49485, Aug. 28, 2007]

§ 20.1003 Definitions.

[Top of File]

As used in this part:

Absorbed dose means the energy imparted by ionizing radiation per unit mass of irradiated material. The units of absorbed dose are the rad and the gray (Gy).

Accelerator-produced radioactive material means any material made radioactive by a particle accelerator.

Act means the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.), as amended.

Activity is the rate of disintegration (transformation) or decay of radioactive material. The units of activity are the curie (Ci) and the becquerel (Bq).

Adult means an individual 18 or more years of age.

Airborne radioactive material means radioactive material dispersed in the air in the form of dusts, fumes, particulates, mists, vapors, or gases.

Airborne radioactivity area means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exist in concentrations--

(1) In excess of the derived air concentrations (DACs) specified in appendix B, to §§ 20.1001-20.2401, or

(2) To such a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or 12 DAC-hours.

Air-purifying respirator means a respirator with an air-purifying filter, cartridge, or canister that removes specific air contaminants by passing ambient air through the air-purifying element.

ALARA (acronym for "as low as is reasonably achievable") means making every reasonable effort to maintain exposures to radiation as far below the dose limits in this part as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

Annual limit on intake (ALI) means the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by the reference man that would result in a committed effective dose equivalent of 5 rems (0.05 Sv) or a committed dose equivalent of 50 rems (0.5 Sv) to any individual organ or tissue. (ALI values for intake by ingestion and by inhalation of selected radionuclides are given in Table 1, Columns 1 and 2, of appendix B to §§ 20.1001-20.2401).

Assigned protection factor (APF) means the expected workplace level of respiratory protection that would be provided by a properly functioning respirator or a class of respirators to properly fitted and trained users. Operationally, the inhaled concentration can be estimated by dividing the ambient airborne concentration by the APF.

Atmosphere-supplying respirator means a respirator that supplies the respirator user with breathing air from a source independent of the ambient atmosphere, and includes supplied-air respirators (SARs) and self-contained breathing apparatus (SCBA) units.

Background radiation means radiation from cosmic sources; naturally occurring radioactive material, including radon (except as a decay product of source or special nuclear material); and global fallout as it exists in the environment from the testing of nuclear explosive devices or from past nuclear accidents such as Chernobyl that contribute to background radiation and are not under the control of the licensee. "*Background radiation*" does not include radiation from source, byproduct, or special nuclear materials regulated by the Commission.

Bioassay (radiobioassay) means the determination of kinds, quantities or concentrations, and, in some cases, the locations of radioactive material in the human body, whether by direct measurement (in vivo counting) or by analysis and evaluation of materials excreted or removed from the human body.

Byproduct material means—

(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(2) The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition;

(3)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that—

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(4) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

Class (or *lung class* or *inhalation class*) means a classification scheme for inhaled material according to its rate of clearance from the pulmonary region of the lung. Materials are classified as D, W, or Y, which applies to a range of clearance half-times: for Class D (Days) of less than 10 days, for Class W (Weeks) from 10 to 100 days, and for Class Y (Years) of greater than 100 days.

Collective dose is the sum of the individual doses received in a given period of time by a specified population from exposure to a specified source of radiation.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Committed dose equivalent ($H_{T,50}$) means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

Committed effective dose equivalent ($H_{E,50}$) is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to these organs or tissues ($H_{E,50} = \Sigma W_T H_{T.50}$).

Constraint (dose constraint) means a value above which specified licensee actions are required.

Controlled area means an area, outside of a restricted area but inside the site boundary, access to which can be limited by the licensee for any reason.

Critical Group means the group of individuals reasonably expected to receive the greatest exposure to residual radioactivity for any applicable set of circumstances.

Declared pregnant woman means a woman who has voluntarily informed the licensee, in writing, of her pregnancy and the estimated date of conception. The declaration remains in effect until the declared pregnant woman withdraws the declaration in writing or is no longer pregnant.

Decommission means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits--

(1) Release of the property for unrestricted use and termination of the license; or

(2) Release of the property under restricted conditions and termination of the license.

Deep-dose equivalent (H_d), which applies to external whole-body exposure, is the dose equivalent at a tissue depth of 1 cm (1000 mg/cm^2).

Demand respirator means an atmosphere-supplying respirator that admits breathing air to the facepiece only when a negative pressure is created inside the facepiece by inhalation.

Department means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U. S.C. 7101 et seq.) to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers, and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104 (b), (c), and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat 565 at 577-578, 42 U.S.C. 7151).

Derived air concentration (DAC) means the concentration of a given radionuclide in air which, if breathed by the reference man for a working year of 2,000 hours under conditions of light work (inhalation rate 1.2 cubic meters of air per hour), results in an intake of one ALI. DAC values are given in Table 1, Column 3, of appendix B to §§ 20.1001-20.2401.

Derived air concentration-hour (DAC-hour) is the product of the concentration of radioactive material in air (expressed as a fraction or multiple of the derived air concentration for each radionuclide) and the time of exposure to that radionuclide, in hours. A licensee may take 2,000 DAC-hours to represent one ALI, equivalent to a committed effective dose equivalent of 5 rems (0.05 Sv).

Discrete source means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

Disposable respirator means a respirator for which maintenance is not intended and that is designed to be discarded after excessive breathing resistance, sorbent exhaustion, physical damage, or end-of-service-life renders it unsuitable for use. Examples of this type of respirator are a disposable half-mask respirator or a disposable escape-only self-contained breathing apparatus (SCBA).

Distinguishable from background means that the detectable concentration of a radionuclide is statistically different from the background concentration of that radionuclide in the vicinity of the site or, in the case of structures, in similar materials using adequate measurement technology, survey, and statistical techniques.

Dose or *radiation dose* is a generic term that means absorbed dose, dose equivalent, effective dose equivalent, committed dose equivalent, committed effective dose equivalent, or total effective dose equivalent, as defined in other paragraphs of this section.

Dose equivalent (H_T) means the product of the absorbed dose in tissue, quality factor, and all other necessary modifying factors at the location of interest. The units of dose equivalent are the rem and sievert (Sv).

Dosimetry processor means an individual or organization that processes and evaluates individual monitoring equipment in order to determine the radiation dose delivered to the equipment.

Effective dose equivalent (H_E) is the sum of the products of the dose equivalent to the organ or tissue (H_T) and the weighting factors (W_T) applicable to each of the body organs or tissues that are irradiated ($H_E = \Sigma W_T H_T$).

Embryo/fetus means the developing human organism from conception until the time of birth.

Entrance or access point means any location through which an individual could gain access to radiation areas or to radioactive materials. This includes entry or exit portals of sufficient size to permit human entry, irrespective of their intended use.

Exposure means being exposed to ionizing radiation or to radioactive material.

External dose means that portion of the dose equivalent received from radiation sources outside the body.

Extremity means hand, elbow, arm below the elbow, foot, knee, or leg below the knee.

Filtering facepiece (dust mask) means a negative pressure particulate respirator with a filter as an integral part of the facepiece or with the entire facepiece composed of the filtering medium, not equipped with elastomeric sealing surfaces and adjustable straps.

Fit factor means a quantitative estimate of the fit of a particular respirator to a specific individual, and typically estimates the ratio of the concentration of a substance in ambient air to its concentration inside the respirator when worn.

Fit test means the use of a protocol to qualitatively or quantitatively evaluate the fit of a respirator on an individual.

Generally applicable environmental radiation standards means standards issued by the Environmental Protection Agency (EPA) under the authority of the Atomic Energy Act of 1954, as amended, that impose limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

Government agency means any executive department, commission, independent establishment, corporation wholly or partly owned by the United States of America, which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

Gray [See § 20.1004].

Helmet means a rigid respiratory inlet covering that also provides head protection against impact and penetration.

High radiation area means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv) in 1 hour at 30 centimeters from the radiation source or 30 centimeters from any surface that the radiation penetrates.

Hood means a respiratory inlet covering that completely covers the head and neck and may also cover portions of the shoulders and torso.

Individual means any human being.

Individual monitoring means--

(1) The assessment of dose equivalent by the use of devices designed to be worn by an individual;

(2) The assessment of committed effective dose equivalent by bioassay (see Bioassay) or by determination of the time-weighted air concentrations to which an individual has been exposed, i.e., DAC-hours; or

(3) The assessment of dose equivalent by the use of survey data.

Individual monitoring devices (individual monitoring equipment) means devices designed to be worn by a single individual for the assessment of dose equivalent such as film badges, thermoluminescence dosimeters (TLDs), pocket ionization chambers, and personal ("lapel") air sampling devices.

Internal dose means that portion of the dose equivalent received from radioactive material taken into the body.

Lens dose equivalent (LDE) applies to the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 centimeter (300 mg/cm^2).

License means a license issued under the regulations in parts 30 through 36, 39, 40, 50, 60, 61, 63, 70, or 72 of this chapter.

Licensed material means source material, special nuclear material, or byproduct material received, possessed, used, transferred or disposed of under a general or specific license issued by the Commission.

Licensee means the holder of a license.

Limits (dose limits) means the permissible upper bounds of radiation doses.

Loose-fitting facepiece means a respiratory inlet covering that is designed to form a partial seal with the face.

Lost or missing licensed material means licensed material whose location is unknown. It includes material that has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system.

Member of the public means any individual except when that individual is receiving an occupational dose.

Minor means an individual less than 18 years of age.

Monitoring (radiation monitoring, radiation protection monitoring) means the measurement of radiation levels, concentrations, surface area concentrations or quantities of radioactive material and the use of the results of these measurements to evaluate potential exposures and doses.

Nationally tracked source is a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in Appendix E of this part. In this context a sealed source is defined as radioactive material that is sealed in a capsule or closely bonded, in a solid form and which is not exempt from regulatory control. It does not mean material encapsulated solely for disposal, or nuclear material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet. Category 1 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 1 threshold. Category 2 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 2 threshold but less than the Category 1 threshold.

Negative pressure respirator (tight fitting) means a respirator in which the air pressure inside the facepiece is negative during inhalation with respect to the ambient air pressure outside the respirator.

Nonstochastic effect means health effects, the severity of which varies with the dose and for which a threshold is believed to exist. Radiation-induced cataract formation is an example of a nonstochastic effect (also called a deterministic effect).

NRC means the Nuclear Regulatory Commission or its duly authorized representatives.

Occupational dose means the dose received by an individual in the course of employment in which the individual's assigned duties involve exposure to radiation or to radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person. Occupational dose does not include doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released under § 35.75, from voluntary participation in medical research programs, or as a member of the public.

Particle accelerator means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 megaelectron volt. For purposes of this definition, "accelerator" is an equivalent term.

Person means--

(1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy (except that the Department shall be considered a person within the meaning of the regulations in 10 CFR chapter I to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021), the Nuclear Waste Policy Act of 1982 (96 Stat. 2201), and section 3(b)(2) of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (99 Stat. 1842)), any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and

(2) Any legal successor, representative, agent, or agency of the foregoing.

Planned special exposure means an infrequent exposure to radiation, separate from and in addition to the annual dose limits.

Positive pressure respirator means a respirator in which the pressure inside the respiratory inlet covering exceeds the ambient air pressure outside the respirator.

Powered air-purifying respirator (PAPR) means an air-purifying respirator that uses a blower to force the ambient air through air-purifying elements to the inlet covering.

Pressure demand respirator means a positive pressure atmosphere-supplying respirator that admits breathing air to the facepiece when the positive pressure is reduced inside the facepiece by inhalation.

Public dose means the dose received by a member of the public from exposure to radiation or to radioactive material released by a licensee, or to any other source of radiation under the control of a licensee. Public dose does not include occupational dose or doses received from background radiation, from any medical administration the individual has received, from exposure to individuals administered radioactive material and released under § 35.75, or from voluntary participation in medical research programs.

Qualitative fit test (QLFT) means a pass/fail fit test to assess the adequacy of respirator fit that relies on the individual's response to the test agent.

Quality Factor (Q) means the modifying factor (listed in tables 1004(b).1 and 1004(b).2 of § 20.1004) that is used to derive dose equivalent from absorbed dose.

Quantitative fit test (QNFT) means an assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator.

Quarter means a period of time equal to one-fourth of the year observed by the licensee (approximately 13 consecutive weeks), providing that the beginning of the first quarter in a year coincides with the starting date of the year and that no day is omitted or duplicated in consecutive quarters.

Rad (See § 20.1004).

Radiation (ionizing radiation) means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. Radiation, as used in this part, does not include non-ionizing radiation, such as radio- or microwaves, or visible, infrared, or ultraviolet light.

Radiation area means an area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 mSv) in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates.

Reference man means a hypothetical aggregation of human physical and physiological characteristics arrived at by international consensus. These characteristics may be used by researchers and public health workers to standardize results of experiments and to relate biological insult to a common base.

Rem (See § 20.1004).

Residual radioactivity means radioactivity in structures, materials, soils, groundwater, and other media at a site resulting from activities under the licensee's control. This includes radioactivity from all licensed and unlicensed sources used by the licensee, but excludes background radiation. It also includes radioactive materials remaining at the site as a result of routine or accidental releases of radioactive material at the site and previous burials at the site, even if those burials were made in accordance with the provisions of 10 CFR part 20.

Respiratory protective device means an apparatus, such as a respirator, used to reduce the individual's intake of airborne radioactive materials.

Restricted area means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a restricted area.

Sanitary sewerage means a system of public sewers for carrying off waste water and refuse, but excluding sewage treatment facilities, septic tanks, and leach fields owned or operated by the licensee.

Self-contained breathing apparatus (SCBA) means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

Shallow-dose equivalent (Hs), which applies to the external exposure of the skin of the whole body or the skin of an extremity, is taken as the dose equivalent at a tissue depth of 0.007 centimeter (7 mg/cm^2).

Sievert (See § 20.1004).

Site boundary means that line beyond which the land or property is not owned, leased, or otherwise controlled by the licensee.

Source material means--

(1) Uranium or thorium or any combination of uranium and thorium in any physical or chemical form; or

(2) Ores that contain, by weight, one-twentieth of 1 percent (0.05 percent), or more, of uranium, thorium, or any combination of uranium and thorium. Source material does not include special nuclear material.

Special nuclear material means--

(1) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material that the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or

(2) Any material artificially enriched by any of the foregoing but does not include source material.

Stochastic effects means health effects that occur randomly and for which the probability of the effect occurring, rather than its severity, is assumed to be a linear function of dose without threshold. Hereditary effects and cancer incidence are examples of stochastic effects.

Supplied-air respirator (SAR) or *airline respirator* means an atmosphere-supplying respirator for which the source of breathing air is not designed to be carried by the user.

Survey means an evalulation of the radiological conditions and potential hazards incident to the production, use, transfer, release, disposal, or presence of radioactive material or other sources of radiation. When appropriate, such an evaluation includes a physical survey of the location of radioactive material and measurements or calculations of levels of radiation, or concentrations or quantities of radioactive material present.

Tight-fitting facepiece means a respiratory inlet covering that forms a complete seal with the face.

Total Effective Dose Equivalent (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

Unrestricted area means an area, access to which is neither limited nor controlled by the licensee.

Uranium fuel cycle means the operations of milling of uranium ore, chemical conversion of uranium, isotopic enrichment of uranium, fabrication of uranium fuel, generation of electricity by a light-water-cooled nuclear power plant using uranium fuel, and reprocessing of spent uranium fuel to the extent that these activities directly support the production of electrical power for public use. Uranium fuel cycle does not include mining operations, operations at waste disposal sites, transportation of radioactive material in support of these operations, and the reuse of recovered non-uranium special nuclear and byproduct materials from the cycle.

User seal check (fit check) means an action conducted by the respirator user to determine if the respirator is properly seated to the face. Examples include negative pressure check, positive pressure check, irritant smoke check, or isoamyl acetate check.

Very high radiation area means an area, accessible to individuals, in which radiation levels from radiation sources external to the body could result in an individual receiving an absorbed dose in excess of 500 rads (5 grays) in 1 hour at 1 meter from a radiation source or 1 meter from any surface that the radiation penetrates.

(Note: At very high doses received at high dose rates, units of absorbed dose (e.g., rads and grays) are appropriate, rather than units of dose equivalent (e.g., rems and sieverts)).

Waste means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in paragraphs (2), (3), and (4) of the definition of Byproduct material set forth in this section.

Week means 7 consecutive days starting on Sunday.

Weighting factor W_T, for an organ or tissue (T) is the proportion of the risk of stochastic effects resulting from irradiation of that organ or tissue to the total risk of stochastic effects when the whole body is irradiated uniformly. For calculating the effective dose equivalent, the values of W_T are:

Organ Dose Weighting Factors

Organ or Tissue	W_T
Gonads	0.25
Breast	0.15
Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone surfaces	0.03
Remainder	[1]0.30
Whole Body	[2]1.00

[1] 0.30 results from 0.06 for each of 5 "remainder" organs (excluding the skin and the lens of the eye) that receive the highest doses.

[2] For the purpose of weighting the external whole body dose (for adding it to the internal dose), a single weighting factor, w_T=1.0, has been specified. The use of other weighting factors for external exposure will be approved on a case-by-case basis until such time as specific guidance is issued.

Whole body means, for purposes of external exposure, head, trunk (including male gonads), arms above the elbow, or legs above the knee.

Working level (WL) is any combination of short-lived radon daughters (for radon-222: polonium-218, lead-214, bismuth-214, and polonium-214; and for radon-220: polonium-216, lead-212, bismuth-212, and polonium-212) in 1 liter of air that will result in the ultimate emission of 1.3×10^5 MeV of potential alpha particle energy.

Working level month (WLM) means an exposure to 1 working level for 170 hours (2,000 working hours per year/12 months per year=approximately 170 hours per month).

Year means the period of time beginning in January used to determine compliance with the provisions of this part. The licensee may change the starting date of the year used to determine compliance by the licensee provided that the change is made at the beginning of the year and that no day is omitted or duplicated in consecutive years.

[56 FR 23391, May 21, 1991, as amended at 57 FR 57878, Dec. 8, 1992; 58 FR 7736, Feb. 9, 1993; 60 FR 36043, July 13, 1995; 60 FR 48625, Sept. 20, 1995; 61 FR 65127, Dec. 10, 1996; 62 FR 4133, Jan. 29, 1997; 62 FR 39087, July 21, 1997; 63 FR 39481, July 23, 1998; 64 FR 54556, Oct. 7, 1999; 66 FR 55789, Nov. 2, 2001; 67 FR 16304, Apr. 5, 2002; 67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002; 72 FR 55921, Oct. 1, 2007; 72 FR 68058, Dec. 4, 2007]

§ 20.1004 Units of radiation dose.

[Top of File]

(a) Definitions. As used in this part, the units of radiation dose are:

Gray (Gy) is the SI unit of absorbed dose. One gray is equal to an absorbed dose of 1 Joule/kilogram (100 rads).

Rad is the special unit of absorbed dose. One rad is equal to an absorbed dose of 100 ergs/gram or 0.01 joule/kilogram (0.01 gray).

Rem is the special unit of any of the quantities expressed as dose equivalent. The dose equivalent in rems is equal to the absorbed dose in rads multiplied by the quality factor (1 rem=0.01 sievert).

Sievert is the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sieverts is equal to the absorbed dose in grays multiplied by the quality factor (1 Sv=100 rems).

(b) As used in this part, the quality factors for converting absorbed dose to dose equivalent are shown in table 1004(b).1.

Table 1004(b).1-Quality Factors and Absorbed Dose Equivalencies

Type of radiation	Quality factor (Q)	Absorbed dose equal to a unit dose equivalent[a]
X-, gamma, or beta radiation	1	1
Alpha particles, multiple-charged particles, fission fragments and heavy particles of unknown charge	20	0.05
Neutrons of unknown energy	10	0.1
High-energy protons	10	0.1

[a] Absorbed dose in rad equal to 1 rem or the absorbed dose in gray equal to 1 sievert.

(c) If it is more convenient to measure the neutron fluence rate than to determine the neutron dose equivalent rate in rems per hour or sieverts per hour, as provided in paragraph (b) of this section, 1 rem (0.01 Sv) of neutron radiation of unknown energies may, for purposes of the regulations in this part, be assumed to result from a total fluence of 25 million neutrons per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee may use the fluence rate per unit dose equivalent or the appropriate Q value from table 1004(b).2 to convert a measured tissue dose in rads to dose equivalent in rems.

Table 1004(b).2.--Mean Quality Factors, Q, and Fluence Per Unit Dose Equivalent for Monoenergetic Neutrons

	Neutron energy (MeV)	Quality factor[a] (Q)	Fluence per unit dose equivalent[b] (neutrons cm^{-2} rem^{-1})
(thermal).....	2.5×10^{-8}	2	980×10^{6}
	1×10^{-7}	2	980×10^{6}
	1×10^{-6}	2	810×10^{6}
	1×10^{-5}	2	810×10^{6}
	1×10^{-4}	2	840×10^{6}
	1×10^{-3}	2	980×10^{6}

1×10^{-2}	2.5	1010×10^{6}
1×10^{-1}	7.5	170×10^{6}
5×10^{-1}	11	39×10^{6}
1	11	27×10^{6}
2.5	9	29×10^{6}
5	8	23×10^{6}
7	7	24×10^{6}
10	6.5	24×10^{6}
14	7.5	17×10^{6}
20	8	16×10^{6}
40	7	14×10^{6}
60	5.5	16×10^{6}
1×10^{2}	4	20×10^{6}
2×10^{2}	3.5	19×10^{6}
3×10^{2}	3.5	16×10^{6}
4×10^{2}	3.5	14×10^{6}

[a] Value of quality factor (Q) at the point where the dose equivalent is maximum in a 30-cm diameter cylinder tissue-equivalent phantom.

[b] Monoenergetic neutrons incident normally on a 30-cm diameter cylinder tissue-equivalent phantom.

§ 20.1005 Units of radioactivity.

[Top of File]

For the purposes of this part, activity is expressed in the special unit of curies (Ci) or in the SI unit of becquerels (Bq), or their multiples, or disintegrations (transformations) per unit of time.

(a) One becquerel=1 disintegration per second (s^{-1}).

(b) One curie=3.7×10^{10} disintegrations per second=3.7×10^{10} becquerels=2.22×10^{12} disintegrations per minute.

[56 FR 23391, May 21, 1991; 56 FR 61352, Dec. 3, 1991]

§ 20.1006 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 20.1007 Communications.

[Top of File]

Unless otherwise specified, communications or reports concerning the regulations in this part should be addressed to the Executive Director for Operations (EDO), and sent either by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[68 FR 58801, Oct. 10, 2003 as amended at 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 20.1008 Implementation.

[Top of File]

(a) [Reserved]

(b) The applicable section of §§ 20.1001-20.2402 must be used in lieu of requirements in the standards for protection against radiation in effect prior to January 1, 1994[1] that are cited in license conditions or technical specifications, except as specified in paragraphs (c), (d), and (e) of this section. If the requirements of this part are more restrictive than the existing license condition, then the licensee shall comply with this part unless exempted by paragraph (d) of this section.

(c) Any existing license condition or technical specification that is more restrictive than a requirement in §§ 20.1001-20.2402 remains in force until there is a technical specification change, license amendment, or license renewal.

(d) If a license condition or technical specification exempted a licensee from a requirement in the standards for protection against radiation in effect prior to January 1, 1994,[1] it continues to exempt a licensee from the corresponding provision of §§ 20.1001-20.2402.

(e) If a license condition cites provisions in requirements in the standards for protection against radiation in effect prior to January 1, 1994[1] and there are no corresponding provisions in §§ 20.1001-20.2402, then the license condition remains in force until there is a technical specification change, license amendment, or license renewal that modifies or removes this condition.

[59 FR 41643, Aug. 15, 1994]

[1] See §§ 20.1-20.602 codified as of January 1, 1993.

§ 20.1009 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0014.

(b) The approved information collection requirements contained in this part appear in §§20.1003, 20.1101, 20.1202, 20.1203, 20.1204, 20.1206, 20.1208, 20.1301, 20.1302, 20.1403, 20.1404, 20.1406, 20.1501, 20.1601, 20.1703, 20.1901, 20.1904, 20.1905, 20.1906, 20.2002, 20.2004, 20.2005, 20.2006, 20.2008, 20.2102, 20.2103, 20.2104, 20.2105, 20.2106, 20.2107, 20.2108, 20.2110, 20.2201, 20.2202, 20.2203, 20.2204, 20.2205, 20.2206, 20.2207, 20.2301, and appendix G to this part.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 20.2104, NRC Form 4 is approved under control number 3150-0005.

(2) In §§ 20.2106 and 20.2206, NRC Form 5 is approved under control number 3150-0006.

(3) In § 20.2006 and appendix G to 10 CFR Part 20, NRC Form 540 and 540A is approved under control number 3150-0164.

(4) In § 20.2006 and appendix G to 10 CFR Part 20, NRC Form 541 and 541A is approved under control number 3150-0166.

(5) In § 20.2006 and appendix G to 10 CFR Part 20, NRC Form 542 and 542A is approved under control number 3150-0165.

(6) In § 20.2207, NRC Form 748 is approved under control number 3150– 0202.

[63 FR 50128, Sept. 21, 1998, as amended at 67 FR 67099, Nov. 4, 2002; 71 FR 65686, Nov. 8, 2006; 72 FR 55922, Oct. 1, 2007]

Subpart B--Radiation Protection Programs

[Top of File]

Source: 56 FR 23396, May 21, 1991, unless otherwise noted.

§ 20.1101 Radiation protection programs.

(a) Each licensee shall develop, document, and implement a radiation protection program commensurate with the scope and extent of

licensed activities and sufficient to ensure compliance with the provisions of this part. (See § 20.2102 for recordkeeping requirements relating to these programs.)

(b) The licensee shall use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA).

(c) The licensee shall periodically (at least annually) review the radiation protection program content and implementation.

(d) To implement the ALARA requirements of § 20.1101 (b), and notwithstanding the requirements in § 20.1301 of this part, a constraint on air emissions of radioactive material to the environment, excluding Radon-222 and its daughters, shall be established by licensees other than those subject to § 50.34a, such that the individual member of the public likely to receive the highest dose will not be expected to receive a total effective dose equivalent in excess of 10 mrem (0.1 mSv) per year from these emissions. If a licensee subject to this requirement exceeds this dose constraint, the licensee shall report the exceedance as provided in § 20.2203 and promptly take appropriate corrective action to ensure against recurrence.

[56 FR 23396, May 21, 1991, as amended at 61 FR 65127, Dec. 10, 1996; 63 FR 39482, July 23, 1998]

Subpart C--Occupational Dose Limits

[Top of File]

Source: 56 FR 23396, May 21, 1991, unless otherwise noted.

§ 20.1201 Occupational dose limits for adults.

(a) The licensee shall control the occupational dose to individual adults, except for planned special exposures under § 20.1206, to the following dose limits.

(1) An annual limit, which is the more limiting of--

(i) The total effective dose equivalent being equal to 5 rems (0.05 Sv); or

(ii) The sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue other than the lens of the eye being equal to 50 rems (0.5 Sv).

(2) The annual limits to the lens of the eye, to the skin of the whole body, and to the skin of the extremities, which are:

(i) A lens dose equivalent of 15 rems (0.15 Sv), and

(ii) A shallow-dose equivalent of 50 rem (0.5 Sv) to the skin of the whole body or to the skin of any extremity.

(b) Doses received in excess of the annual limits, including doses received during accidents, emergencies, and planned special exposures, must be subtracted from the limits for planned special exposures that the individual may receive during the current year (see § 20.1206(e)(1)) and during the individual's lifetime (see § 20.1206(e)(2)).

(c) When the external exposure is determined by measurement with an external personal monitoring device, the deep-dose equivalent must be used in place of the effective dose equivalent, unless the effective dose equivalent is determined by a dosimetry method approved by the NRC. The assigned deep-dose equivalent must be for the part of the body receiving the highest exposure. The assigned shallow-dose equivalent must be the dose averaged over the contiguous 10 square centimeters of skin receiving the highest exposure. The deep-dose equivalent, lens-dose equivalent, and shallow-dose equivalent may be assessed from surveys or other radiation measurements for the purpose of demonstrating compliance with the occupational dose limits, if the individual monitoring device was not in the region of highest potential exposure, or the results of individual monitoring are unavailable.

(d) Derived air concentration (DAC) and annual limit on intake (ALI) values are presented in table 1 of appendix B to part 20 and may be used to determine the individual's dose (see § 20.2106) and to demonstrate compliance with the occupational dose limits.

(e) In addition to the annual dose limits, the licensee shall limit the soluble uranium intake by an individual to 10 milligrams in a week in consideration of chemical toxicity (see footnote 3 of appendix B to part 20).

(f) The licensee shall reduce the dose that an individual may be allowed to receive in the current year by the amount of occupational dose received while employed by any other person (see § 20.2104(e)).

[56 FR 23396, May 21, 1991, as amended at 60 FR 20185, Apr. 25, 1995; 63 FR 39482, July 23, 1998; 67 FR 16304, Apr. 5, 2002; 72 FR 68059, Dec. 4, 2007]

§ 20.1202 Compliance with requirements for summation of external and internal doses.

[Top of File]

(a) If the licensee is required to monitor under both §§ 20.1502(a) and (b), the licensee shall demonstrate compliance with the dose limits by summing external and internal doses. If the licensee is required to monitor only under § 20.1502(a) or only under § 20.1502(b), then summation is not required to demonstrate compliance with the dose limits. The licensee may demonstrate compliance with the requirements for summation of external and internal doses by meeting one of the conditions specified in paragraph (b) of this section and the conditions in paragraphs (c) and (d) of this section.

(Note: The dose equivalents for the lens of the eye, the skin, and the extremities are not included in the summation, but are subject to separate limits.)

(b) *Intake by inhalation*. If the only intake of radionuclides is by inhalation, the total effective dose equivalent limit is not exceeded if the sum of the deep-dose equivalent divided by the total effective dose equivalent limit, and one of the following, does not exceed unity:

(1) The sum of the fractions of the inhalation ALI for each radionuclide, or

(2) The total number of derived air concentration-hours (DAC-hours) for all radionuclides divided by 2,000, or

(3) The sum of the calculated committed effective dose equivalents to all significantly irradiated[1] organs or tissues (T) calculated from bioassay data using appropriate biological models and expressed as a fraction of the annual limit.

(c) *Intake by oral ingestion*. If the occupationally exposed individual also receives an intake of radionuclides by oral ingestion greater than 10 percent of the applicable oral ALI, the licensee shall account for this intake and include it in demonstrating compliance with the limits.

(d) *Intake through wounds or absorption through skin*. The licensee shall evaluate and, to the extent practical, account for intakes through wounds or skin absorption.

Note: The intake through intact skin has been included in the calculation of DAC for hydrogen-3 and does not need to be further evaluated.

[56 FR 23396, May 21, 1991, as amended at 57 FR 57878, Dec. 8, 1992]

[1] An organ or tissue is deemed to be significantly irradiated if, for that organ or tissue, the product of the weighting factor, w_T, and the committed dose equivalent, $H_{T,50}$, per unit intake is greater than 10 percent of the maximum weighted value of $H_{T,50}$, (i.e., $w_T H_{T,50}$) per unit intake for any organ or tissue.

§ 20.1203 Determination of external dose from airborne radioactive material.

[Top of File]

Licensees shall, when determining the dose from airborne radioactive material, include the contribution to the deep-dose equivalent, lens dose equivalent, and shallow-dose equivalent from external exposure to the radioactive cloud (see appendix B to part 20, footnotes 1 and 2).

Note: Airborne radioactivity measurements and DAC values should not be used as the primary means to assess the deep-dose equivalent when the airborne radioactive material includes radionuclides other than noble gases or if the cloud of airborne radioactive material is not relatively uniform. The determination of the deep-dose equivalent to an individual should be based upon measurements using instruments or individual monitoring devices.

[56 FR 23396, May 21, 1991, as amended at 60 FR 20185, Apr. 25, 1995; 63 FR 39482, July 23, 1998]

§ 20.1204 Determination of internal exposure.

[Top of File]

(a) For purposes of assessing dose used to determine compliance with occupational dose equivalent limits, the licensee shall, when required under § 20.1502, take suitable and timely measurements of--

(1) Concentrations of radioactive materials in air in work areas; or

(2) Quantities of radionuclides in the body; or

(3) Quantities of radionuclides excreted from the body; or

(4) Combinations of these measurements.

(b) Unless respiratory protective equipment is used, as provided in § 20.1703, or the assessment of intake is based on bioassays, the

licensee shall assume that an individual inhales radioactive material at the airborne concentration in which the individual is present.

(c) When specific information on the physical and biochemical properties of the radionuclides taken into the body or the behavior or the material in an individual is known, the licensee may--

(1) Use that information to calculate the committed effective dose equivalent, and, if used, the licensee shall document that information in the individual's record; and

(2) Upon prior approval of the Commission, adjust the DAC or ALI values to reflect the actual physical and chemical characteristics of airborne radioactive material (e.g., aerosol size distribution or density); and

(3) Separately assess the contribution of fractional intakes of Class D, W, or Y compounds of a given radionuclide (see appendix B to part 20) to the committed effective dose equivalent.

(d) If the licensee chooses to assess intakes of Class Y material using the measurements given in § 20.1204(a)(2) or (3), the licensee may delay the recording and reporting of the assessments for periods up to 7 months, unless otherwise required by §§ 20.2202 or 20.2203, in order to permit the licensee to make additional measurements basic to the assessments.

(e) If the identity and concentration of each radionuclide in a mixture are known, the fraction of the DAC applicable to the mixture for use in calculating DAC-hours must be either--

(1) The sum of the ratios of the concentration to the appropriate DAC value (e.g., D, W, Y) from appendix B to part 20 for each radionuclide in the mixture; or

(2) The ratio of the total concentration for all radionuclides in the mixture to the most restrictive DAC value for any radionuclide in the mixture.

(f) If the identity of each radionuclide in a mixture is known, but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture must be the most restrictive DAC of any radionuclide in the mixture.

(g) When a mixture of radionuclides in air exists, licensees may disregard certain radionuclides in the mixture if--

(1) The licensee uses the total activity of the mixture in demonstrating compliance with the dose limits in § 20.1201 and in complying with the monitoring requirements in § 20.1502(b), and

(2) The concentration of any radionuclide disregarded is less than 10 percent of its DAC, and

(3) The sum of these percentages for all of the radionuclides disregarded in the mixture does not exceed 30 percent.

(h)(1) In order to calculate the committed effective dose equivalent, the licensee may assume that the inhalation of one ALI, or an exposure of 2,000 DAC-hours, results in a committed effective dose equivalent of 5 rems (0.05 Sv) for radionuclides that have their ALIs or DACs based on the committed effective dose equivalent.

(2) When the ALI (and the associated DAC) is determined by the nonstochastic organ dose limit of 50 rems (0.5 Sv), the intake of radionuclides that would result in a committed effective dose equivalent of 5 rems (0.05 Sv) (the stochastic ALI) is listed in parentheses in table 1 of appendix B to part 20. In this case, the licensee may, as a simplifying assumption, use the stochastic ALIs to determine committed effective dose equivalent. However, if the licensee uses the stochastic ALIs, the licensee must also demonstrate that the limit in § 20.1201(a)(1)(ii) is met.

[56 FR 23396, May 21, 1991, as amended at 60 FR 20185, Apr. 25, 1995]

§ 20.1205 [Reserved]

[Top of File]

§ 20.1206 Planned special exposures.

[Top of File]

A licensee may authorize an adult worker to receive doses in addition to and accounted for separately from the doses received under the limits specified in § 20.1201 provided that each of the following conditions is satisfied--

(a) The licensee authorizes a planned special exposure only in an exceptional situation when alternatives that might avoid the dose estimated to result from the planned special exposure are unavailable or impractical.

(b) The licensee (and employer if the employer is not the licensee) specifically authorizes the planned special exposure, in writing, before the exposure occurs.

(c) Before a planned special exposure, the licensee ensures that the individuals involved are--

(1) Informed of the purpose of the planned operation;

(2) Informed of the estimated doses and associated potential risks and specific radiation levels or other conditions that might be involved in performing the task; and

(3) Instructed in the measures to be taken to keep the dose ALARA considering other risks that may be present.

(d) Prior to permitting an individual to participate in a planned special exposure, the licensee ascertains prior doses as required by § 20.2104 (b) during the lifetime of the individual for each individual involved.

(e) Subject to § 20.1201(b), the licensee does not authorize a planned special exposure that would cause an individual to receive a dose from all planned special exposures and all doses in excess of the limits to exceed--

(1) The numerical values of any of the dose limits in § 20.1201(a) in any year; and

(2) Five times the annual dose limits in § 20.1201(a) during the individual's lifetime.

(f) The licensee maintains records of the conduct of a planned special exposure in accordance with § 20.2105 and submits a written report in accordance with § 20.2204.

(g) The licensee records the best estimate of the dose resulting from the planned special exposure in the individual's record and informs the individual, in writing, of the dose within 30 days from the date of the planned special exposure. The dose from planned special exposures is not to be considered in controlling future occupational dose of the individual under § 20.1201(a) but is to be included in evaluations required by § 20.1206 (d) and (e).

[56 FR 23396, May 21, 1991, as amended at 63 FR 39482, July 23, 1998]

§ 20.1207 Occupational dose limits for minors.

[Top of File]

The annual occupational dose limits for minors are 10 percent of the annual dose limits specified for adult workers in § 20.1201.

§ 20.1208 Dose equivalent to an embryo/fetus.

[Top of File]

(a) The licensee shall ensure that the dose equivalent to the embryo/fetus during the entire pregnancy, due to the occupational exposure of a declared pregnant woman, does not exceed 0.5 rem (5 mSv). (For recordkeeping requirements, see § 20.2106.)

(b) The licensee shall make efforts to avoid substantial variation above a uniform monthly exposure rate to a declared pregnant woman so as to satisfy the limit in paragraph (a) of this section.

(c) The dose equivalent to the embryo/fetus is the sum of--

(1) The deep-dose equivalent to the declared pregnant woman; and

(2) The dose equivalent to the embryo/fetus resulting from radionuclides in the embryo/fetus and radionuclides in the declared pregnant woman.

(d) If the dose equivalent to the embryo/fetus is found to have exceeded 0.5 rem (5 mSv), or is within 0.05 rem (0.5 mSv) of this dose, by the time the woman declares the pregnancy to the licensee, the licensee shall be deemed to be in compliance with paragraph (a) of this section if the additional dose equivalent to the embryo/fetus does not exceed 0.05 rem (0.5 mSv) during the remainder of the pregnancy.

[56 FR 23396, May 21, 1991, as amended at 63 FR 39482, July 23, 1998]

Subpart D--Radiation Dose Limits for Individual Members of the Public

[Top of File]

Source: 56 FR 23398, May 21, 1991, unless otherwise noted.

§ 20.1301 Dose limits for individual members of the public.

(a) Each licensee shall conduct operations so that —

(1) The total effective dose equivalent to individual members of the public from the licensed operation does not exceed 0.1 rem (1 mSv) in a year, exclusive of the dose contributions from background radiation, from any administration the individual has received, from exposure to individuals administered radioactive material and released under § 35.75, from voluntary participation in medical research programs, and from the licensee's disposal of radioactive material into sanitary sewerage in accordance with § 20.2003, and

(2) The dose in any unrestricted area from external sources, exclusive of the dose contributions from patients administered radioactive material and released in accordance with § 35.75, does not exceed 0.002 rem (0.02 millisievert) in any one hour.

(b) If the licensee permits members of the public to have access to controlled areas, the limits for members of the public continue to apply to those individuals.

(c) Notwithstanding paragraph (a)(1) of this section, a licensee may permit visitors to an individual who cannot be released, under § 35.75, to receive a radiation dose greater than 0.1 rem (1 mSv) if—

(1) The radiation dose received does not exceed 0.5 rem (5 mSv); and

(2) The authorized user, as defined in 10 CFR Part 35, has determined before the visit that it is appropriate.

(d) A licensee or license applicant may apply for prior NRC authorization to operate up to an annual dose limit for an individual member of the public of 0.5 rem (5 mSv). The licensee or license applicant shall include the following information in this application:

(1) Demonstration of the need for and the expected duration of operations in excess of the limit in paragraph (a) of this section;

(2) The licensee's program to assess and control dose within the 0.5 rem (5 mSv) annual limit; and

(3) The procedures to be followed to maintain the dose as low as is reasonably achievable.

(e) In addition to the requirements of this part, a licensee subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR part 190 shall comply with those standards.

(f) The Commission may impose additional restrictions on radiation levels in unrestricted areas and on the total quantity of radionuclides that a licensee may release in effluents in order to restrict the collective dose.

[56 FR 23398, May 21, 1991, as amended at 60 FR 48625, Sept. 20, 1995; 62 FR 4133, Jan. 29, 1997; 67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002]

§ 20.1302 Compliance with dose limits for individual members of the public.

[Top of File]

(a) The licensee shall make or cause to be made, as appropriate, surveys of radiation levels in unrestricted and controlled areas and radioactive materials in effluents released to unrestricted and controlled areas to demonstrate compliance with the dose limits for individual members of the public in § 20.1301.

(b) A licensee shall show compliance with the annual dose limit in § 20.1301 by--

(1) Demonstrating by measurement or calculation that the total effective dose equivalent to the individual likely to receive the highest dose from the licensed operation does not exceed the annual dose limit; or

(2) Demonstrating that--

(i) The annual average concentrations of radioactive material released in gaseous and liquid effluents at the boundary of the unrestricted area do not exceed the values specified in table 2 of appendix B to part 20; and

(ii) If an individual were continuously present in an unrestricted area, the dose from external sources would not exceed 0.002 rem (0.02 mSv) in an hour and 0.05 rem (0.5 mSv) in a year.

(c) Upon approval from the Commission, the licensee may adjust the effluent concentration values in appendix B to part 20, table 2, for members of the public, to take into account the actual physical and chemical characteristics of the effluents (e.g., aerosol size distribution, solubility, density, radioactive decay equilibrium, chemical form).

[56 FR 23398, May 21, 1991; 56 FR 61352, Dec. 3, 1991, as amended at 57 FR 57878, Dec. 8, 1992; 60 FR 20185, Apr. 25, 1995]

Subpart E--Radiological Criteria for License Termination

[Top of File]

Source: 62 FR 39088, July 21, 1987, unless otherwise noted.

§ 20.1401 General provisions and scope.

(a) The criteria in this subpart apply to the decommissioning of facilities licensed under parts 30, 40, 50, 52, 60, 61, 63, 70, and 72 of this chapter, and release of part of a facility or site for unrestricted use in accordance with § 50.83 of this chapter, as well as other facilities subject to the Commission's jurisdiction under the Atomic Energy Act of 1954, as amended, and the Energy Reorganization Act of 1974, as amended. For high-level and low-level waste disposal facilities (10 CFR parts 60, 61, and 63), the criteria apply only to ancillary surface facilities that support radioactive waste disposal activities. The criteria do not apply to uranium and thorium recovery facilities already subject to appendix A to 10 CFR part 40 or the uranium solution extraction facilities.

(b) The criteria in this subpart do not apply to sites which:

(1) Have been decommissioned prior to the effective date of the rule in accordance with criteria identified in the Site Decommissioning Management Plan (SDMP) Action Plan of April 16, 1992 (57 FR 13389);

(2) Have previously submitted and received Commission approval on a license termination plan (LTP) or decommissioning plan that is compatible with the SDMP Action Plan criteria; or

(3) Submit a sufficient LTP or decommissioning plan before August 20, 1998 and such LTP or decommissioning plan is approved by the Commission before August 20, 1999 and in accordance with the criteria identified in the SDMP Action Plan, except that if an EIS is required in the submittal, there will be a provision for day-for-day extension.

(c) After a site has been decommissioned and the license terminated in accordance with the criteria in this subpart, or after part of a facility or site has been released for unrestricted use in accordance with § 50.83 of this chapter and in accordance with the criteria in this subpart, the Commission will require additional cleanup only, if based on new information, it determines that the criteria of this subpart were not met and residual radioactivity remaining at the site could result in significant threat to public health and safety.

(d) When calculating TEDE to the average member of the critical group the licensee shall determine the peak annual TEDE dose expected within the first 1000 years after decommissioning.

[62 FR 39088, July 21, 1997, as amended at 66 FR 55789, Nov. 2, 2001; 72 FR 49485, Aug. 28, 2007]

§ 20.1402 Radiological criteria for unrestricted use.

[Top of File]

A site will be considered acceptable for unrestricted use if the residual radioactivity that is distinguishable from background radiation results in a TEDE to an average member of the critical group that does not exceed 25 mrem (0.25 mSv) per year, including that from groundwater sources of drinking water, and the residual radioactivity has been reduced to levels that are as low as reasonably achievable (ALARA). Determination of the levels which are ALARA must take into account consideration of any detriments, such as deaths from transportation accidents, expected to potentially result from decontamination and waste disposal.

§ 20.1403 Criteria for license termination under restricted conditions.

[Top of File]

A site will be considered acceptable for license termination under restricted conditions if:

(a) The licensee can demonstrate that further reductions in residual radioactivity necessary to comply with the provisions of § 20.1402 would result in net public or environmental harm or were not being made because the residual levels associated with restricted conditions are ALARA. Determination of the levels which are ALARA must take into account consideration of any detriments, such as traffic accidents, expected to potentially result from decontamination and waste disposal;

(b) The licensee has made provisions for legally enforceable institutional controls that provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 25 mrem (0.25 mSv) per year;

(c) The licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site. Acceptable financial assurance mechanisms are--

(1) Funds placed into an account segregated from the licensee's assets and outside the licensee's administrative control as described in § 30.35(f)(1) of this chapter;

(2) Surety method, insurance, or other guarantee method as described in § 30.35(f)(2) of this chapter;

(3) A statement of intent in the case of Federal, State, or local Government licensees, as described in § 30.35(f)(4) of this chapter; or

(4) When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

(d) The licensee has submitted a decommissioning plan or License Termination Plan (LTP) to the Commission indicating the licensee's intent to decommission in accordance with §§ 30.36(d), 40.42(d), 50.82 (a) and (b), 70.38(d), or 72.54 of this chapter, and specifying that the licensee intends to decommission by restricting use of the site. The licensee shall document in the LTP or decommissioning plan how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and incorporated, as appropriate, following analysis of that advice.

(1) Licensees proposing to decommission by restricting use of the site shall seek advice from such affected parties regarding the following matters concerning the proposed decommissioning--

(i) Whether provisions for institutional controls proposed by the licensee;

(A) Will provide reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group will not exceed 25 mrem (0.25 mSv) TEDE per year;

(B) Will be enforceable; and

(C) Will not impose undue burdens on the local community or other affected parties.

(ii) Whether the licensee has provided sufficient financial assurance to enable an independent third party, including a governmental custodian of a site, to assume and carry out responsibilities for any necessary control and maintenance of the site;

(2) In seeking advice on the issues identified in § 20.1403(d)(1), the licensee shall provide for:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues; and

(e) Residual radioactivity at the site has been reduced so that if the institutional controls were no longer in effect, there is reasonable assurance that the TEDE from residual radioactivity distinguishable from background to the average member of the critical group is as low as reasonably achievable and would not exceed either--

(1) 100 mrem (1 mSv) per year; or

(2) 500 mrem (5 mSv) per year provided the licensee--

(i) Demonstrates that further reductions in residual radioactivity necessary to comply with the 100 mrem/y (1 mSv/y) value of paragraph (e)(1) of this section are not technically achievable, would be prohibitively expensive, or would result in net public or environmental harm;

(ii) Makes provisions for durable institutional controls;

(iii) Provides sufficient financial assurance to enable a responsible government entity or independent third party, including a governmental custodian of a site, both to carry out periodic rechecks of the site no less frequently than every 5 years to assure that the institutional controls remain in place as necessary to meet the criteria of § 20.1403(b) and to assume and carry out responsibilities for any necessary control and maintenance of those controls. Acceptable financial assurance mechanisms are those in paragraph (c) of this section.

§ 20.1404 Alternate criteria for license termination.

[Top of File]

(a) The Commission may terminate a license using alternate criteria greater than the dose criterion of §§ 20.1402, 20.1403(b), and 20.1403 (d)(1)(i)(A), if the licensee--

(1) Provides assurance that public health and safety would continue to be protected, and that it is unlikely that the dose from all man-made sources combined, other than medical, would be more than the 1 mSv/y (100 mrem/y) limit of subpart D, by submitting an analysis of possible sources of exposure;

(2) Has employed to the extent practical restrictions on site use according to the provisions of § 20.1403 in minimizing exposures at the

site; and

(3) Reduces doses to ALARA levels, taking into consideration any detriments such as traffic accidents expected to potentially result from decontamination and waste disposal.

(4) Has submitted a decommissioning plan or License Termination Plan (LTP) to the Commission indicating the licensee's intent to decommission in accordance with §§ 30.36(d), 40.42(d), 50.82 (a) and (b), 70.38(d), or 72.54 of this chapter, and specifying that the licensee proposes to decommission by use of alternate criteria. The licensee shall document in the decommissioning plan or LTP how the advice of individuals and institutions in the community who may be affected by the decommissioning has been sought and addressed, as appropriate, following analysis of that advice. In seeking such advice, the licensee shall provide for:

(i) Participation by representatives of a broad cross section of community interests who may be affected by the decommissioning;

(ii) An opportunity for a comprehensive, collective discussion on the issues by the participants represented; and

(iii) A publicly available summary of the results of all such discussions, including a description of the individual viewpoints of the participants on the issues and the extent of agreement and disagreement among the participants on the issues.

(b) The use of alternate criteria to terminate a license requires the approval of the Commission after consideration of the NRC staff's recommendations that will address any comments provided by the Environmental Protection Agency and any public comments submitted pursuant to § 20.1405.

§ 20.1405 Public notification and public participation.

[Top of File]

Upon the receipt of an LTP or decommissioning plan from the licensee, or a proposal by the licensee for release of a site pursuant to §§ 20.1403 or 20.1404, or whenever the Commission deems such notice to be in the public interest, the Commission shall:

(a) Notify and solicit comments from:

(1) local and State governments in the vicinity of the site and any Indian Nation or other indigenous people that have treaty or statutory rights that could be affected by the decommissioning; and

(2) the Environmental Protection Agency for cases where the licensee proposes to release a site pursuant to § 20.1404.

(b) Publish a notice in the Federal Register and in a forum, such as local newspapers, letters to State or local organizations, or other appropriate forum, that is readily accessible to individuals in the vicinity of the site, and solicit comments from affected parties.

§ 20.1406 Minimization of contamination.

[Top of File]

(a) Applicants for licenses, other than early site permits and manufacturing licenses under part 52 of this chapter and renewals, whose applications are submitted after August 20, 1997, shall describe in the application how facility design and procedures for operation will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.

(b) Applicants for standard design certifications, standard design approvals, and manufacturing licenses under part 52 of this chapter, whose applications are submitted after August 20, 1997, shall describe in the application how facility design will minimize, to the extent practicable, contamination of the facility and the environment, facilitate eventual decommissioning, and minimize, to the extent practicable, the generation of radioactive waste.

[72 FR 49485, Aug. 28, 2007]

Subpart F--Surveys and Monitoring

[Top of File]

Source: 56 FR 23398, May 21, 1991, unless otherwise noted.

§ 20.1501 General.

(a) Each licensee shall make or cause to be made, surveys that--

(1) May be necessary for the licensee to comply with the regulations in this part; and

(2) Are reasonable under the circumstances to evaluate--

(i) The magnitude and extent of radiation levels; and

(ii) Concentrations or quantities of radioactive material; and

(iii) The potential radiological hazards.

(b) The licensee shall ensure that instruments and equipment used for quantitative radiation measurements (e.g., dose rate and effluent monitoring) are calibrated periodically for the radiation measured.

(c) All personnel dosimeters (except for direct and indirect reading pocket ionization chambers and those dosimeters used to measure the dose to the extremities) that require processing to determine the radiation dose and that are used by licensees to comply with § 20.1201, with other applicable provisions of this chapter, or with conditions specified in a license must be processed and evaluated by a dosimetry processor--

(1) Holding current personnel dosimetry accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology; and

(2) Approved in this accreditation process for the type of radiation or radiations included in the NVLAP program that most closely approximates the type of radiation or radiations for which the individual wearing the dosimeter is monitored.

[56 FR 23398, May 21, 1991, as amended at 63 FR 39482, July 23, 1998]

§ 20.1502 Conditions requiring individual monitoring of external and internal occupational dose.

[Top of File]

Each licensee shall monitor exposures to radiation and radioactive material at levels sufficient to demonstrate compliance with the occupational dose limits of this part. As a minimum--

(a) Each licensee shall monitor occupational exposure to radiation from licensed and unlicensed radiation sources under the control of the licensee and shall supply and require the use of individual monitoring devices by--

(1) Adults likely to receive, in 1 year from sources external to the body, a dose in excess of 10 percent of the limits in § 20.1201(a),

(2) Minors likely to receive, in 1 year, from radiation sources external to the body, a deep dose equivalent in excess of 0.1 rem (1 mSv), a lens dose equivalent in excess of 0.15 rem (1.5 mSv), or a shallow dose equivalent to the skin or to the extremities in excess of 0.5 rem (5 mSv);

(3) Declared pregnant women likely to receive during the entire pregnancy, from radiation sources external to the body, a deep dose equivalent in excess of 0.1 rem (1 mSv);[2] and

(4) Individuals entering a high or very high radiation area.

(b) Each licensee shall monitor (see § 20.1204) the occupational intake of radioactive material by and assess the committed effective dose equivalent to--

(1) Adults likely to receive, in 1 year, an intake in excess of 10 percent of the applicable ALI(s) in table 1, Columns 1 and 2, of appendix B to §§ 20.1001-20.2402;

(2) Minors likely to receive, in 1 year, a committed effective dose equivalent in excess of 0.1 rem (1 mSv); and

(3) Declared pregnant women likely to receive, during the entire pregnancy, a committed effective dose equivalent in excess of 0.1 rem (1 mSv).

[56 FR 23398, May 21, 1991, as amended at 60 FR 20185, Apr. 25, 1995; 63 FR 39482, July 23, 1998]

[2] All of the occupational doses in § 20.1201 continue to be applicable to the declared pregnant worker as long as the embryo/fetus dose limit is not exceeded.

Subpart G--Control of Exposure From External Sources in Restricted Areas

[Top of File]

Source: 56 FR 23398, May 21, 1991, unless otherwise noted.

§ 20.1601 Control of access to high radiation areas.

(a) The licensee shall ensure that each entrance or access point to a high radiation area has one or more of the following features--

(1) A control device that, upon entry into the area, causes the level of radiation to be reduced below that level at which an individual might receive a deep-dose equivalent of 0.1 rem (1 mSv) in 1 hour at 30 centimeters from the radiation source or from any surface that the radiation penetrates;

(2) A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry; or

(3) Entryways that are locked, except during periods when access to the areas is required, with positive control over each individual entry.

(b) In place of the controls required by paragraph (a) of this section for a high radiation area, the licensee may substitute continuous direct or electronic surveillance that is capable of preventing unauthorized entry.

(c) A licensee may apply to the Commission for approval of alternative methods for controlling access to high radiation areas.

(d) The licensee shall establish the controls required by paragraphs (a) and (c) of this section in a way that does not prevent individuals from leaving a high radiation area.

(e) Control is not required for each entrance or access point to a room or other area that is a high radiation area solely because of the presence of radioactive materials prepared for transport and packaged and labeled in accordance with the regulations of the Department of Transportation provided that--

(1) The packages do not remain in the area longer than 3 days; and

(2) The dose rate at 1 meter from the external surface of any package does not exceed 0.01 rem (0.1 mSv) per hour.

(f) Control of entrance or access to rooms or other areas in hospitals is not required solely because of the presence of patients containing radioactive material, provided that there are personnel in attendance who will take the necessary precautions to prevent the exposure of individuals to radiation or radioactive material in excess of the limits established in this part and to operate within the ALARA provisions of the licensee's radiation protection program.

§ 20.1602 Control of access to very high radiation areas.

[Top of File]

In addition to the requirements in § 20.1601, the licensee shall institute additional measures to ensure that an individual is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at 500 rads (5 grays) or more in 1 hour at 1 meter from a radiation source or any surface through which the radiation penetrates.

Subpart H--Respiratory Protection and Controls to Restrict Internal Exposure in Restricted Areas

[Top of File]

Source: 56 FR 23400, May 21, 1991, unless otherwise noted.

§ 20.1701 Use of process or other engineering controls.

The licensee shall use, to the extent practical, process or other engineering controls (*e.g.,* containment, decontamination, or ventilation) to control the concentration of radioactive material in air.

[64 FR 54556, Oct. 7, 1999]

§ 20.1702 Use of other controls.

[Top of File]

(a) When it is not practical to apply process or other engineering controls to control the concentrations of radioactive material in the air to values below those that define an airborne radioactivity area, the licensee shall, consistent with maintaining the total effective dose equivalent ALARA, increase monitoring and limit intakes by one or more of the following means--

(1) Control of access;

(2) Limitation of exposure times;

(3) Use of respiratory protection equipment; or

(4) Other controls.

(b) If the licensee performs an ALARA analysis to determine whether or not respirators should be used, the licensee may consider safety factors other than radiological factors. The licensee should also consider the impact of respirator use on workers' industrial health and safety.

[64 FR 54556, Oct. 7, 1999]

§ 20.1703 Use of individual respiratory protection equipment.

[Top of File]

If the licensee assigns or permits the use of respiratory protection equipment to limit the intake of radioactive material,

(a) The licensee shall use only respiratory protection equipment that is tested and certified by the National Institute for Occupational Safety and Health (NIOSH) except as otherwise noted in this part.

(b) If the licensee wishes to use equipment that has not been tested or certified by NIOSH, or for which there is no schedule for testing or certification, the licensee shall submit an application to the NRC for authorized use of this equipment except as provided in this part. The application must include evidence that the material and performance characteristics of the equipment are capable of providing the proposed degree of protection under anticipated conditions of use. This must be demonstrated either by licensee testing or on the basis of reliable test information.

(c) The licensee shall implement and maintain a respiratory protection program that includes:

(1) Air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate doses;

(2) Surveys and bioassays, as necessary, to evaluate actual intakes;

(3) Testing of respirators for operability (user seal check for face sealing devices and functional check for others) immediately prior to each use;

(4) Written procedures regarding--

(i) Monitoring, including air sampling and bioassays;

(ii) Supervision and training of respirator users;

(iii) Fit testing;

(iv) Respirator selection;

(v) Breathing air quality;

(vi) Inventory and control;

(vii) Storage, issuance, maintenance, repair, testing, and quality assurance of respiratory protection equipment;

(viii) Recordkeeping; and

(ix) Limitations on periods of respirator use and relief from respirator use;

(5) Determination by a physician that the individual user is medically fit to use respiratory protection equipment:

(i) Before the initial fitting of a face sealing respirator;

(ii) Before the first field use of non-face sealing respirators, and

(iii) Either every 12 months thereafter, or periodically at a frequency determined by a physician.

(6) Fit testing, with fit factor $\geq$ 10 times the APF for negative pressure devices, and a fit factor $\geq$ 500 for any positive pressure, continuous

flow, and pressure-demand devices, before the first field use of tight fitting, face-sealing respirators and periodically thereafter at a frequency not to exceed 1 year. Fit testing must be performed with the facepiece operating in the negative pressure mode.

(d) The licensee shall advise each respirator user that the user may leave the area at any time for relief from respirator use in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other conditions that might require such relief.

(e) The licensee shall also consider limitations appropriate to the type and mode of use. When selecting respiratory devices the licensee shall provide for vision correction, adequate communication, low temperature work environments, and the concurrent use of other safety or radiological protection equipment. The licensee shall use equipment in such a way as not to interfere with the proper operation of the respirator.

(f) Standby rescue persons are required whenever one-piece atmosphere-supplying suits, or any combination of supplied air respiratory protection device and personnel protective equipment are used from which an unaided individual would have difficulty extricating himself or herself. The standby persons must be equipped with respiratory protection devices or other apparatus appropriate for the potential hazards. The standby rescue persons shall observe or otherwise maintain continuous communication with the workers (visual, voice, signal line, telephone, radio, or other suitable means), and be immediately available to assist them in case of a failure of the air supply or for any other reason that requires relief from distress. A sufficient number of standby rescue persons must be immediately available to assist all users of this type of equipment and to provide effective emergency rescue if needed.

(g) Atmosphere-supplying respirators must be supplied with respirable air of grade D quality or better as defined by the Compressed Gas Association in publication G-7.1, "Commodity Specification for Air," 1997 and included in the regulations of the Occupational Safety and Health Administration (29 CFR 1910.134(i)(1)(ii)(A) through (E). Grade D quality air criteria include--

(1) Oxygen content (v/v) of 19.5-23.5%;

(2) Hydrocarbon (condensed) content of 5 milligrams per cubic meter of air or less;

(3) Carbon monoxide (CO) content of 10 ppm or less;

(4) Carbon dioxide content of 1,000 ppm or less; and

(5) Lack of noticable odor.

(h) The licensee shall ensure that no objects, materials or substances, such as facial hair, or any conditions that interfere with the face--facepiece seal or valve function, and that are under the control of the respirator wearer, are present between the skin of the wearer's face and the sealing surface of a tight-fitting respirator facepiece.

(i) In estimating the dose to individuals from intake of airborne radioactive materials, the concentration of radioactive material in the air that is inhaled when respirators are worn is initially assumed to be the ambient concentration in air without respiratory protection, divided by the assigned protection factor. If the dose is later found to be greater than the estimated dose, the corrected value must be used. If the dose is later found to be less than the estimated dose, the corrected value may be used.

[64 FR 54557, Oct. 7, 1999, as amended at 67 FR 77652, Dec. 19, 2002]

§ 20.1704 Further restrictions on the use of respiratory protection equipment.

[Top of File]

The Commission may impose restrictions in addition to the provisions of §§ 20.1702, 20.1703, and Appendix A to Part 20, in order to:

(a) Ensure that the respiratory protection program of the licensee is adequate to limit doses to individuals from intakes of airborne radioactive materials consistent with maintaining total effective dose equivalent ALARA; and

(b) Limit the extent to which a licensee may use respiratory protection equipment instead of process or other engineering controls.

[64 FR 54557, Oct. 7, 1999]

§ 20.1705 Application for use of higher assigned protection factors.

[Top of File]

The licensee shall obtain authorization from the Commission before using assigned protection factors in excess of those specified in Appendix A to Part 20. The Commission may authorize a licensee to use higher assigned protection factors on receipt of an application that--

(a) Describes the situation for which a need exists for higher protection factors; and

(b) Demonstrates that the respiratory protection equipment provides these higher protection factors under the proposed conditions of use.

[64 FR 54557, Oct. 7, 1999]

Subpart I--Storage and Control of Licensed Material

[Top of File]

Source: 56 FR 23401, May 21, 1991, unless otherwise noted.

§ 20.1801 Security of stored material.

The licensee shall secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas.

§ 20.1802 Control of material not in storage.

[Top of File]

The licensee shall control and maintain constant surveillance of licensed material that is in a controlled or unrestricted area and that is not in storage.

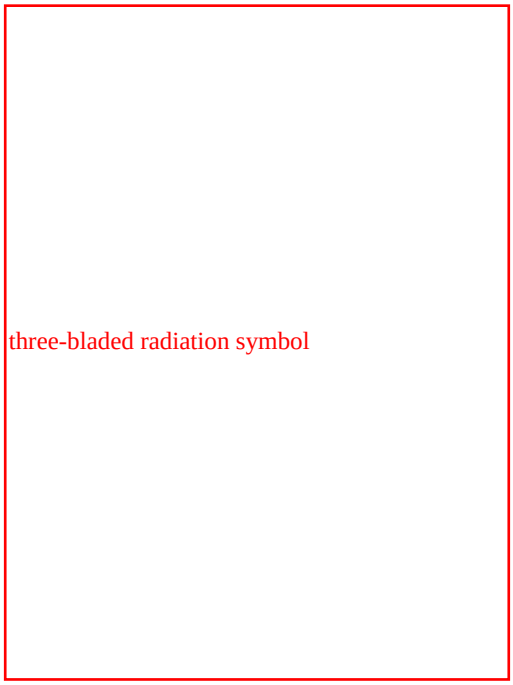
Subpart J--Precautionary Procedures

[Top of File]

Source: 56 FR 23401, May 21, 1991, unless otherwise noted.

§ 20.1901 Caution signs.

(a) *Standard radiation symbol*. Unless otherwise authorized by the Commission, the symbol prescribed by this part shall use the colors magenta, or purple, or black on yellow background. The symbol prescribed by this part is the three-bladed design:



(1) Cross-hatched area is to be magenta, or purple, or black, and

(2) The background is to be yellow.

(b) *Exception to color requirements for standard radiation symbol*. Notwithstanding the requirements of paragraph (a) of this section, licensees are authorized to label sources, source holders, or device components containing sources of licensed materials that are subjected to high temperatures, with conspicuously etched or stamped radiation caution symbols and without a color requirement.

(c) *Additional information on signs and labels*. In addition to the contents of signs and labels prescribed in this part, the licensee may provide, on or near the required signs and labels, additional information, as appropriate, to make individuals aware of potential radiation exposures and to minimize the exposures.

§ 20.1902 Posting requirements.

[Top of File]

(a) *Posting of radiation areas*. The licensee shall post each radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIATION AREA."

(b) *Posting of high radiation areas*. The licensee shall post each high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, HIGH RADIATION AREA" or "DANGER, HIGH RADIATION AREA."

(c) *Posting of very high radiation areas*. The licensee shall post each very high radiation area with a conspicuous sign or signs bearing the radiation symbol and words "GRAVE DANGER, VERY HIGH RADIATION AREA."

(d) *Posting of airborne radioactivity areas*. The licensee shall post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA."

(e) *Posting of areas or rooms in which licensed material is used or stored*. The licensee shall post each area or room in which there is used or stored an amount of licensed material exceeding 10 times the quantity of such material specified in appendix C to part 20 with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL(S)" or "DANGER, RADIOACTIVE MATERIAL(S)."

[56 FR 23401, May 21, 1991, as amended at 60 FR 20185, Apr. 25, 1995]

§ 20.1903 Exceptions to posting requirements.

[Top of File]

(a) A licensee is not required to post caution signs in areas or rooms containing radioactive materials for periods of less than 8 hours, if each of the following conditions is met:

(1) The materials are constantly attended during these periods by an individual who takes the precautions necessary to prevent the exposure of individuals to radiation or radioactive materials in excess of the limits established in this part; and

(2) The area or room is subject to the licensee's control.

(b) Rooms or other areas in hospitals that are occupied by patients are not required to be posted with caution signs pursuant to § 20.1902 provided that the patient could be released from licensee control pursuant to § 35.75 of this chapter.

(c) A room or area is not required to be posted with a caution sign because of the presence of a sealed source provided the radiation level at 30 centimeters from the surface of the source container or housing does not exceed 0.005 rem (0.05 mSv) per hour.

(d) Rooms in hospitals or clinics that are used for teletherapy are exempt from the requirement to post caution signs under § 20.1902 if--

(1) Access to the room is controlled pursuant to 10 CFR 35.615; and

(2) Personnel in attendance take necessary precautions to prevent the inadvertent exposure of workers, other patients, and members of the public to radiation in excess of the limits established in this part.

[56 FR 23401, May 21, 1991, as amended at 57 FR 39357, Aug. 31, 1992; 62 FR 4133, Jan. 29, 1997; 63 FR 39482, July 23, 1998]

§ 20.1904 Labeling containers.

[Top of File]

(a) The licensee shall ensure that each container of licensed material bears a durable, clearly visible label bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." The label must also provide sufficient information (such as the radionuclide(s) present, an estimate of the quantity of radioactivity, the date for which the activity is estimated, radiation levels, kinds of materials, and mass enrichment) to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions to avoid or minimize exposures.

(b) Each licensee shall, prior to removal or disposal of empty uncontaminated containers to unrestricted areas, remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive materials.

§ 20.1905 Exemptions to labeling requirements.

[Top of File]

A licensee is not required to label--

(a) Containers holding licensed material in quantities less than the quantities listed in appendix C to part 20; or

(b) Containers holding licensed material in concentrations less than those specified in table 3 of appendix B to part 20; or

(c) Containers attended by an individual who takes the precautions necessary to prevent the exposure of individuals in excess of the limits established by this part; or

(d) Containers when they are in transport and packaged and labeled in accordance with the regulations of the Department of Transportation,[3] or

(e) Containers that are accessible only to individuals authorized to handle or use them, or to work in the vicinity of the containers, if the contents are identified to these individuals by a readily available written record (examples of containers of this type are containers in locations such as water-filled canals, storage vaults, or hot cells). The record must be retained as long as the containers are in use for the purpose indicated on the record; or

(f) Installed manufacturing or process equipment, such as reactor components, piping, and tanks; or

(g) Containers holding licensed material (other than sealed sources that are either specifically or generally licensed) at a facility licensed under Parts 50 or 52 of this chapter, not including non-power reactors, that are within an area posted under the requirements in § 20.1902 if the containers are:

(1) Conspicuously marked (such as by providing a system of color coding of containers) commensurate with the radiological hazard;

(2) Accessible only to individuals who have sufficient instruction to minimize radiation exposure while handling or working in the vicinity of the containers; and

(3) Subject to plant procedures to ensure they are appropriately labeled, as specified at § 20.1904 before being removed from the posted area.

[56 FR 23401, May 21, 1991, as amended at 60 FR 20185, Apr. 25, 1995; 72 FR 68059, Dec. 4, 2007]

[3] Labeling of packages containing radioactive materials is required by the Department of Transportation (DOT) if the amount and type of radioactive material exceeds the limits for an excepted quantity or article as defined and limited by DOT regulations 49 CFR 173.403 (m) and (w) and 173.421-424.

§ 20.1906 Procedures for receiving and opening packages.

[Top of File]

(a) Each licensee who expects to receive a package containing quantities of radioactive material in excess of a Type A quantity, as defined in § 71.4 and appendix A to part 71 of this chapter, shall make arrangements to receive--

(1) The package when the carrier offers it for delivery; or

(2) Notification of the arrival of the package at the carrier's terminal and to take possession of the package expeditiously.

(b) Each licensee shall--

(1) Monitor the external surfaces of a labeled[3a] package for radioactive contamination unless the package contains only radioactive material in the form of a gas or in special form as defined in 10 CFR 71.4;

(2) Monitor the external surfaces of a labeled[3a] package for radiation levels unless the package contains quantities of radioactive material that are less than or equal to the Type A quantity, as defined in § 71.4 and appendix A to part 71 of this chapter; and

(3) Monitor all packages known to contain radioactive material for radioactive contamination and radiation levels if there is evidence of degradation of package integrity, such as packages that are crushed, wet, or damaged.

(c) The licensee shall perform the monitoring required by paragraph (b) of this section as soon as practical after receipt of the package, but not later than 3 hours after the package is received at the licensee's facility if it is received during the licensee's normal working hours, or not later than 3 hours from the beginning of the next working day if it is received after working hours.

(d) The licensee shall immediately notify the final delivery carrier and the NRC Operations Center (301-816-5100), by telephone, when--

(1) Removable radioactive surface contamination exceeds the limits of § 71.87(i) of this chapter; or

(2) External radiation levels exceed the limits of § 71.47 of this chapter.

(e) Each licensee shall--

(1) Establish, maintain, and retain written procedures for safely opening packages in which radioactive material is received; and

(2) Ensure that the procedures are followed and that due consideration is given to special instructions for the type of package being opened.

(f) Licensees transferring special form sources in licensee-owned or licensee-operated vehicles to and from a work site are exempt from the contamination monitoring requirements of paragraph (b) of this section, but are not exempt from the survey requirement in paragraph (b) of this section for measuring radiation levels that is required to ensure that the source is still properly lodged in its shield.

[56 FR 23401, May 21, 1991, as amended at 57 FR 39357, Aug. 31, 1992; 60 FR 20185, Apr. 25, 1995; 63 FR 39482, July 23, 1998]

[3a] Labeled with a Radioactive White I, Yellow II, or Yellow III label as specified in U.S. Department of Transportation regulations, 49 CFR 172.403 and 172.436-440.

Subpart K--Waste Disposal

[Top of File]

Source: 56 FR 23403, May 21, 1991, unless otherwise noted.

§ 20.2001 General requirements.

(a) A licensee shall dispose of licensed material only--

(1) By transfer to an authorized recipient as provided in § 20.2006 or in the regulations in parts 30, 40, 60, 61, 63, 70, and 72 of this chapter;

(2) By decay in storage; or

(3) By release in effluents within the limits in § 20.1301; or

(4) As authorized under §§ 20.2002, 20.2003, 20.2004, 20.2005, or 20.2008.

(b) A person must be specifically licensed to receive waste containing licensed material from other persons for:

(1) Treatment prior to disposal; or

(2) Treatment or disposal by incineration; or

(3) Decay in storage; or

(4) Disposal at a land disposal facility licensed under part 61 of this chapter; or

(5) Disposal at a geologic repository under part 60 or part 63 of this chapter.

[56 FR 23403, May 21, 1991, as amended at 66 FR 55789, Nov. 2, 2001; 72 FR 55922, Oct. 1, 2007]

§ 20.2002 Method for obtaining approval of proposed disposal procedures.

[Top of File]

A licensee or applicant for a license may apply to the Commission for approval of proposed procedures, not otherwise authorized in the regulations in this chapter, to dispose of licensed material generated in the licensee's activities. Each application shall include:

(a) A description of the waste containing licensed material to be disposed of, including the physical and chemical properties important to risk evaluation, and the proposed manner and conditions of waste disposal; and

(b) An analysis and evaluation of pertinent information on the nature of the environment; and

(c) The nature and location of other potentially affected licensed and unlicensed facilities; and

(d) Analyses and procedures to ensure that doses are maintained ALARA and within the dose limits in this part.

§ 20.2003 Disposal by release into sanitary sewerage.

[Top of File]

(a) A licensee may discharge licensed material into sanitary sewerage if each of the following conditions is satisfied:

(1) The material is readily soluble (or is readily dispersible biological material) in water; and

(2) The quantity of licensed or other radioactive material that the licensee releases into the sewer in 1 month divided by the average monthly volume of water released into the sewer by the licensee does not exceed the concentration listed in table 3 of appendix B to part 20; and

(3) If more than one radionuclide is released, the following conditions must also be satisfied:

(i) The licensee shall determine the fraction of the limit in table 3 of appendix B to part 20 represented by discharges into sanitary sewerage by dividing the actual monthly average concentration of each radionuclide released by the licensee into the sewer by the concentration of that radionuclide listed in table 3 of appendix B to part 20; and

(ii) The sum of the fractions for each radionuclide required by paragraph (a)(3)(i) of this section does not exceed unity; and

(4) The total quantity of licensed and other radioactive material that the licensee releases into the sanitary sewerage system in a year does not exceed 5 curies (185 GBq) of hydrogen-3, 1 curie (37 GBq) of carbon-14, and 1 curie (37 GBq) of all other radioactive materials combined.

(b) Excreta from individuals undergoing medical diagnosis or therapy with radioactive material are not subject to the limitations contained in paragraph (a) of this section.

[56 FR 23403, May 21, 1991, as amended at 60 FR 20185, Apr. 25, 1995]

§ 20.2004 Treatment or disposal by incineration.

[Top of File]

(a) A licensee may treat or dispose of licensed material by incineration only:

(1) As authorized by paragraph (b) of this section; or

(2) If the material is in a form and concentration specified in § 20.2005; or

(3) As specifically approved by the Commission pursuant to § 20.2002.

(b) (1) Waste oils (petroleum derived or synthetic oils used principally as lubricants, coolants, hydraulic or insulating fluids, or metalworking oils) that have been radioactively contaminated in the course of the operation or maintenance of a nuclear power reactor licensed under part 50 of this chapter may be incinerated on the site where generated provided that the total radioactive effluents from the facility, including the effluents from such incineration, conform to the requirements of appendix I to part 50 of this chapter and the effluent release limits contained in applicable license conditions other than effluent limits specifically related to incineration of waste oil. The licensee shall report any changes or additions to the information supplied under §§ 50.34 and 50.34a of this chapter associated with this incineration pursuant to § 50.71 of this chapter, as appropriate. The licensee shall also follow the procedures of § 50.59 of this chapter with respect to such changes to the facility or procedures.

(2) Solid residues produced in the process of incinerating waste oils must be disposed of as provided by § 20.2001.

(3) The provisions of this section authorize onsite waste oil incineration under the terms of this section and supersede any provision in an individual plant license or technical specification that may be inconsistent.

[57 FR 57656, Dec. 7, 1992]

§ 20.2005 Disposal of specific wastes.

[Top of File]

(a) A licensee may dispose of the following licensed material as if it were not radioactive:

(1) 0.05 microcurie (1.85 kBq), or less, of hydrogen-3 or carbon-14 per gram of medium used for liquid scintillation counting; and

(2) 0.05 microcurie (1.85 kBq), or less, of hydrogen-3 or carbon-14 per gram of animal tissue, averaged over the weight of the entire animal.

(b) A licensee may not dispose of tissue under paragraph (a)(2) of this section in a manner that would permit its use either as food for humans or as animal feed.

(c) The licensee shall maintain records in accordance with § 20.2108.

§ 20.2006 Transfer for disposal and manifests.

[Top of File]

(a) The requirements of this section and appendix G to 10 CFR Part 20 are designed to--

(1) Control transfers of low-level radioactive waste by any waste generator, waste collector, or waste processor licensee, as defined in this part, who ships low-level waste either directly, or indirectly through a waste collector or waste processor, to a licensed low-level waste land disposal facility (as defined in Part 61 of this chapter);

(2) Establish a manifest tracking system; and

(3) Supplement existing requirements concerning transfers and recordkeeping for those wastes.

(b) Any licensee shipping radioactive waste intended for ultimate disposal at a licensed land disposal facility must document the information required on NRC's Uniform Low-Level Radioactive Waste Manifest and transfer this recorded manifest information to the intended consignee in accordance with appendix G to 10 CFR Part 20.

(c) Each shipment manifest must include a certification by the waste generator as specified in section II of appendix G to 10 CFR Part 20.

(d) Each person involved in the transfer for disposal and disposal of waste, including the waste generator, waste collector, waste processor, and disposal facility operator, shall comply with the requirements specified in section III of appendix G to 10 CFR Part 20.

(e) Any licensee shipping byproduct material as defined in paragraphs (3) and (4) of the definition of *Byproduct material* set forth in § 20.1003 intended for ultimate disposal at a land disposal facility licensed under part 61 of this chapter must document the information required on the NRC's Uniform Low-Level Radioactive Waste Manifest and transfer this recorded manifest information to the intended consignee in accordance with appendix G to this part.

[63 FR 50128, Sept. 21, 1998; 72 FR 55922, Oct. 1, 2007]

§ 20.2007 Compliance with environmental and health protection regulations.

[Top of File]

Nothing in this subpart relieves the licensee from complying with other applicable Federal, State, and local regulations governing any other toxic or hazardous properties of materials that may be disposed of under this subpart.

§ 20.2008 Disposal of certain byproduct material.

[Top of File]

(a) Licensed material as defined in paragraphs (3) and (4) of the definition of *Byproduct material* set forth in §20.1003 may be disposed of in accordance with part 61 of this chapter, even though it is not defined as low-level radioactive waste. Therefore, any licensed byproduct material being disposed of at a facility, or transferred for ultimate disposal at a facility licensed under part 61 of this chapter, must meet the requirements of § 20.2006.

(b) A licensee may dispose of byproduct material, as defined in paragraphs (3) and (4) of the definition of *Byproduct material* set forth in § 20.1003, at a disposal facility authorized to dispose of such material in accordance with any Federal or State solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005.

[72 FR 55922, Oct. 1, 2007]

Subpart L--Records

[Top of File]

Source: 56 FR 23404, May 21, 1991, unless otherwise noted.

§ 20.2101 General provisions.

(a) Each licensee shall use the units: curie, rad, rem, including multiples and subdivisions, and shall clearly indicate the units of all quantities on records required by this part.

(b) In the records required by this part, the licensee may record quantities in SI units in parentheses following each of the units specified in paragraph (a) of this section. However, all quantities must be recorded as stated in paragraph (a) of this section.

(c) Not withstanding the requirements of paragraph (a) of this section, when recording information on shipment manifests, as required in § 20.2006(b), information must be recorded in the International System of Units (SI) or in SI and units as specified in paragraph (a) of this section.

(d) The licensee shall make a clear distinction among the quantities entered on the records required by this part (e.g., total effective dose equivalent, shallow-dose equivalent, lens dose equivalent, deep-dose equivalent, committed effective dose equivalent).

[56 FR 23404, May 21, 1991, as amended at 60 FR 15663, Mar. 27, 1995; 63 FR 39483, July 23, 1998]

§ 20.2102 Records of radiation protection programs.

[Top of File]

(a) Each licensee shall maintain records of the radiation protection program, including:

(1) The provisions of the program; and

(2) Audits and other reviews of program content and implementation.

(b) The licensee shall retain the records required by paragraph (a)(1) of this section until the Commission terminates each pertinent license requiring the record. The licensee shall retain the records required by paragraph (a)(2) of this section for 3 years after the record is made.

§ 20.2103 Records of surveys.

[Top of File]

(a) Each licensee shall maintain records showing the results of surveys and calibrations required by §§ 20.1501 and 20.1906(b). The licensee shall retain these records for 3 years after the record is made.

(b) The licensee shall retain each of the following records until the Commission terminates each pertinent license requiring the record:

(1) Records of the results of surveys to determine the dose from external sources and used, in the absence of or in combination with individual monitoring data, in the assessment of individual dose equivalents. This includes those records of results of surveys to determine the dose from external sources and used, in the absence of or in combination with individual monitoring data, in the assessment of individual dose equivalents required under the standards for protection against radiation in effect prior to January 1, 1994; and

(2) Records of the results of measurements and calculations used to determine individual intakes of radioactive material and used in the assessment of internal dose. This includes those records of the results of measurements and calculations used to determine individual intakes of radioactive material and used in the assessment of internal dose required under the standards for protection against radiation in effect prior to January 1, 1994; and

(3) Records showing the results of air sampling, surveys, and bioassays required pursuant to § 20.1703(c)(1) and (2). This includes those records showing the results of air sampling, surveys, and bioassays required under the standards for protection against radiation in effect prior to January 1, 1994; and

(4) Records of the results of measurements and calculations used to evaluate the release of radioactive effluents to the environment. This includes those records of the results of measurements and calculations used to evaluate the release of radioactive effluents to the environment required under the standards for protection against radiation in effect prior to January 1, 1994.

[56 FR 23404, May 21, 1991, as amended at 60 FR 20185, Apr. 25, 1995; 66 FR 64737, Dec. 14, 2001]

§ 20.2104 Determination of prior occupational dose.

[Top of File]

(a) For each individual who is likely to receive an annual occupational dose requiring monitoring under § 20.1502, the licensee shall determine the occupational radiation dose received during the current year.

(b) Prior to permitting an individual to participate in a planned special exposure, the licensee shall determine--

(1) The internal and external doses from all previous planned special exposures; and

(2) All doses in excess of the limits (including doses received during accidents and emergencies) received during the lifetime of the individual.

(c) In complying with the requirements of paragraphs (a) or (b) of this section, a licensee may—

(1) Accept, as a record of the occupational dose that the individual received during the current year, a written signed statement from the individual, or from the individual's most recent employer for work involving radiation exposure, that discloses the nature and the amount of any occupational dose that the individual may have received during the current year;

(2) Accept, as the record of cumulative radiation dose, an up-to-date NRC Form 4, or equivalent, signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer (if the individual is not employed by the licensee); and

(3) Obtain reports of the individual's dose equivalent(s) from the most recent employer for work involving radiation exposure, or the individual's current employer (if the individual is not employed by the licensee) by telephone, telegram, electronic media, or letter. The licensee shall request a written verification of the dose data if the authenticity of the transmitted report cannot be established.

(d) The licensee shall record the exposure history of each individual, as required by paragraphs (a) or (b) of this section, on NRC Form 4, or other clear and legible record, including all of the information required by NRC Form 4.[4] The form or record must show each period in which the individual received occupational exposure to radiation or radioactive material and must be signed by the individual who received the exposure. For each period for which the licensee obtains reports, the licensee shall use the dose shown in the report in preparing the NRC Form 4. For any period in which the licensee does not obtain a report, the licensee shall place a notation on the NRC Form 4 indicating the periods of time for which data are not available.

(e) If the licensee is unable to obtain a complete record of an individual's current and previously accumulated occupational dose, the licensee shall assume--

(1) In establishing administrative controls under § 20.1201(f) for the current year, that the allowable dose limit for the individual is reduced by 1.25 rems (12.5 mSv) for each quarter for which records were unavailable and the individual was engaged in activities that could have resulted in occupational radiation exposure; and

(2) That the individual is not available for planned special exposures.

(f) The licensee shall retain the records on NRC Form 4 or equivalent until the Commission terminates each pertinent license requiring this record. The licensee shall retain records used in preparing NRC Form 4 for 3 years after the record is made. This includes records required under the standards for protection against radiation in effect prior to January 1, 1994.

[56 FR 23404, May 21, 1991, as amended at 57 FR 57878, Dec. 8, 1992; 60 FR 20186, Apr. 25, 1995; 60 FR 36043, July 13, 1995; 72 FR 68059, Dec. 4, 2007]

[4] Licensees are not required to partition historical dose between external dose equivalent(s) and internal committed dose equivalent(s). Further, occupational exposure histories obtained and recorded on NRC Form 4 before January 1, 1994, might not have included effective dose equivalent, but may be used in the absence of specific information on the intake of radionuclides by the individual.

§ 20.2105 Records of planned special exposures.

[Top of File]

(a) For each use of the provisions of § 20.1206 for planned special exposures, the licensee shall maintain records that describe--

(1) The exceptional circumstances requiring the use of a planned special exposure; and

(2) The name of the management official who authorized the planned special exposure and a copy of the signed authorization; and

(3) What actions were necessary; and

(4) Why the actions were necessary; and

(5) How doses were maintained ALARA; and

(6) What individual and collective doses were expected to result, and the doses actually received in the planned special exposure.

(b) The licensee shall retain the records until the Commission terminates each pertinent license requiring these records.

§ 20.2106 Records of individual monitoring results.

[Top of File]

(a) *Recordkeeping requirement*. Each licensee shall maintain records of doses received by all individuals for whom monitoring was required pursuant to § 20.1502, and records of doses received during planned special exposures, accidents, and emergency conditions. These records[5] must include, when applicable--

(1) The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose equivalent to the skin, and shallow-dose equivalent to the extremities;

(2) The estimated intake of radionuclides (see § 20.1202);

(3) The committed effective dose equivalent assigned to the intake of radionuclides;

(4) The specific information used to assess the committed effective dose equivalent pursuant to § 20.1204(a) and (c), and when required by § 20.1502;

(5) The total effective dose equivalent when required by § 20.1202; and

(6) The total of the deep-dose equivalent and the committed dose to the organ receiving the highest total dose.

(b) *Recordkeeping frequency*. The licensee shall make entries of the records specified in paragraph (a) of this section at least annually.

(c) *Recordkeeping format*. The licensee shall maintain the records specified in paragraph (a) of this section on NRC Form 5, in accordance with the instructions for NRC Form 5, or in clear and legible records containing all the information required by NRC Form 5.

(d) *Privacy protection*. The records required under this section should be protected from public disclosure because of their personal privacy nature. These records are protected by most State privacy laws and, when transferred to the NRC, are protected by the Privacy Act of 1974, Public Law 93-579, 5 U.S.C. 552a, and the Commission's regulations in 10 CFR part 9.

(e) The licensee shall maintain the records of dose to an embryo/fetus with the records of dose to the declared pregnant woman. The declaration of pregnancy shall also be kept on file, but may be maintained separately from the dose records.

(f) The licensee shall retain the required form or record until the Commission terminates each pertinent license requiring this record. This includes records required under the standards for protection against radiation in effect prior to January 1, 1994.

[56 FR 23404, May 21, 1991, as amended at 60 FR 20186, Apr. 25, 1995; 63 FR 39483, July 23, 1998]

[5] Assessments of dose equivalent and records made using units in effect before the licensee's adoption of this part need not be changed.

§ 20.2107 Records of dose to individual members of the public.

[Top of File]

(a) Each licensee shall maintain records sufficient to demonstrate compliance with the dose limit for individual members of the public (see § 20.1301).

(b) The licensee shall retain the records required by paragraph (a) of this section until the Commission terminates each pertinent license requiring the record.

§ 20.2108 Records of waste disposal.

[Top of File]

(a) Each licensee shall maintain records of the disposal of licensed materials made under §§ 20.2002, 20.2003, 20.2004, 20.2005, 10 CFR part 61 and disposal by burial in soil, including burials authorized before January 28, 1981.[6]

(b) The licensee shall retain the records required by paragraph (a) of this section until the Commission terminates each pertinent license requiring the record. Requirements for disposition of these records, prior to license termination, are located in §§ 30.51, 40.61, 70.51, and 72.80 for activities licensed under these parts.

[56 FR 23404, May 21, 1991, as amended at 60 FR 20186, Apr. 25, 1995; 61 FR 24673, May 16, 1996]

[6] A previous § 20.304 permitted burial of small quantities of licensed materials in soil before January 28, 1981, without specific Commission authorization.

§ 20.2109 [Reserved]

[Top of File]

§ 20.2110 Form of records.

[Top of File]

Each record required by this part must be legible throughout the specified retention period. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records, such as letters, drawings, and specifications, must include all pertinent information, such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

Subpart M--Reports

[Top of File]

Source: 56 FR 23406, May 21, 1991, unless otherwise noted.

§ 20.2201 Reports of theft or loss of licensed material.

(a) *Telephone reports.* (1) Each licensee shall report by telephone as follows:

(i) Immediately after its occurrence becomes known to the licensee, any lost, stolen, or missing licensed material in an aggregate quantity equal to or greater than 1,000 times the quantity specified in appendix C to part 20 under such circumstances that it appears to the licensee that an exposure could result to persons in unrestricted areas; or

(ii) Within 30 days after the occurrence of any lost, stolen, or missing licensed material becomes known to the licensee, all licensed material in a quantity greater than 10 times the quantity specified in appendix C to part 20 that is still missing at this time.

(2) Reports must be made as follows:

(i) Licensees having an installed Emergency Notification System shall make the reports to the NRC Operations Center in accordance with § 50.72 of this chapter, and

(ii) All other licensees shall make reports by telephone to the NRC Operations Center (301)-816-5100.

(b) *Written reports.* (1) Each licensee required to make a report under paragraph (a) of this section shall, within 30 days after making the telephone report, make a written report setting forth the following information:

(i) A description of the licensed material involved, including kind, quantity, and chemical and physical form; and

(ii) A description of the circumstances under which the loss or theft occurred; and

(iii) A statement of disposition, or probable disposition, of the licensed material involved; and

(iv) Exposures of individuals to radiation, circumstances under which the exposures occurred, and the possible total effective dose equivalent to persons in unrestricted areas; and

(v) Actions that have been taken, or will be taken, to recover the material; and

(vi) Procedures or measures that have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed material.

(2) Reports must be made as follows:

(i) For holders of an operating license for a nuclear power plant, the events included in paragraph (b) of this section must be reported in accordance with the procedures described in § 50.73(b), (c), (d), (e), and (g) of this chapter and must include the information required in paragraph (b)(1) of this section, and

(ii) All other licensees shall make reports to the Administrator of the appropriate NRC Regional Office listed in appendix D to part 20.

(c) A duplicate report is not required under paragraph (b) of this section if the licensee is also required to submit a report pursuant to §§ 30.55(c), 40.64(c), 50.72, 50.73, 70.52, 73.27(b), 73.67(e)(3)(vii), 73.67(g)(3)(iii), 73.71, or § 150.19(c) of this chapter.

(d) Subsequent to filing the written report, the licensee shall also report any additional substantive information on the loss or theft within 30 days after the licensee learns of such information.

(e) The licensee shall prepare any report filed with the Commission pursuant to this section so that names of individuals who may have received exposure to radiation are stated in a separate and detachable part of the report.

[56 FR 23406, May 21, 1991, as amended at 58 FR 69220, Dec. 30, 1993; 60 FR 20186, Apr. 25, 1995; 66 FR 64738, Dec. 14, 2001; 67 FR 3585, Jan. 25, 2002]

§ 20.2202 Notification of incidents.

[Top of File]

(a) Immediate notification. Notwithstanding any other requirements for notification, each licensee shall immediately report any event involving byproduct, source, or special nuclear material possessed by the licensee that may have caused or threatens to cause any of the following conditions--

(1) An individual to receive--

(i) A total effective dose equivalent of 25 rems (0.25 Sv) or more; or

(ii) A lens dose equivalent of 75 rems (0.75 Sv) or more; or

(iii) A shallow-dose equivalent to the skin or extremities of 250 rads (2.5 Gy) or more; or

(2) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours, the individual could have received an intake five times the annual limit on intake (the provisions of this paragraph do not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures).

(b) Twenty-four hour notification. Each licensee shall, within 24 hours of discovery of the event, report any event involving loss of control of licensed material possessed by the licensee that may have caused, or threatens to cause, any of the following conditions:

(1) An individual to receive, in a period of 24 hours--

(i) A total effective dose equivalent exceeding 5 rems (0.05 Sv); or

(ii) A lens dose equivalent exceeding 15 rems (0.15 Sv); or

(iii) A shallow-dose equivalent to the skin or extremities exceeding 50 rems (0.5 Sv); or

(2) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours, the individual could have received an intake in excess of one occupational annual limit on intake (the provisions of this paragraph do not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures).

(c) The licensee shall prepare any report filed with the Commission pursuant to this section so that names of individuals who have received exposure to radiation or radioactive material are stated in a separate and detachable part of the report.

(d) Reports made by licensees in response to the requirements of this section must be made as follows:

(1) Licensees having an installed Emergency Notification System shall make the reports required by paragraphs (a) and (b) of this section to the NRC Operations Center in accordance with 10 CFR 50.72; and

(2) All other licensees shall make the reports required by paragraphs (a) and (b) of this section by telephone to the NRC Operations Center (301) 816-5100.

(e) The provisions of this section do not include doses that result from planned special exposures, that are within the limits for planned special exposures, and that are reported under § 20.2204.

[56 FR 23406, May 21, 1991, as amended at 56 FR 40766, Aug. 16, 1991; 57 FR 57879, Dec. 8, 1992; 59 FR 14086, Mar. 25, 1994; 63 FR 39483, July 23, 1998]

§ 20.2203 Reports of exposures, radiation levels, and concentrations of radioactive material exceeding the constraints or limits.

[Top of File]

(a) *Reportable events*. In addition to the notification required by § 20.2202, each licensee shall submit a written report within 30 days after learning of any of the following occurrences:

(1) Any incident for which notification is required by § 20.2202; or

(2) Doses in excess of any of the following:

(i) The occupational dose limits for adults in § 20.1201; or

(ii) The occupational dose limits for a minor in § 20.1207; or

(iii) The limits for an embryo/fetus of a declared pregnant woman in § 20.1208; or

(iv) The limits for an individual member of the public in § 20.1301; or

(v) Any applicable limit in the license; or

(vi) The ALARA constraints for air emissions established under § 20.1101(d); or

(3) Levels of radiation or concentrations of radioactive material in--

(i) A restricted area in excess of any applicable limit in the license; or

(ii) An unrestricted area in excess of 10 times any applicable limit set forth in this part or in the license (whether or not involving exposure of any individual in excess of the limits in § 20.1301); or

(4) For licensees subject to the provisions of EPA's generally applicable environmental radiation standards in 40 CFR part 190, levels of radiation or releases of radioactive material in excess of those standards, or of license conditions related to those standards.

(b) *Contents of reports*. (1) Each report required by paragraph (a) of this section must describe the extent of exposure of individuals to radiation and radioactive material, including, as appropriate:

(i) Estimates of each individual's dose; and

(ii) The levels of radiation and concentrations of radioactive material involved; and

(iii) The cause of the elevated exposures, dose rates, or concentrations; and

(iv) Corrective steps taken or planned to ensure against a recurrence, including the schedule for achieving conformance with applicable limits, ALARA constraints, generally applicable environmental standards, and associated license conditions.

(2) Each report filed pursuant to paragraph (a) of this section must include for each occupationally overexposed[1] individual: the name, Social Security account number, and date of birth. The report must be prepared so that this information is stated in a separate and detachable part of the report and must be clearly labeled "Privacy Act Information: Not for Public Disclosure."

(c) For holders of an operating license or a combined license for a nuclear power plant, the occurrences included in paragraph (a) of this section must be reported in accordance with the procedures described in §§ 50.73(b), (c), (d), (e), and (g) of this chapter, and must include the information required by paragraph (b) of this section. Occurrences reported in accordance with § 50.73 of this chapter need not be reported by a duplicate report under paragraph (a) of this section.

(d) All licensees, other than those holding an operating license or a combined license for a nuclear power plant, who make reports under paragraph (a) of this section shall submit the report in writing either by mail addressed to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, Electronic Information Exchange, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/esubmittals.html*, by calling (301) 415–0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. A copy should be sent to the appropriate NRC Regional Office listed in appendix D to this part.

[56 FR 23406, May 21, 1991, as amended at 60 FR 20186, Apr. 25, 1995; 61 FR 65127, Dec. 10, 1996; 68 FR 14309, Mar. 25, 2003; 68

FR 58802, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 72 FR 49486, Aug. 28, 2007]

[1] With respect to the limit for the embryo-fetus (§ 20.1208), the identifiers should be those of the declared pregnant woman.

§ 20.2204 Reports of planned special exposures.

[Top of File]

The licensee shall submit a written report to the Administrator of the appropriate NRC Regional Office listed in appendix D to part 20 within 30 days following any planned special exposure conducted in accordance with § 20.1206, informing the Commission that a planned special exposure was conducted and indicating the date the planned special exposure occurred and the information required by § 20.2105.

[56 FR 23406, May 21, 1991, as amended at 60 FR 20186, Apr. 25, 1995]

440.250 [Amended]

[Top of File]

§ 20.2205 Reports to individuals of exceeding dose limits.

When a licensee is required by §§ 20.2203 or 20.2204 to report to the Commission any exposure of an identified occupationally exposed individual, or an identified member of the public, to radiation or radioactive material, the licensee shall also provide the individual a report on his or her exposure data included in the report to Commission. This report must be transmitted no later than the transmittal to the Commission.

[60 FR 36043, July 13, 1995; 72 FR 68059, Dec. 4, 2007]

§ 20.2206 Reports of individual monitoring.

[Top of File]

(a) This section applies to each person licensed by the Commission to--

(1) Operate a nuclear reactor designed to produce electrical or heat energy pursuant to § 50.21(b) or § 50.22 of this chapter or a testing facility as defined in § 50.2 of this chapter; or

(2) Possess or use byproduct material for purposes of radiography pursuant to Parts 30 and 34 of this chapter; or

(3) Possess or use at any one time, for purposes of fuel processing, fabricating, or reprocessing, special nuclear material in a quantity exceeding 5,000 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof pursuant to part 70 of this chapter; or

(4) Possess high-level radioactive waste at a geologic repository operations area pursuant to part 60 or 63 of this chapter; or

(5) Possess spent fuel in an independent spent fuel storage installation (ISFSI) pursuant to part 72 of this chapter; or

(6) Receive radioactive waste from other persons for disposal under part 61 of this chapter; or

(7) Possess or use at any time, for processing or manufacturing for distribution pursuant to parts 30, 32, 33 or 35 of this chapter, byproduct material in quantities exceeding any one of the following quantities:

Radionuclide	Quantity of radionuclide[1] in curies
Cesium-137	1
Cobalt-60	1
Gold-198	100
Iodine-131	1
Iridium-192	10
Krypton-85	1,000
Promethium-147	10
Techetium-99m	1,000

[1] The Commission may require as a license condition, or by rule, regulation, or order pursuant to § 20.2302, reports from licensees who are licensed to use radionuclides not on this list, in quantities sufficient to cause comparable radiation levels.

(b) Each licensee in a category listed in paragraph (a) of this section shall submit an annual report of the results of individual monitoring carried out by the licensee for each individual for whom monitoring was required by § 20.1502 during that year. The licensee may include additional data for individuals for whom monitoring was provided but not required. The licensee shall use Form NRC 5 or electronic media containing all the information required by Form NRC 5.

(c) The licensee shall file the report required by § 20.2206(b), covering the preceding year, on or before April 30 of each year. The licensee shall submit the report to the REIRS Project Manager by an appropriate method listed in § 20.1007 or via the REIRS Web site at *http://www.reirs.com*.

[56 FR 23406, May 21, 1991, as amended at 56 FR 32072, July 15, 1991; 66 FR 5578, Nov. 2, 2001; 68 FR 58802, Oct. 10, 2003]

§ 20.2207 Reports of transactions involving nationally tracked sources.

[Top of File]

Each licensee who manufactures, transfers, receives, disassembles, or disposes of a nationally tracked source shall complete and submit a National Source Tracking Transaction Report as specified in paragraphs (a) through (e) of this section for each type of transaction.

(a) Each licensee who manufactures a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(1) The name, address, and license number of the reporting licensee;

(2) The name of the individual preparing the report;

(3) The manufacturer, model, and serial number of the source;

(4) The radioactive material in the source;

(5) The initial source strength in becquerels (curies) at the time of manufacture; and

(6) The manufacture date of the source.

(b) Each licensee that transfers a nationally tracked source to another person shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(1) The name, address, and license number of the reporting licensee;

(2) The name of the individual preparing the report;

(3) The name and license number of the recipient facility and the shipping address;

(4) The manufacturer, model, and serial number of the source or, if not available, other information to uniquely identify the source;

(5) The radioactive material in the source;

(6) The initial or current source strength in becquerels (curies);

(7) The date for which the source strength is reported;

(8) The shipping date;

(9) The estimated arrival date; and

(10) For nationally tracked sources transferred as waste under a Uniform Low-Level Radioactive Waste Manifest, the waste manifest number and the container identification of the container with the nationally tracked source.

(c) Each licensee that receives a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(1) The name, address, and license number of the reporting licensee;

(2) The name of the individual preparing the report;

(3) The name, address, and license number of the person that provided the source;

(4) The manufacturer, model, and serial number of the source or, if not available, other information to uniquely identify the source;

(5) The radioactive material in the source;

(6) The initial or current source strength in becquerels (curies);

(7) The date for which the source strength is reported;

(8) The date of receipt; and

(9) For material received under a Uniform Low-Level Radioactive Waste Manifest, the waste manifest number and the container identification with the nationally tracked source.

(d) Each licensee that disassembles a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(1) The name, address, and license number of the reporting licensee;

(2) The name of the individual preparing the report;

(3) The manufacturer, model, and serial number of the source or, if not available, other information to uniquely identify the source;

(4) The radioactive material in the source;

(5) The initial or current source strength in becquerels (curies);

(6) The date for which the source strength is reported;

(7) The disassemble date of the source.

(e) Each licensee who disposes of a nationally tracked source shall complete and submit a National Source Tracking Transaction Report. The report must include the following information:

(1) The name, address, and license number of the reporting licensee;

(2) The name of the individual preparing the report;

(3) The waste manifest number;

(4) The container identification with the nationally tracked source.

(5) The date of disposal; and

(6) The method of disposal.

(f) The reports discussed in paragraphs (a) through (e) of this section must be submitted by the close of the next business day after the transaction. A single report may be submitted for multiple sources and transactions. The reports must be submitted to the National Source Tracking System by using:

(1) The on-line National Source Tracking System;

(2) Electronically using a computerreadable format;

(3) By facsimile;

(4) By mail to the address on the National Source Tracking Transaction Report Form (NRC Form 748); or

(5) By telephone with followup by facsimile or mail.

(g) Each licensee shall correct any error in previously filed reports or file a new report for any missed transaction within 5 business days of the discovery of the error or missed transaction. Such errors may be detected by a variety of methods such as administrative reviews or by

physical inventories required by regulation. In addition, each licensee
shall reconcile the inventory of nationally tracked sources possessed by the licensee against that licensee's data
in the National Source Tracking System. The reconciliation must be conducted during the month of January in each year. The reconciliation process must include resolving any discrepancies between the National Source Tracking System and the actual inventory by filing the reports identified by paragraphs (a) through (e) of this section. By January 31 of each year, each licensee must submit to the National Source Tracking System confirmation that the data in the National Source Tracking System is correct.

(h) Each licensee that possesses Category 1 nationally tracked sources shall report its initial inventory of Category 1 nationally tracked sources to the National Source Tracking System by January 31, 2009. Each licensee that possesses Category 2 nationally tracked sources shall report its initial inventory of Category 2 nationally tracked sources to the National Source Tracking System by January 31, 2009. The information may be submitted by using any of the methods identified by paragraph (f)(1) through (f)(4) of this section. The initial inventory report must include the following information:

(1) The name, address, and license number of the reporting licensee;

(2) The name of the individual preparing the report;

(3) The manufacturer, model, and serial number of each nationally tracked source or, if not available, other information to uniquely identify the source;

(4) The radioactive material in the sealed source;

(5) The initial or current source strength in becquerels (curies); and

(6) The date for which the source strength is reported.

[72 FR 59163, Oct. 19, 2007]

Subpart N--Exemptions and Additional Requirements

[Top of File]

Source: 56 FR 23408, May 21, 1991, unless otherwise noted.

§ 20.2301 Applications for exemptions.

The Commission may, upon application by a licensee or upon its own initiative, grant an exemption from the requirements of the regulations in this part if it determines the exemption is authorized by law and would not result in undue hazard to life or property.

§ 20.2302 Additional requirements.

[Top of File]

The Commission may, by rule, regulation, or order, impose requirements on a licensee, in addition to those established in the regulations in this part, as it deems appropriate or necessary to protect health or to minimize danger to life or property.

Subpart O--Enforcement

[Top of File]

§ 20.2401 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107 or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section; and

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

[56 FR 23408, May 21, 1991; 56 FR 61352, Dec. 3, 1991, as amended at 57 FR 55071, Nov. 24, 1992]

§ 20.2402 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in §§ 20.1001 through 20.2402 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) this section.

(b) The regulations in §§ 20.1001 through 20.2402 that are not issued under Sections 161b, 161i, or 161o for the purposes of Section 223 are as follows: §§ 20.1001, 20.1002, 20.1003, 20.1004, 20.1005, 20.1006, 20.1007, 20.1008, 20.1009, 20.1405, 20.1704, 20.1903, 20.1905, 20.2002, 20.2007, 20.2301, 20.2302, 20.2401, and 20.2402.

[57 FR 55071, Nov. 24, 1992]

Appendix A to Part 20--Assigned Protection Factors for Respirators[a]

[Top of File]

	Operating mode	Assigned Protection Factors
I. Air Purifying Respirators [Particulate[b] only][c]:		
Filtering facepiece disposable[d]	Negative Pressure	([d])
Facepiece, half [e]	Negative Pressure	10
Facepiece, full	Negative Pressure	100
Facepiece, half	Powered air-purifying respirators	50
Facepiece, full	Powered air-purifying respirators	1000
Helmet/hood	Powered air-purifying respirators	1000
Facepiece, loose-fitting	Powered air-purifying respirators	25
II. Atmosphere supplying respirators [particulate, gases and vapors[f]]:		
1. Air-line respirator:		
Facepiece, half	Demand	10
Facepiece, half	Continuous Flow	50
Facepiece, half	Pressure Demand	50
Facepiece, full	Demand	100
Facepiece, full	Continuous Flow	1000
Facepiece, full	Pressure Demand	1000
Helmet/hood	Continuous Flow	1000
Facepiece, loose-fitting	Continuous Flow	25
Suit	Continuous Flow	([g])
2. Self-contained breathing Apparatus (SCBA):		
Facepiece, full	Demand	[h]100
Facepiece, full	Pressure Demand	[i]10,000
Facepiece, full	Demand, Recirculating	[h]100

Facepiece, full	Positive Pressure Recirculating	[i]10,000
III. Combination Respirators:		
Any combination of air-purifying and atmosphere-supplying respirators	Assigned protection factor for type and mode of operation as listed above.	

[a] These assigned protection factors apply only in a respiratory protection program that meets the requirements of this Part. They are applicable only to airborne radiological hazards and may not be appropriate to circumstances when chemical or other respiratory hazards exist instead of, or in addition to, radioactive hazards. Selection and use of respirators for such circumstances must also comply with Department of Labor regulations.

Radioactive contaminants for which the concentration values in Table 1, Column 3 of Appendix B to Part 20 are based on internal dose due to inhalation may, in addition, present external exposure hazards at higher concentrations. Under these circumstances, limitations on occupancy may have to be governed by external dose limits.

[b] Air purifying respirators with APF <100 must be equipped with particulate filters that are at least 95 percent efficient. Air purifying respirators with APF = 100 must be equipped with particulate filters that are at least 99 percent efficient. Air purifying respirators with APFs >100 must be equipped with particulate filters that are at least 99.97 percent efficient.

[c] The licensee may apply to the Commission for the use of an APF greater than 1 for sorbent cartridges as protection against airborne radioactive gases and vapors (e.g., radioiodine).

[d] Licensees may permit individuals to use this type of respirator who have not been medically screened or fit tested on the device provided that no credit be taken for their use in estimating intake or dose. It is also recognized that it is difficult to perform an effective positive or negative pressure pre-use user seal check on this type of device. All other respiratory protection program requirements listed in § 20.1703 apply. An assigned protection factor has not been assigned for these devices. However, an APF equal to 10 may be used if the licensee can demonstrate a fit factor of at least 100 by use of a validated or evaluated, qualitative or quantitative fit test.

[e] Under-chin type only. No distinction is made in this Appendix between elastomeric half-masks with replaceable cartridges and those designed with the filter medium as an integral part of the facepiece (e.g., disposable or reusable disposable). Both types are acceptable so long as the seal area of the latter contains some substantial type of seal-enhancing material such as rubber or plastic, the two or more suspension straps are adjustable, the filter medium is at least 95 percent efficient and all other requirements of this Part are met.

[f] The assigned protection factors for gases and vapors are not applicable to radioactive contaminants that present an absorption or submersion hazard. For tritium oxide vapor, approximately one-third of the intake occurs by absorption through the skin so that an overall protection factor of 3 is appropriate when atmosphere-supplying respirators are used to protect against tritium oxide. Exposure to radioactive noble gases is not considered a significant respiratory hazard, and protective actions for these contaminants should be based on external (submersion) dose considerations.

[g] No NIOSH approval schedule is currently available for atmosphere supplying suits. This equipment may be used in an acceptable respiratory protection program as long as all the other minimum program requirements, with the exception of fit testing, are met (i.e., § 20.1703).

[h] The licensee should implement institutional controls to assure that these devices are not used in areas immediately dangerous to life or health (IDLH).

[i] This type of respirator may be used as an emergency device in unknown concentrations for protection against inhalation hazards. External radiation hazards and other limitations to permitted exposure such as skin absorption shall be taken into account in these circumstances. This device may not be used by any individual who experiences perceptible outward leakage of breathing gas while wearing the device.

[64 FR 54558, Oct. 7, 1999; 64 FR 55524, Oct. 13, 1999]

Appendix B to Part 20--Annual Limits on Intake (ALIs) and Derived Air Concentrations (DACs) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sewerage

[Top of File]

Introduction

For each radionuclide Table 1 indicates the chemical form which is to be used for selecting the appropriate ALI or DAC value. The ALIs and DACs for inhalation are given for an aerosol with an activity median aerodynamic diameter (AMAD) of 1 μm and for three classes (D,W,Y) of radioactive material, which refer to their retention (approximately days, weeks or years) in the pulmonary region of the lung. This classification applies to a range of clearance half-times of less than 10 days for D, for W from 10 to 100 days, and for Y greater than 100 days. The class (D, W, or Y) given in the column headed "Class" applies only to the inhalation ALIs and DACs given in Table 1, columns 2 and 3. Table 2 provides concentration limits for airborne and liquid effluents released to the general environment. Table 3 provides concentration limits for discharges to sanitary sewer systems.

Notation

The values in Tables 1, 2, and 3 are presented in the computer "E" notation. In this notation a value of 6E-02 represents a value of $6x10^{-2}$ or 0.06, 6E+2 represents $6x10^{2}$ or 600, and 6E+0 represents $6x10^{0}$ or 6.

Table 1 "Occupational"

Note that the columns in Table 1, of this appendix captioned "Oral Ingestion ALI," "Inhalation ALI," and "DAC," are applicable to occupational exposure to radioactive material.

The ALIs in this appendix are the annual intakes of a given radionuclide by "Reference Man" which would result in either (1) a committed effective dose equivalent of 5 rems (stochastic ALI) or (2) a committed dose equivalent of 50 rems to an organ or tissue (non-stochastic ALI). The stochastic ALIs were derived to result in a risk, due to irradiation of organs and tissues, comparable to the risk associated with deep dose equivalent to the whole body of 5 rems. The derivation includes multiplying the committed dose equivalent to an organ or tissue by a weighting factor, w_T. This weighting factor is the proportion of the risk of stochastic effects resulting from irradiation of the organ or tissue, T, to the total risk of stochastic effects when the whole body is irradiated uniformly. The values of w_T are listed under the definition of weighting factor in § 20.1003. The non-stochastic ALIs were derived to avoid non-stochastic effects, such as prompt damage to tissue or reduction in organ function.

A value of w_T=0.06 is applicable to each of the five organs or tissues in the "remainder" category receiving the highest dose equivalents, and the dose equivalents of all other remaining tissues may be disregarded. The following parts of the GI tract--stomach, small intestine, upper large intestine, and lower large intestine--are to be treated as four separate organs.

Note that the dose equivalents for extremities (hands and forearms, feet and lower legs), skin, and lens of the eye are not considered in computing the committed effective dose equivalent, but are subject to limits that must be met separately.

When an ALI is defined by the stochastic dose limit, this value alone, is given. When an ALI is determined by the non-stochastic dose limit to an organ, the organ or tissue to which the limit applies is shown, and the ALI for the stochastic limit is shown in parentheses. (Abbreviated organ or tissue designations are used: LLI wall = lower large intestine wall; St. wall = stomach wall; Blad wall = bladder wall; and Bone surf = bone surface.)

The use of the ALIs listed first, the more limiting of the stochastic and non-stochastic ALIs, will ensure that non-stochastic effects are avoided and that the risk of stochastic effects is limited to an acceptably low value. If, in a particular situation involving a radionuclide for which the non-stochastic ALI is limiting, use of that non-stochastic ALI is considered unduly conservative, the licensee may use the stochastic ALI to determine the committed effective dose equivalent. However, the licensee shall also ensure that the 50-rem dose equivalent limit for any organ or tissue is not exceeded by the sum of the external deep dose equivalent plus the internal committed dose to that organ (not the effective dose). For the case where there is no external dose contribution, this would be demonstrated if the sum of the fractions of the nonstochastic ALIs (ALI_{ns}) that contribute to the committed dose equivalent to the organ receiving the highest dose does not exceed unity (i.e., (intake (in µCi) of each radionuclide/ALI_{ns}) < 1.0). If there is an external deep dose equivalent contribution of H_d then this sum must be less than 1 - (H_d/50) instead of being < 1.0.

The derived air concentration (DAC) values are derived limits intended to control chronic occupational exposures. The relationship between the DAC and the ALI is given by: DAC=ALI(in µCi)/(2000 hours per working year x 60 minutes/hour x 2 x 10^4 ml per minute)= [ALI/$2.4x10^9$] µCi/ml, where $2x10^4$ ml is the volume of air breathed per minute at work by "Reference Man" under working conditions of "light work."

The DAC values relate to one of two modes of exposure: either external submersion or the internal committed dose equivalents resulting from inhalation of radioactive materials. Derived air concentrations based upon submersion are for immersion in a semi-infinite cloud of uniform concentration and apply to each radionuclide separately.

The ALI and DAC values relate to exposure to the single radionuclide named, but also include contributions from the in-growth of any daughter radionuclide produced in the body by the decay of the parent. However, intakes that include both the parent and daughter radionuclides should be treated by the general method appropriate for mixtures.

The value of ALI and DAC do not apply directly when the individual both ingests and inhales a radionuclide, when the individual is exposed to a mixture of radionuclides by either inhalation or ingestion or both, or when the individual is exposed to both internal and external radiation (see § 20.1202). When an individual is exposed to radioactive materials which fall under several of the translocation classifications (i.e., Class D, Class W, or Class Y) of the same radionuclide, the exposure may be evaluated as if it were a mixture of different radionuclides.

It should be noted that the classification of a compound as Class D, W, or Y is based on the chemical form of the compound and does not take into account the radiological half-life of different radioisotopes. For this reason, values are given for Class D, W, and Y compounds, even for very short-lived radionuclides.

Table 2

The columns in Table 2 of this appendix captioned "Effluents," "Air," and "Water," are applicable to the assessment and control of dose to

the public, particularly in the implementation of the provisions of § 20.1302. The concentration values given in Columns 1 and 2 of Table 2 are equivalent to the radionuclide concentrations which, if inhaled or ingested continuously over the course of a year, would produce a total effective dose equivalent of 0.05 rem (50 millirem or 0.5 millisieverts).

Consideration of non-stochastic limits has not been included in deriving the air and water effluent concentration limits because non-stochastic effects are presumed not to occur at the dose levels established for individual members of the public. For radionuclides, where the non-stochastic limit was governing in deriving the occupational DAC, the stochastic ALI was used in deriving the corresponding airborne effluent limit in Table 2. For this reason, the DAC and airborne effluent limits are not always proportional as was the case in appendix B to §§ 20.1-20.601.

The air concentration values listed in Table 2, Column 1, were derived by one of two methods. For those radionuclides for which the stochastic limit is governing, the occupational stochastic inhalation ALI was divided by 2.4 x 10^9ml, relating the inhalation ALI to the DAC, as explained above, and then divided by a factor of 300. The factor of 300 includes the following components: a factor of 50 to relate the 5-rem annual occupational dose limit to the 0.1-rem limit for members of the public, a factor of 3 to adjust for the difference in exposure time and the inhalation rate for a worker and that for members of the public; and a factor of 2 to adjust the occupational values (derived for adults) so that they are applicable to other age groups.

For those radionuclides for which submersion (external dose) is limiting, the occupational DAC in Table 1, Column 3, was divided by 219. The factor of 219 is composed of a factor of 50, as described above, and a factor of 4.38 relating occupational exposure for 2,000 hours per year to full-time exposure (8,760 hours per year). Note that an additional factor of 2 for age considerations is not warranted in the submersion case.

The water concentrations were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3 x 10^7. The factor of 7.3 x 10^7 (ml) includes the following components: the factors of 50 and 2 described above and a factor of 7.3 x 10^5 (ml) which is the annual water intake of "Reference Man."

Note 2 of this appendix provides groupings of radionuclides which are applicable to unknown mixtures of radionuclides. These groupings (including occupational inhalation ALIs and DACs, air and water effluent concentrations and sewerage) require demonstrating that the most limiting radionuclides in successive classes are absent. The limit for the unknown mixture is defined when the presence of one of the listed radionuclides cannot be definitely excluded either from knowledge of the radionuclide composition of the source or from actual measurements.

Table 3 "Sewer Disposal"

The monthly average concentrations for release to sanitary sewers are applicable to the provisions in § 20.2003. The concentration values were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3 x 10^6(ml). The factor of 7.3 x 10^6 (ml) is composed of a factor of 7.3 x 10^5(ml), the annual water intake by "Reference Man," and a factor of 10, such that the concentrations, if the sewage released by the licensee were the only source of water ingested by a reference man during a year, would result in a committed effective dose equivalent of 0.5 rem.

List of Elements

Name	Atomic	
	Symbol	No.
Actinium	Ac	89
Aluminium	Al	13
Americium	Am	95
Antimony	Sb	51
Argon	Ar	18
Arsenic	As	33
Astatine	At	85
Barium	Ba	56
Berkelium	Bk	97
Beryllium	Be	4
Bismuth	Bi	83
Bromine	Br	35
Cadmium	Cd	48
Calcium	Ca	20
Californium	Cf	98
Carbon	C	6
Cerium	Ce	58

Cesium	Cs	55
Chlorine	Cl	17
Chromium	Cr	24
Cobalt	Co	27
Copper	Cu	29
Curium	Cm	96
Dysprosium	Dy	66
Einsteinium	Es	99
Erbium	Er	68
Europium	Eu	63
Femium	Fm	100
Fluorine	F	9
Francium	Fr	87
Gadolinium	Gd	64
Gallium	Ga	31
Germanium	Ge	32
Gold	Au	79
Hafniim	Hf	72
Holmium	Ho	67
Hydrogen	H	1
Indium	In	49
Iodine	I	53
Iridium	Ir	77
Iron	Fe	26
Krypton	Kr	36
Lanthanum	La	57
Lead	Pb	82
Lutetium	Lu	71
Magnesium	Mg	12
Manganese	Mn	25
Mendelevium	Md	101
Mercury	Hg	80
Molybdenum	Mo	42
Neodymium	Nd	60
Neptunium	Np	93
Nickel	Ni	28
Niobium	Nb	41
Nitrogen	N	7
Osmium	Os	76
Oxygen	O	8
Palladium	Pd	46
Phosphorus	P	15
Platinum	Pt	78
Plutonium	Pu	94
Polonium	Po	84
Potassium	K	19
Praseodymium	Pr	59
Promethium	Pm	61

Protactinium	Pa	91
Radium	Ra	88
Radon	Rn	86
Rhenium	Re	75
Rhodium	Rh	45
Rubidium	Rb	37
Ruthenium	Ru	44
Samarium	Sm	62
Scandium	Sc	21
Selenium	Se	34
Silicon	Si	14
Silver	Ag	47
Sodium	Na	11
Strontium	Sr	38
Sulfur	S	16
Tantaium	Ta	73
Technetium	Tc	43
Tellurium	Te	52
Terbium	Tb	65
Thallium	Tl	81
Thorium	Th	90
Thulium	Tm	69
Tin	Sn	50
Titanium	Ti	22
Tungsten	W	74
Uranium	U	92
Vanadium	V	23
Xenon	Xe	54
Yterbium	Yb	70
Yttrium	Y	39
Zinc	Zn	30
Zirconium	Zr	40

[56 FR 23409, May 21, 1991; 56 FR 61352, Dec. 3, 1991, as amended at 57 FR 57879, Dec. 8, 1992. Redesignated at 58 FR 67659, Dec. 22, 1993; 71 FR 15007, Mar. 27, 2006; 72 FR 55922, Oct. 1, 2007]

Appendix C to Part 20--Quantities[1] of Licensed Material Requiring Labeling

[Top of File]

Radionuclide	Abbreviation	Quantity (μCi)
Hydrogen-3	H-3	1,000
Beryllium-7	Be-7	1,000
Beryllium-10	Be-10	1
Carbon-11	C-11	1,000
Carbon-14	C-14	100
Fluorine-18	F-18	1,000
Sodium-22	Na-22	10
Sodium-24	Na-24	100
Magnesium-28	Mg-28	100

Aluminum-26	Al-26	10
Silicon-31	Si-31	1,000
Silicon-32	Si-32	1
Phosphorus-32	P-32	10
Phosphorus-33	P-33	100
Sulfur-35	S-35	100
Chlorine-36	Cl-36	10
Chlorine-38	Cl-38	1,000
Chlorine-39	Cl-39	1,000
Argon-39	Ar-39	1,000
Argon-41	Ar-41	1,000
Potassium-40	K-40	100
Potassium-42	K-42	1,000
Potassium-43	K-43	1,000
Potassium-44	K-44	1,000
Potassium-45	K-45	1,000
Calcium-41	Ca-41	100
Calcium-45	Ca-45	100
Calcium-47	Ca-47	100
Scandium-43	Sc-43	1,000
Scandium-44m	Sc-44m	100
Scandium-44	Sc-44	100
Scandium-46	Sc-46	10
Scandium-47	Sc-47	100
Scandium-48	Sc-48	100
Scandium-49	Sc-49	1,000
Titanium-44	Ti-44	1
Titanium-45	Ti-45	1,000
Vanadium-47	V-47	1,000
Vanadium-48	V-48	100
Vanadium-49	V-49	1,000
Chromium-48	Cr-48	1,000
Chromium-49	Cr-49	1,000
Chromium-51	Cr-51	1,000
Manganese-51	Mn-51	1,000
Manganese-52m	Mn-52m	1,000
Manganese-52	Mn-52	100
Manganese-53	Mn-53	1,000
Manganese-54	Mn-54	100
Manganese-56	Mn-56	1,000
Iron-52	Fe-52	100
Iron-55	Fe-55	100
Iron-59	Fe-59	10
Iron-60	Fe-60	1
Cobalt-55	Co-55	100
Cobalt-56	Co-56	10
Cobalt-57	Co-57	100
Cobalt-58m	Co-58m	1,000

Cobalt-58	Co-58	100
Cobalt-60m	Co-60m	1,000
Cobalt-60	Co-60	1
Cobalt-61	Co-61	1,000
Cobalt-62m	Co-62m	1,000
Nickel-56	Ni-56	100
Nickel-57	Ni-57	100
Nickel-59	Ni-59	100
Nickel-63	Ni-63	100
Nickel-65	Ni-65	1,000
Nickel-66	Ni-66	10
Copper-60	Cu-60	1,000
Copper-61	Cu-61	1,000
Copper-64	Cu-64	1,000
Copper-67	Cu-67	1,000
Zinc-62	Zn-62	100
Zinc-63	Zn-63	1,000
Zinc-65	Zn-65	10
Zinc-69m	Zn-69m	100
Zinc-69	Zn-69	1,000
Zinc-71m	Zn-71m	1,000
Zinc-72	Zn-72	100
Gallium-65	Ga-65	1,000
Gallium-66	Ga-66	100
Gallium-67	Ga-67	1,000
Gallium-68	Ga-68	1,000
Gallium-70	Ga-70	1,000
Gallium-72	Ga-72	100
Gallium-73	Ga-73	1,000
Germanium-66	Ge-66	1,000
Germanium-67	Ge-67	1,000
Germanium-68	Ge-68	10
Germanium-69	Ge-69	1,000
Germanium-71	Ge-71	1,000
Germanium-75	Ge-75	1,000
Germanium-77	Ge-77	1,000
Germanium-78	Ge-78	1,000
Arsenic-69	As-69	1,000
Arsenic-70	As-70	1,000
Arsenic-71	As-71	100
Arsenic-72	As-72	100
Arsenic-73	As-73	100
Arsenic-74	As-74	100
Arsenic-76	As-76	100
Arsenic-77	As-77	100
Arsenic-78	As-78	1,000
Selenium-70	Se-70	1,000
Selenium-73m	Se-73m	1,000

Selenium-73	Se-73	100
Selenium-75	Se-75	100
Selenium-79	Se-79	100
Selenium-81m	Se-81m	1,000
Selenium-81	Se-81	1,000
Selenium-83	Se-83	1,000
Bromine-74m	Br-74m	1,000
Bromine-74	Br-74	1,000
Bromine-75	Br-75	1,000
Bromine-76	Br-76	100
Bromine-77	Br-77	1,000
Bromine-80m	Br-80m	1,000
Bromine-80	Br-80	1,000
Bromine-82	Br-82	100
Bromine-83	Br-83	1,000
Bromine-84	Br-84	1,000
Krypton-74	Kr-74	1,000
Krypton-76	Kr-76	1,000
Krypton-77	Kr-77	1,000
Krypton-79	Kr-79	1,000
Krypton-81	Kr-81	1,000
Krypton-83m	Kr-83m	1,000
Krypton-85m	Kr-85m	1,000
Krypton-85	Kr-85	1,000
Krypton-87	Kr-87	1,000
Krypton-88	Kr-88	1,000
Rubidium-79	Rb-79	1,000
Rubidium-81m	Rb-81m	1,000
Rubidium-81	Rb-81	1,000
Rubidium-82m	Rb-82m	1,000
Rubidium-83	Rb-83	100
Rubidium-84	Rb-84	100
Rubidium-86	Rb-86	100
Rubidium-87	Rb-87	100
Rubidium-88	Rb-88	1,000
Rubidium-89	Rb-89	1,000
Strontium-80	Sr-80	100
Strontium-81	Sr-81	1,000
Strontium-83	Sr-83	100
Strontium-85m	Sr-85m	1,000
Strontium-85	Sr-85	100
Strontium-87m	Sr-87m	1,000
Strontium-89	Sr-89	10
Strontium-90	Sr-90	0.1
Strontium-91	Sr-91	100
Strontium-92	Sr-92	100
Yttrium-86m	Y-86m	1,000
Yttrium-86	Y-86	100

Yttrium-87	Y-87	100
Yttrium-88	Y-88	10
Yttrium-90m	Y-90m	1,000
Yttrium-90	Y-90	10
Yttrium-91m	Y-91m	1,000
Yttrium-91	Y-91	10
Yttrium-92	Y-92	100
Yttrium-93	Y-93	100
Yttrium-94	Y-94	1,000
Yttrium-95	Y-95	1,000
Zirconium-86	Zr-86	100
Zirconium-88	Zr-88	10
Zirconium-89	Zr-89	100
Zirconium-93	Zr-93	1
Zirconium-95	Zr-95	10
Zirconium-97	Zr-97	100
Niobium-88	Nb-88	1,000
Niobium-89m (66 min)	Nb-89m	1,000
Niobium-89 (122 min)	Nb-89	1,000
Niobium-89	Nb-89	1,000
Niobium-90	Nb-90	100
Niobium-93m	Nb-93m	10
Niobium-94	Nb-94	1
Niobium-95m	Nb-95m	100
Niobium-95	Nb-95	100
Niobium-96	Nb-96	100
Niobium-97	Nb-97	1,000
Niobium-98	Nb-98	1,000
Molybdenum-90	Mo-90	100
Molybdenum-93m	Mo-93m	100
Molybdenum-93	Mo-93	10
Molybdenum-99	Mo-99	100
Molybdenum-101	Mo-101	1,000
Technetium-93m	Tc-93m	1,000
Technetium-93	Tc-93	1,000
Technetium-94m	Tc-94m	1,000
Technetium-94	Tc-94	1,000
Technetium-96m	Tc-96	1,000
Technetium-96	Tc-96	100
Technetium-97m	Tc-97m	100
Technetium-97	Tc-97	1,000
Technetium-98	Tc-98	10
Technetium-99m	Tc-99m	1,000
Technetium-99	Tc-99	100
Technetium-101	Tc-101	1,000
Technetium-104	Tc-104	1,000
Ruthenium-94	Ru-94	1,000
Ruthenium-97	Ru-97	1,000

Ruthenium-103	Ru-103	100
Ruthenium-105	Ru-105	1,000
Ruthenium-106	Ru-106	1
Rhodium-99m	Rh-99m	1,000
Rhodium-99	Rh-99	100
Rhodium-100	Rh-100	100
Rhodium-101m	Rh-101m	1,000
Rhodium-101	Rh-101	10
Rhodium-102m	Rh-102m	10
Rhodium-102	Rh-102	10
Rhodium-103m	Rh-103m	1,000
Rhodium-105	Rh-105	100
Rhodium-106m	Rh-106m	1,000
Rhodium-107	Rh-107	1,000
Palladium-100	Pd-100	100
Palladium-101	Pd-101	1,000
Palladium-103	Pd-103	100
Palladium-107	Pd-107	10
Palladium-109	Pd-109	100
Silver-102	Ag-102	1,000
Silver-103	Ag-103	1,000
Silver-104m	Ag-104m	1,000
Silver-104	Ag-104	1,000
Silver-105	Ag-105	100
Silver-106m	Ag-106m	100
Silver-106	Ag-106	1,000
Silver-108m	Ag-108m	1
Silver-110m	Ag-110m	10
Silver-111	Ag-111	100
Silver-112	Ag-112	100
Silver-115	Ag-115	1,000
Cadmium-104	Cd-104	1,000
Cadmium-107	Cd-107	1,000
Cadmium-109	Cd-109	1
Cadmium-113m	Cd-113m	0.1
Cadmium-113	Cd-113	100
Cadmium-115m	Cd-115m	10
Cadmium-115	Cd-115	100
Cadmium-117m	Cd-117m	1,000
Cadmium-117	Cd-117	1,000
Indium-109	In-109	1,000
Indium-110 (69.1 min.)	In-110	1,000
Indium-110 (4.9h)	In-110	1,000
Indium-111	In-111	100
Indium-112	In-112	1,000
Indium-113m	In-113m	1,000
Indium-114m	In-114m	10
Indium-115m	In-115m	1,000

Indium-115	In-115	100
Indium-116m	In-116m	1,000
Indium-117m	In-117m	1,000
Indium-117	In-117	1,000
Indium-119m	In-119m	1,000
Tin-110	Sn-110	100
Tin-111	Sn-111	1,000
Tin-113	Sn-113	100
Tin-117m	Sn-117m	100
Tin-119m	Sn-119m	100
Tin-121m	Sn-121m	100
Tin-121	Sn-121	1,000
Tin-123m	Sn-123m	1,000
Tin-123	Sn-123	10
Tin-125	Sn-125	10
Tin-126	Sn-126	10
Tin-127	Sn-127	1,000
Tin-128	Sn-128	1,000
Antimony-115	Sb-115	1,000
Antimony-116m	Sb-116m	1,000
Antimony-116	Sb-116	1,000
Antimony-117	Sb-117	1,000
Antimony-118m	Sb-118m	1,000
Antimony-119	Sb-119	1,000
Antimony-120 (16 min.)	Sb-120	1,000
Antimony-120 (5.76d)	Sb-120	100
Antimony-122	Sb-122	100
Antimony-124m	Sb-124m	1,000
Antimony-124	Sb-124	10
Antimony-125	Sb-125	100
Antimony-126m	Sb-126m	1,000
Antimony-126	Sb-126	100
Antimony-127	Sb-127	100
Antimony-128 (10.4 min.)	Sb-128	1,000
Antimony-128 (9.01h)	Sb-128	100
Antimony-129	Sb-129	100
Antimony-130	Sb-130	1,000
Antimony-131	Sb-131	1,000
Tellurium-116	Te-116	1,000
Tellurium-121m	Te-121m	10
Tellurium-121	Te-121	100
Tellurium-123m	Te-123m	10
Tellurium-123	Te-123	100
Tellurium-125m	Te-125m	10
Tellurium-127m	Te-127m	10
Tellurium-127	Te-127	1,000
Tellurium-129m	Te-129m	10
Tellurium-129	Te-129	1,000

Tellurium-131m	Te-131m	10
Tellurium-131	Te-131	100
Tellurium-132	Te-132	10
Tellurium-133m	Te-133m	100
Tellurium-133	Te-133	1,000
Tellurium-134	Te-134	1,000
Iodine-120m	I-120m	1,000
Iodine-120	I-120	100
Iodine-121	I-121	1,000
Iodine-123	I-123	100
Iodine-124	I-124	10
Iodine-125	I-125	1
Iodine-126	I-126	1
Iodine-128	I-128	1,000
Iodine-129	I-129	1
Iodine-130	I-130	10
Iodine-131	I-131	1
Iodine-132m	I-132m	100
Iodine-132	I-132	100
Iodine-133	I-133	10
Iodine-134	I-134	1,000
Iodine-135	I-135	100
Xenon-120	Xe-120	1,000
Xenon-121	Xe-121	1,000
Xenon-122	Xe-122	1,000
Xenon-123	Xe-123	1,000
Xenon-125	Xe-125	1,000
Xenon-127	Xe-127	1,000
Xenon-129m	Xe-129m	1,000
Xenon-131m	Xe-131m	1,000
Xenon-133m	Xe-133m	1,000
Xenon-133	Xe-133	1,000
Xenon-135m	Xe-135m	1,000
Xenon-135	Xe-135	1,000
Xenon-138	Xe-138	1,000
Cesium-125	Cs-125	1,000
Cesium-127	Cs-127	1,000
Cesium-129	Cs-129	1,000
Cesium-130	Cs-130	1,000
Cesium-131	Cs-131	1,000
Cesium-132	Cs-132	100
Cesium-134m	Cs-134m	1,000
Cesium-134	Cs-134	10
Cesium-135m	Cs-135m	1,000
Cesium-135	Cs-135	100
Cesium-136	Cs-136	10
Cesium-137	Cs-137	10
Cesium-138	Cs-138	1,000

Barium-126	Ba-126	1,000
Barium-128	B-128	100
Barium-131m	Ba-131m	1,000
Barium-131	Ba-131	100
Barium-133m	Ba-133m	100
Barium-133	Ba-133	100
Barium-135m	Ba-135m	100
Barium-139	Ba-139	1,000
Barium-140	Ba-140	100
Barium-141	Ba-141	1,000
Barium-142	Ba-142	1,000
Lanthanum-131	La-131	1,000
Lanthanum-132	La-132	100
Lanthanum-135	La-135	1,000
Lanthanum-137	La-137	10
Lanthanum-138	La-138	100
Lanthanum-140	La-140	100
Lanthanum-141	La-141	100
Lanthanum-142	La-142	1,000
Lanthanum-143	La-143	1,000
Cerium-134	Ce-134	100
Cerium-135	Ce-135	100
Cerium-137m	Ce-137m	100
Cerium-137	Ce-137	1,000
Cerium-139	Ce-139	100
Cerium-141	Ce-141	100
Cerium-143	Ce-143	100
Cerium-144	Ce-144	1
Praseodymium-136	Pr-136	1,000
Praseodymium-137	Pr-137	1,000
Praseodymium-138m	Pe-138m	1,000
Praseodymium-139	Pe-139	1,000
Praseodymium-142m	Pe-142m	1,000
Praseodymium-142	Pe-142	100
Praseodymium-143	Pe-143	100
Praseodymium-144	Pe-144	1,000
Praseodymium-145	Pe-145	100
Praseodymium-147	Pe-147	1,000
Neodymium-136	Nd-136	1,000
Neodymium-138	Nd-138	100
Neodymium-139m	Nd-139m	1,000
Neodymium-139	Nd-139	1,000
Neodymium-141	Nd-141	1,000
Neodymium-147	Nd-147	100
Neodymium-149	Nd-149	1,000
Neodymium-151	Nd-151	1,000
Promethium-141	Pm-141	1,000
Promethium-143	Pm-143	100

Promethium-144	Pm-144	10
Promethium-145	Pm-145	10
Promethium-146	Pm-146	1
Promethium-147	Pm-147	10
Promethium-148m	Pm-148m	10
Promethium-148	Pm-148	10
Promethium-149	Pm-149	100
Promethium-150	Pm-150	1,000
Promethium-151	Pm-151	100
Samarium-141m	Sm-141m	1,000
Samarium-141	Sm-141	1,000
Samarium-142	Sm-142	1,000
Samarium-145	Sm-145	100
Samarium-146	Sm-146	1
Samarium-147	Sm-147	100
Samarium-151	Sm-151	10
Samarium-153	Sm-153	100
Samarium-155	Sm-155	1,000
Samarium-156	Sm-156	1,000
Europium-145	Eu-145	100
Europium-146	Eu-146	100
Europium-147	Eu-147	100
Europium-148	Eu-148	10
Europium-149	Eu-149	100
Europium-150 (12.62h)	Eu-150	100
Europium-150 (34.2y)	Eu-150	1
Europium-152m	Eu-152m	100
Europium-152	Eu-152	1
Europium-154	Eu-154	1
Europium-155	Eu-155	10
Europium-156	Eu-156	100
Europium-157	Eu-157	100
Europium-158	Eu-158	1,000
Gadolinium-145	Gd-145	1,000
Gadolinium-146	Gd-146	10
Gadolinium-147	Gd-147	100
Gadolinium-148	Gd-148	0.001
Gadolinium-149	Gd-149	100
Gadolinium-151	Gd-151	10
Gadolinium-152	Gd-152	100
Gadolinium-153	Gd-153	10
Gadolinium-159	Gd-159	100
Terbium-147	Tb-147	1,000
Terbium-149	Tb-149	100
Terbium-150	Tb-150	1,000
Terbium-151	Tb-151	100
Terbium-153	Tb-153	1,000
Terbium-154	Tb-154	100

Terbium-155	Tb-155	1,000
Terbium-156m (5.0h)	Tb-156m	1,000
Terbium-156m (24.4h)	Tb-156m	1,000
Terbium-156	Tb-156	100
Terbium-157	Tb-157	10
Terbium-158	Tb-158	1
Terbium-160	Tb-160	10
Terbium-161	Tb-161	100
Dysprosium-155	Dy-155	1,000
Dysprosium-157	Dy-157	1,000
Dysprosium-159	Dy-159	100
Dysprosium-165	Dy-165	1,000
Dysprosium-166	Dy-166	100
Holmium-155	Ho-155	1,000
Holmium-157	Ho-157	1,000
Holmium-159	Ho-159	1,000
Holmium-161	Ho-161	1,000
Holmium-162m	Ho-162m	1,000
Holmium-162	Ho-162	1,000
Holmium-164m	Hp-164m	1,000
Holmium-164	Ho-164	1,000
Holmium-166m	Ho-166m	1
Holmium-166	Ho-166	100
Holmium-167	Ho-167	1,000
Erbium-161	Er-161	1,000
Erbium-165	Er-165	1,000
Erbium-169	Er-169	100
Erbium-171	Er-171	100
Erbium-172	Er-172	100
Thulium-162	Tm-162	1,000
Thulium-166	Tm-166	100
Thulium-167	Tm-167	100
Thulium-170	Tm-170	10
Thulium-171	Tm-171	10
Thulium-172	Tm-172	100
Thulium-173	Tm-173	100
Thulium-175	Tm-175	1,000
Ytterbium-162	Yb-162	1,000
Ytterbium-166	Yb-166	100
Ytterbium-167	Yb-167	1,000
Ytterbium-169	Yb-169	100
Ytterbium-175	Yb-175	100
Ytterbium-177	Yb-177	1,000
Ytterbium-178	Yb-178	1,000
Lutetium-169	Lu-169	100
Lutetium-170	Lu-170	100
Lutetium-171	Lu-171	100
Lutetium-172	Lu-172	100

Lutetium-173	Lu-173	10
Lutetium-174m	Lu-174m	10
Lutetium-174	Lu-174	10
Lutetium-176m	Lu-176m	1,000
Lutetium-176	Lu-176	100
Lutetium-177m	Lu-177m	10
Lutetium-177	Lu-177	100
Lutetium-178m	Lu-178m	1,000
Lutetium-178	Lu-178	1,000
Lutetium-179	Lu-179	1,000
Hafnium-170	Hf-170	100
Hafnium-172	Hf-172	1
Hafnium-173	Hf-173	1,000
Hafnium-175	Hf-175	100
Hafnium-177m	Hf-177m	1,000
Hafnium-178m	Hf-178m	0.1
Hafnium-179m	Hf-179m	10
Hafnium-180m	Hf-180m	1,000
Hafnium-181	Hf-181	10
Hafnium-182m	Hf-182m	1,000
Hafnium-182	Hf-182	0.1
Hafnium-183	Hf-183	1,000
Hafnium-184	Hf-184	100
Tantalum-172	Ta-172	1,000
Tantalum-173	Ta-173	1,000
Tantalum-174	Ta-174	1,000
Tantalum-175	Ta-175	1,000
Tantalum-176	Ta-176	100
Tantalum-177	Ta-177	1,000
Tantalum-178	Ta-178	1,000
Tantalum-179	Ta-179	100
Tantalum-180m	Ta-180m	1,000
Tantalum-180	Ta-180	100
Tantalum-182m	Ta-182m	1,000
Tantalum-182	Ta-182	10
Tantalum-183	Ta-183	100
Tantalum-184	Ta-184	100
Tantalum-185	Ta-185	1,000
Tantalum-186	Ta-186	1,000
Tungsten-176	W-176	1,000
Tungsten-177	W-177	1,000
Tungsten-178	W-178	1,000
Tungsten-179	W-179	1,000
Tungsten-181	W-181	1,000
Tungsten-185	W-185	100
Tungsten-187	W-187	100
Tungsten-188	W-188	10
Rhenium-177	Re-177	1,000

Rhenium-178	Re-178	1,000
Rhenium-181	Re-181	1,000
Rhenium-182 (12.7h)	Re-182	1,000
Rhenium-182 (64.0h)	Re-182	100
Rhenium-184m	Re-184m	10
Rhenium-184	Re-184	100
Rhenium-186m	Re-186m	10
Rhenium-186	Re-186	100
Rhenium-187	Re-187	1,000
Rhenium-188m	Re-188m	1,000
Rhenium-188	Re-188	100
Rhenium-189	Re-189	100
Osmium-180	Os-180	1,000
Osmium-181	Os-181	1,000
Osmium-182	Os-182	100
Osmium-185	Os-185	100
Osmium-189m	Os-189m	1,000
Osmium-191m	Os-191m	1,000
Osmium-191	Os-191	100
Osmium-193	Os-193	100
Osmium-194	Os-194	1
Iridium-182	Ir-182	1,000
Iridium-184	Ir-184	1,000
Iridium-185	Ir-185	1,000
Iridium-186	Ir-186	100
Iridium-187	Ir-187	1,000
Iridium-188	Ir-188	100
Iridium-189	Ir-189	100
Iridium-190m	Ir-190m	1,000
Iridium-190	Ir-190	100
Iridium-192 (73.8d)	Ir-192	1
Iridium-192m (1.4 min.)	Ir-192m	10
Iridium-194m	Ir-194m	10
Iridium-194	Ir-194	100
Iridium-195m	Ir-195m	1,000
Iridium-195	Ir-95	1,000
Platinum-186	Pt-186	1,000
Platinum-188	Pt-188	100
Platinum-189	Pt-189	1,000
Platinum-191	Pt-191	100
Platinum-193m	Pt-193m	100
Platinum-193	Pt-193	1,000
Platinum-195m	Pt-195m	100
Platinum-197m	Pt-197m	1,000
Platinum-197	Pt-197	100
Platinum-199	Pt-199	1,000
Platinum-200	Pt-200	100
Gold-193	Au-193	1,000

Gold-194	Au-194	100
Gold-195	Au-195	10
Gold-198m	Au-198m	100
Gold-198	Au-198	100
Gold-199	Au-199	100
Gold-200m	Au-200m	100
Gold-200	Au-200	1,000
Gold-201	Au-201	1,000
Mercury-193m	Hg-193m	100
Mercury-193	Hg-193	1,000
Mercury-194	Hg-194	1
Mercury-195m	Hg-195m	100
Mercury-195	Hg-195	1,000
Mercury-197m	Hg-197m	100
Mercury-197	Hg-197	1,000
Mercury-199m	Hg-199m	1,000
Mercury-203	Hg-203	100
Thallium-194m	Tl-194m	1,000
Thallium-194	Tl-194	1,000
Thallium-195	Tl-195	1,000
Thallium-197	Tl-197	1,000
Thallium-198m	Tl-198m	1,000
Thallium-198	Tl-198	1,000
Thallium-199	Tl-199	1,000
Thallium-200	Tl-200	1,000
Thallium-201	Tl-201	1,000
Thallium-202	Tl-202	100
Thallium-204	Tl-204	100
Lead-195m	Pb-195m	1,000
Lead-198	Pb-198	1,000
Lead-199	Pb-199	1,000
Lead-200	Pb-200	100
Lead-201	Pb-201	1,000
Lead-202m	Pb-202m	1,000
Lead-202	Pb-202	10
Lead-203	Pb-2023	1,000
Lead-205	Pb-205	100
Lead-209	Pb-209	1,000
Lead-210	Pb-210	0.01
Lead-211	Pb-211	100
Lead-212	Pb-212	1
Lead-214	Pb-214	100
Bismuth-200	Bi-200	1,000
Bismuth-201	Bi-201	1,000
Bismuth-202	Bi-202	1,000
Bismuth-203	Bi-203	100
Bismuth-205	Bi-205	100
Bismuth-206	Bi-206	100

Bismuth-207	Bi-207	10
Bismuth-210m	Bi-210m	0.1
Bismuth-210	Bi-210	1
Bismuth-212	Bi-212	10
Bismuth-213	Bi-213	10
Bismuth-214	Bi-214	100
Polonium-203	Po-203	1,000
Polonium-205	Po-205	1,000
Polonium-207	Po-207	1,000
Polonium-210	Po-210	0.1
Astatine-207	At-207	100
Astatine-211	At-211	10
Radon-220	Rn-220	1
Radon-222	Rn-222	1
Francium-222	Fr-222	100
Francium-223	Fr-223	100
Radium-223	Ra-223	0.1
Radium-224	Ra-224	0.1
Radium-225	Ra-225	0.1
Radium-226	Ra-226	0.1
Radium-227	Ra-227	1,000
Radium-228	Ra-228	0.1
Actinium-224	Ac-224	1
Actinium-225	Ac-225	0.01
Actinium-226	Ac-226	0.1
Actinium-227	Ac-227	0.001
Actinium-228	Ac-228	1
Thorium-226	Th-226	10
Thorium-227	Th-227	0.01
Thorium-228	Th-228	0.001
Thorium-229	Th-229	0.001
Thorium-230	Th-230	0.001
Thorium-231	Th-231	100
Thorium-232	Th-232	100
Thorium-234	Th-234	10
Thorium-natural		100
Protactinium-227	Pa-227	10
Protactinium-228	Pa-228	1
Protactinium-230	Pa-230	0.01
Protactinium-231	Pa-231	0.001
Protactinium-232	Pa-232	1
Protactinium-233	Pa-233	100
Protactinium-234	Pa-234	100
Uranium-230	U-230	0.01
Uranium-231	U-231	100
Uranium-232	U-232	0.001
Uranium-233	U-233	0.001
Uranium-234	U-234	0.001

Uranium-235	U-235	0.001
Uranium-236	U-236	0.001
Uranium-237	U-237	100
Uranium-238	U-238	100
Uranium-239	U-239	1,000
Uranium-240	U-240	100
Uranium-natural		100
Neptunium-232	Np-232	100
Neptunium-233	Np-233	1,000
Neptunium-234	Np-234	100
Neptunium-235	Np-235	100
Neptunium-236 ($1.15x10^5$y)	Np-236	0.001
Neptunium-236 (22.5h)	Np-236	1
Neptunium-237	Np-237	0.001
Neptunium-238	Np-238	10
Neptunium-239	Np-239	100
Neptunium-240	Np-240	1,000
Plutonium-234	Pu-234	10
Plutonium-235	Pu-235	1,000
Plutonium-236	Pu-236	0.001
Plutonium-237	Pu-237	100
Plutonium-238	Pu-238	0.001
Plutonium-239	Pu-239	0.001
Plutonium-240	Pu-240	0.001
Plutonium-241	Pu-241	0.01
Plutonium-242	Pu-242	0.001
Plutonium-243	Pu-243	1,000
Plutonium-244	Pu-244	0.001
Plutonium-245	Pu-245	100
Americium-237	Am-237	1,000
Americium-238	Am-238	100
Americium-239	Am-239	1,000
Americium-240	Am-240	100
Americium-241	Am-241	0.001
Americium-242m	Am-242m	0.001
Americium-242	Am-242	10
Americium-243	Am-243	0.001
Americium-244m	Am-244m	100
Americium-244	Am-244	10
Americium-245	Am-245	1,000
Americium-246m	Am-246	1,000
Americium-246	Am-246	1,000
Curium-238	Cm-238	100
Curium-240	Cm-240	0.1
Curium-241	Cm-241	1
Curium-242	Cm-242	0.01
Curium-243	Cm-243	0.001
Curium-244	Cm-244	0.001

Curium-245	Cm-245	0.001
Curium-246	Cm-246	0.001
Curium-247	Cm-247	0.001
Curium-248	Cm-248	0.001
Curium-249	Cm-249	1,000
Berkelium-245	Bk-245	100
Berkelium-246	Bk-246	100
Berkelium-247	Bk-247	0.001
Berkelium-249	Bk-249	0.1
Berkelium-250	Bk-250	10
Californium-244	Cf-244	100
Californium-246	Cf-246	1
Californium-248	Cf-248	0.01
Californium-249	Cf-249	0.001
Californium-250	Cf-250	0.001
Californium-251	Cf-251	0.001
Californium-252	Cf-252	0.001
Californium-253	Cf-253	0.1
Californium-254	Cf-254	0.001
Any alpha emitting radionuclide not listed above or mixtures or alpha emitters of unknown composition		0.001
Einsteinium-250	Es-250	100
Einsteinium-251	Es-251	100
Einsteinium-253	Es-253	0.1
Einsteinium-254m	Es-254m	1
Einsteinium-254	Es-254	0.01
Fermium-252	Fm-252	1
Fermium-253	Fm-253	1
Fermium-254	Fm-254	10
Fermium-255	Fm-255	1
Fermium-257	Fm-257	0.01
Mendelevium-257	Md-257	10
Mendelevium-258	Md-258	0.01
Any radionuclide other than alpha emitter radionuclides not listed above, or mixtures of beta emitters of unknown composition		0.01

[1] The quantities listed above were derived by taking $^{1}/_{10}$th of the most restrictive ALI listed in table 1, columns 1 and 2, of appendix B to §§ 20.1001-20.2401 of this part, rounding to the nearest factor of 10, and arbitrarily constraining the values listed between 0.001 and 1,000 µCi. Values of 100 µCi have been assigned for radionuclides having a radioactive half-life in excess of 10^{9} years (except rhenium, 1000 µCi) to take into account their low specific activity.

NOTE: For purposes of §§ 20.1902(e), 20.1905(a), and 20.2201(a) where there is involved a combination of radionuclides in known amounts, the limit for the combination should be derived as follows: determine, for each radionuclide in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific radionuclide when not in combination. The sum of such ratios for all radionuclides in the combination may not exceed "1" (i.e., "unity").

[56 FR 23465, May 21, 1991; 56 FR 61352, Dec. 3, 1991. Redesignated and amended at 58 FR 67659, Dec. 22, 1993; 60 FR 20186, Apr. 25, 1995]

APPENDIX D TO PART 20--UNITED STATES NUCLEAR REGULATORY COMMISSION REGIONAL OFFICES

[Top of File]

Region	Address	Telephone (24 hour)	E-Mail
NRC Headquarters Operations Center	USNRC, Division of Incident Response Operations, Washington, DC 20555-0001.	(301) 816-5100 (301) 951-0550 (301) 816-5151 (fax)	*H001@nrc.gov*
Region I: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.	USNRC, Region I, 475 Allendale Road, King of Prussia, PA 19406-1415.	(610) 337-5000, (800) 432-1156 TDD: (301) 415-5575	*RidsRgn1MailCenter@nrc.gov*
Region II: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Virginia, Virgin Islands, and West Virginia.	USNRC, Region II, Sam Nunn Atlanta Federal Center, Suite 23T85, 61 Forsyth Street, SW, Atlanta, GA 30303-8931.	(404) 562-4400, (800) 877-8510 TDD: (301) 415-5575	*RidsRgn2MailCenter@nrc.gov*
Region III: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin.	USNRC, Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352.	(630) 829-9500 (800) 522-3025 TDD: (301) 415-5575	*RidsRgn3MailCenter@nrc.gov*
Region IV: Alaska, Arizona, Arkansas, California, Colorado, Hawaii, Idaho, Kansas, Louisiana, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming, and the U.S. territories and possessions in the Pacific.	USNRC, Region IV, Texas Health Resources Tower, 612 E. Lamar Blvd., Arlington, TX 76011-4005.	(817) 860-8100 (800) 952-9677 TDD: (301) 415-5575	*RidsRgn4MailCenter@nrc.gov*

[56 FR 23468, May 21, 1991, as amended at 56 FR 41449, Aug. 21, 1991; 58 FR 64111, Dec. 6, 1993; 59 FR 17465, Apr. 13, 1994; 60 FR 24551, May 9, 1995; 62 FR 22880, Apr. 28, 1997; 67 FR 67099, Nov. 4, 2002; 67 FR 77652, Dec. 19, 2002; 68 FR 58802, Oct. 10, 2003; 71 FR 15007, Mar. 27, 2006]

Appendix E to Part 20--Nationally Tracked Source Thresholds

[Top of File]

The Terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the TBq value. The curie values are provided for practical usefulness only and are rounded after conversion.

Radioactive material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Actinium-227	20	540	0.2	5.4
Americium-241	60	1,600	0.6	16
Americium-241/Be	60	1,600	0.6	16
Californium-252	20	540	0.2	5.4
Cobalt-60	30	810	0.3	8.1
Curium-244	50	1,400	0.5	14
Cesium-137	100	2,700	1	27
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,200	0.8	22
Plutonium-238	60	1,600	0.6	16
Plutonium-239/Be	60	1,600	0.6	16
Polonium-210	60	1,600	0.6	16
Promethium-147	40,000	1,100,000	400	11,000
Radium-226	40	1,100	0.4	11
Selenium-75	200	5,400	2	54
Strontium-90	1,000	27,000	10	270
Thorium-228	20	540	0.2	5.4
Thorium-229	20	540	0.2	5.4
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81

[71 FR 65686, November 8, 2006]

Appendix F to Part 20--[Reserved]

[Top of File]

Appendix G to Part 20--Requirements for Transfers of Low-Level Radioactive Waste Intended for Disposal at Licensed Land Disposal Facilities and Manifests

[Top of File]

I. Manifest

A waste generator, collector, or processor who transports, or offers for transportation, low-level radioactive waste intended for ultimate disposal at a licensed low-level radioactive waste land disposal facility must prepare a Manifest (OMB Control Numbers 3150-0164,-0165, and-0166) reflecting information requested on applicable NRC Forms 540 (Uniform Low-Level Radioactive Waste Manifest (Shipping Paper)) and 541 (Uniform Low-Level Radioactive Waste Manifest (Container and Waste Description)) and, if necessary, on an applicable NRC Form 542 (Uniform Low-Level Radioactive Waste Manifest (Manifest Index and Regional Compact Tabulation)). NRC Forms 540 and 540A must be completed and must physically accompany the pertinent low-level waste shipment. Upon agreement between shipper and consignee, NRC Forms 541 and 541A and 542 and 542A may be completed, transmitted, and stored in electronic media with the capability for producing legible, accurate, and complete records on the respective forms. Licensees are not required by NRC to comply with the manifesting requirements of this part when they ship:

(a) LLW for processing and expect its return (i.e., for storage under their license) prior to disposal at a licensed land disposal facility;

(b) LLW that is being returned to the licensee who is the "waste generator" or "generator," as defined in this part; or

(c) Radioactively contaminated material to a "waste processor" that becomes the processor's "residual waste."

For guidance in completing these forms, refer to the instructions that accompany the forms. Copies of manifests required by this appendix may be legible carbon copies, photocopies, or computer printouts that reproduce the data in the format of the uniform manifest.

NRC Forms 540, 540A, 541, 541A, 542 and 542A, and the accompanying instructions, in hard copy, may be obtained by writing or calling the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-5877, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

This appendix includes information requirements of the Department of Transportation, as codified in 49 CFR part 172. Information on hazardous, medical, or other waste, required to meet Environmental Protection Agency regulations, as codified in 40 CFR parts 259, 261 or elsewhere, is not addressed in this section, and must be provided on the required EPA forms. However, the required EPA forms must accompany the Uniform Low-Level Radioactive Waste Manifest required by this chapter.

As used in this appendix, the following definitions apply:

Chelating agent has the same meaning as that given in § 61.2 of this chapter.

Chemical description means a description of the principal chemical characteristics of a low-level radioactive waste.

Computer-readable medium means that the regulatory agency's computer can transfer the information from the medium into its memory.

Consignee means the designated receiver of the shipment of low-level radioactive waste.

Decontamination facility means a facility operating under a Commission or Agreement State license whose principal purpose is decontamination of equipment or materials to accomplish recycle, reuse, or other waste management objectives, and, for purposes of this part, is not considered to be a consignee for LLW shipments.

Disposal container means a container principally used to confine low-level radioactive waste during disposal operations at a land disposal facility (also see "high integrity container"). Note that for some shipments, the disposal container may be the transport package.

EPA identification number means the number received by a transporter following application to the Administrator of EPA as required by 40 CFR part 263.

Generator means a licensee operating under a Commission or Agreement State license who (1) is a waste generator as defined in this part, or (2) is the licensee to whom waste can be attributed within the context of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (e.g., waste generated as a result of decontamination or recycle activities).

High integrity container (HIC) means a container commonly designed to meet the structural stability requirements of § 61.56 of this chapter, and to meet Department of Transportation requirements for a Type A package.

Land disposal facility has the same meaning as that given in § 61.2 of this chapter.

NRC Forms 540, 540A, 541, 541A, 542, and 542A are official NRC Forms referenced in this appendix. Licensees need not use originals of these NRC Forms as long as any substitute forms are equivalent to the original documentation in respect to content, clarity, size, and location of information. Upon agreement between the shipper and consignee, NRC Forms 541 (and 541A) and NRC Forms 542 (and 542A) may be completed, transmitted, and stored in electronic media. The electronic media must have the capability for producing legible, accurate, and complete records in the format of the uniform manifest.

Package means the assembly of components necessary to ensure compliance with the packaging requirements of DOT regulations, together with its radioactive contents, as presented for transport.

Physical description means the items called for on NRC Form 541 to describe a low-level radioactive waste.

Residual waste means low-level radioactive waste resulting from processing or decontamination activities that cannot be easily separated into distinct batches attributable to specific waste generators. This waste is attributable to the processor or decontamination facility, as applicable.

Shipper means the licensed entity (i.e., the waste generator, waste collector, or waste processor) who offers low-level radioactive waste for transportation, typically consigning this type of waste to a licensed waste collector, waste processor, or land disposal facility operator.

Shipping paper means NRC Form 540 and, if required, NRC Form 540A which includes the information required by DOT in 49 CFR part 172.

Source material has the same meaning as that given in § 40.4 of this chapter.

Special nuclear material has the same meaning as that given in § 70.4 of this chapter.

Uniform Low-Level Radioactive Waste Manifest or *uniform manifest* means the combination of NRC Forms 540, 541, and, if necessary, 542, and their respective continuation sheets as needed, or equivalent.

Waste collector means an entity, operating under a Commission or Agreement State license, whose principal purpose is to collect and consolidate waste generated by others, and to transfer this waste, without processing or repackaging the collected waste, to another licensed waste collector, licensed waste processor, or licensed land disposal facility.

Waste description means the physical, chemical and radiological description of a low-level radioactive waste as called for on NRC Form 541.

Waste generator means an entity, operating under a Commission or Agreement State license, who (1) possesses any material or component that contains radioactivity or is radioactively contaminated for which the licensee foresees no further use, and (2) transfers this material or component to a licensed land disposal facility or to a licensed waste collector or processor for handling or treatment prior to disposal. A licensee performing processing or decontamination services may be a "waste generator" if the transfer of low-level radioactive waste from its facility is defined as "residual waste."

Waste processor means an entity, operating under a Commission or Agreement State license, whose principal purpose is to process, repackage, or otherwise treat low-level radioactive material or waste generated by others prior to eventual transfer of waste to a licensed low-level radioactive waste land disposal facility.

Waste type means a waste within a disposal container having a unique physical description (i.e., a specific waste descriptor code or description; or a waste sorbed on or solidified in a specifically defined media).

Information Requirements

A. General Information

The shipper of the radioactive waste, shall provide the following information on the uniform manifest:

1. The name, facility address, and telephone number of the licensee shipping the waste;

2. An explicit declaration indicating whether the shipper is acting as a waste generator, collector, processor, or a combination of these identifiers for purposes of the manifested shipment; and

3. The name, address, and telephone number, or the name and EPA identification number for the carrier transporting the waste.

B. Shipment Information

The shipper of the radioactive waste shall provide the following information regarding the waste shipment on the uniform manifest:

1. The date of the waste shipment;

2. The total number of packages/disposal containers;

3. The total disposal volume and disposal weight in the shipment;

4. The total radionuclide activity in the shipment;

5. The activity of each of the radionuclides H-3, C-14, Tc-99, and I-129 contained in the shipment; and

6. The total masses of U-233, U-235, and plutonium in special nuclear material, and the total mass of uranium and thorium in source material.

C. Disposal Container and Waste Information

The shipper of the radioactive waste shall provide the following information on the uniform manifest regarding the waste and each disposal container of waste in the shipment:

1. An alphabetic or numeric identification that uniquely identifies each disposal container in the shipment;

2. A physical description of the disposal container, including the manufacturer and model of any high integrity container;

3. The volume displaced by the disposal container;

4. The gross weight of the disposal container, including the waste;

5. For waste consigned to a disposal facility, the maximum radiation level at the surface of each disposal container;

6. A physical and chemical description of the waste;

7. The total weight percentage of chelating agent for any waste containing more than 0.1% chelating agent by weight, plus the identity of the principal chelating agent;

8. The approximate volume of waste within a container;

9. The sorbing or solidification media, if any, and the identity of the solidification media vendor and brand name;

10. The identities and activities of individual radionuclides contained in each container, the masses of U-233, U-235, and plutonium in special nuclear material, and the masses of uranium and thorium in source material. For discrete waste types (i.e., activated materials, contaminated equipment, mechanical filters, sealed source/devices, and wastes in solidification/stabilization media), the identities and activities of individual radionuclides associated with or contained on these waste types within a disposal container shall be reported;

11. The total radioactivity within each container; and

12. For wastes consigned to a disposal facility, the classification of the waste pursuant to § 61.55 of this chapter. Waste not meeting the structural stability requirements of § 61.56(b) of this chapter must be identified.

D. Uncontainerized Waste Information

The shipper of the radioactive waste shall provide the following information on the uniform manifest regarding a waste shipment delivered without a disposal container:

1. The approximate volume and weight of the waste;

2. A physical and chemical description of the waste;

3. The total weight percentage of chelating agent if the chelating agent exceeds 0.1% by weight, plus the identity of the principal chelating agent;

4. For waste consigned to a disposal facility, the classification of the waste pursuant to § 61.55 of this chapter. Waste not meeting the structural stability requirements of § 61.56(b) of this chapter must be identified;

5. The identities and activities of individual radionuclides contained in the waste, the masses of U-233, U-235, and plutonium in special nuclear material, and the masses of uranium and thorium in source material; and

6. For wastes consigned to a disposal facility, the maximum radiation levels at the surface of the waste.

E. Multi-Generator Disposal Container Information

This section applies to disposal containers enclosing mixtures of waste originating from different generators. (Note: The origin of the LLW resulting from a processor's activities may be attributable to one or more "generators" (including "waste generators") as defined in this

part). It also applies to mixtures of wastes shipped in an uncontainerized form, for which portions of the mixture within the shipment originate from different generators.

1. For homogeneous mixtures of waste, such as incinerator ash, provide the waste description applicable to the mixture and the volume of the waste attributed to each generator.

2. For heterogeneous mixtures of waste, such as the combined products from a large compactor, identify each generator contributing waste to the disposal container, and, for discrete waste types (i.e., activated materials, contaminated equipment, mechanical filters, sealed source/ devices, and wastes in solidification/stabilization media), the identities and activities of individual radionuclides contained on these waste types within the disposal container. For each generator, provide the following:

(a) The volume of waste within the disposal container;

(b) A physical and chemical description of the waste, including the solidification agent, if any;

(c) The total weight percentage of chelating agents for any disposal container containing more than 0.1% chelating agent by weight, plus the identity of the principal chelating agent;

(d) The sorbing or solidification media, if any, and the identity of the solidification media vendor and brand name if the media is claimed to meet stability requirements in 10 CFR 61.56(b); and

(e) Radionuclide identities and activities contained in the waste, the masses of U-233, U-235, and plutonium in special nuclear material, and the masses of uranium and thorium in source material if contained in the waste.

II. Certification

An authorized representative of the waste generator, processor, or collector shall certify by signing and dating the shipment manifest that the transported materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the Commission. A collector in signing the certification is certifying that nothing has been done to the collected waste which would invalidate the waste generator's certification.

III. Control and Tracking

A. Any licensee who transfers radioactive waste to a land disposal facility or a licensed waste collector shall comply with the requirements in paragraphs A.1 through 9 of this section. Any licensee who transfers waste to a licensed waste processor for waste treatment or repackaging shall comply with the requirements of paragraphs A.4 through 9 of this section. A licensee shall:

1. Prepare all wastes so that the waste is classified according to § 61.55 and meets the waste characteristics requirements in § 61.56 of this chapter;

2. Label each disposal container (or transport package if potential radiation hazards preclude labeling of the individual disposal container) of waste to identify whether it is Class A waste, Class B waste, Class C waste, or greater then Class C waste, in accordance with § 61.55 of this chapter;

3. Conduct a quality assurance program to assure compliance with §§ 61.55 and 61.56 of this chapter (the program must include management evaluation of audits);

4. Prepare the NRC Uniform Low-Level Radioactive Waste Manifest as required by this appendix;

5. Forward a copy or electronically transfer the Uniform Low-Level Radioactive Waste Manifest to the intended consignee so that either (i) receipt of the manifest precedes the LLW shipment or (ii) the manifest is delivered to the consignee with the waste at the time the waste is transferred to the consignee. Using both (i) and (ii) is also acceptable;

6. Include NRC Form 540 (and NRC Form 540A, if required) with the shipment regardless of the option chosen in paragraph A.5 of this section;

7. Receive acknowledgement of the receipt of the shipment in the form of a signed copy of NRC Form 540;

8. Retain a copy of or electronically store the Uniform Low-Level Radioactive Waste Manifest and documentation of acknowledgement of receipt as the record of transfer of licensed material as required by 10 CFR Parts 30, 40, and 70 of this chapter; and

9. For any shipments or any part of a shipment for which acknowledgement of receipt has not been received within the times set forth in this appendix, conduct an investigation in accordance with paragraph E of this appendix.

B. Any waste collector licensee who handles only prepackaged waste shall:

1. Acknowledge receipt of the waste from the shipper within one week of receipt by returning a signed copy of NRC Form 540;

2. Prepare a new manifest to reflect consolidated shipments that meet the requirements of this appendix. The waste collector shall ensure that, for each container of waste in the shipment, the manifest identifies the generator of that container of waste;

3. Forward a copy or electronically transfer the Uniform Low-Level Radioactive Waste Manifest to the intended consignee so that either: (i) Receipt of the manifest precedes the LLW shipment or (ii) the manifest is delivered to the consignee with the waste at the time the waste is transferred to the consignee. Using both (i) and (ii) is also acceptable;

4. Include NRC Form 540 (and NRC Form 540A, if required) with the shipment regardless of the option chosen in paragraph B.3 of this section;

5. Receive acknowledgement of the receipt of the shipment in the form of a signed copy of NRC Form 540;

6. Retain a copy of or electronically store the Uniform Low-Level Radioactive Waste Manifest and documentation of acknowledgement of receipt as the record of transfer of licensed material as required by 10 CFR parts 30, 40, and 70 of this chapter;

7. For any shipments or any part of a shipment for which acknowledgement of receipt has not been received within the times set forth in this appendix, conduct an investigation in accordance with paragraph E of this appendix; and

8. Notify the shipper and the Administrator of the nearest Commission Regional Office listed in appendix D of this part when any shipment, or part of a shipment, has not arrived within 60 days after receipt of an advance manifest, unless notified by the shipper that the shipment has been cancelled.

C. Any licensed waste processor who treats or repackages waste shall:

1. Acknowledge receipt of the waste from the shipper within one week of receipt by returning a signed copy of NRC Form 540;

2. Prepare a new manifest that meets the requirements of this appendix. Preparation of the new manifest reflects that the processor is responsible for meeting these requirements. For each container of waste in the shipment, the manifest shall identify the waste generators, the preprocessed waste volume, and the other information as required in paragraph I.E. of this appendix;

3. Prepare all wastes so that the waste is classified according to § 61.55 of this chapter and meets the waste characteristics requirements in § 61.56 of this chapter;

4. Label each package of waste to identify whether it is Class A waste, Class B waste, or Class C waste, in accordance with §§ 61.55 and 61.57 of this chapter;

5. Conduct a quality assurance program to assure compliance with §§ 61.55 and 61.56 of this chapter (the program shall include management evaluation of audits);

6. Forward a copy or electronically transfer the Uniform Low-Level Radioactive Waste Manifest to the intended consignee so that either: (i) Receipt of the manifest precedes the LLW shipment or (ii) the manifest is delivered to the consignee with the waste at the time the waste is transferred to the consignee. Using both (i) and (ii) is also acceptable;

7. Include NRC Form 540 (and NRC Form 540A, if required) with the shipment regardless of the option chosen in paragraph C.6 of this section;

8. Receive acknowledgement of the receipt of the shipment in the form of a signed copy of NRC Form 540;

9. Retain a copy of or electronically store the Uniform Low-Level Radioactive Waste Manifest and documentation of acknowledgement of receipt as the record of transfer of licensed material as required by 10 CFR parts 30, 40, and 70 of this chapter;

10. For any shipment or any part of a shipment for which acknowledgement of receipt has not been received within the times set forth in this appendix, conduct an investigation in accordance with paragraph E of this appendix; and

11. Notify the shipper and the Administrator of the nearest Commission Regional Office listed in appendix D of this part when any shipment, or part of a shipment, has not arrived within 60 days after receipt of an advance manifest, unless notified by the shipper that the shipment has been cancelled.

D. The land disposal facility operator shall:

1. Acknowledge receipt of the waste within one week of receipt by returning, as a minimum, a signed copy of NRC Form 540 to the shipper. The shipper to be notified is the licensee who last possessed the waste and transferred the waste to the operator. If any discrepancy exists between materials listed on the Uniform Low-Level Radioactive Waste Manifest and materials received, copies or electronic transfer of the affected forms must be returned indicating the discrepancy;

2. Maintain copies of all completed manifests and electronically store the information required by 10 CFR 61.80(l) until the Commission terminates the license; and

3. Notify the shipper and the Administrator of the nearest Commission Regional Office listed in appendix D of this part when any shipment,

or part of a shipment, has not arrived within 60 days after receipt of an advance manifest, unless notified by the shipper that the shipment has been cancelled.

E. Any shipment or part of a shipment for which acknowledgement is not received within the times set forth in this section must:

1. Be investigated by the shipper if the shipper has not received notification or receipt within 20 days after transfer; and

2. Be traced and reported. The investigation shall include tracing the shipment and filing a report with the nearest Commission Regional Office listed in Appendix D to this part. Each licensee who conducts a trace investigation shall file a written report with the appropriate NRC Regional Office within 2 weeks of completion of the investigation.

[60 FR 15664, Mar. 27, 1995, as amended at 60 FR 25983, May 16, 1995; 68 FR 58802, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005]

PART 21--REPORTING OF DEFECTS AND NONCOMPLIANCE

[Top of File]

General Provisions

[Top of File]

§ 21.1 Purpose.

The regulations in this part establish procedures and requirements for implementation of section 206 of the Energy Reorganization Act of 1974. That section requires any individual director or responsible officer of a firm constructing, owning, operating or supplying the components of any facility or activity which is licensed or otherwise regulated pursuant to the Atomic Energy Act of 1954, as amended, or the Energy Reorganization Act of 1974, who obtains information reasonably indicating: (a) That the facility, activity or basic component supplied to such facility or activity fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the Commission relating to substantial safety hazards or (b) that the facility, activity, or basic component supplied to such facility or activity contains defects, which could create a substantial safety hazard, to immediately notify the Commission of such failure to comply or such defect, unless he has actual knowledge that the Commission has been adequately informed of such defect or failure to comply.

§ 21.2 Scope.

[Top of File]

(a) The regulations in this part apply, except as specifically provided otherwise in parts 31, 34, 35, 39, 40, 60, 61, 63, 70, or part 72 of this chapter, to:

(1) Each individual, partnership, corporation, or other entity applying for or holding a license or permit under the regulations in this chapter to possess, use, or transfer within the United States source material, byproduct material, special nuclear material, and/or spent fuel and high-level radioactive waste, or to construct, manufacture, possess, own, operate, or transfer within the United States, any production or utilization facility or independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS); and each director and responsible officer of such a licensee;

(2) Each individual, corporation, partnership, or other entity doing business within the United States, and each director and responsible officer of such an organization, that constructs a production or utilization facility licensed for manufacture, construction, or operation under parts 50 or 52 of this chapter, an ISFSI for the storage of spent fuel licensed under part 72 of this chapter, an MRS for the storage of spent fuel or high-level radioactive waste under part 72 of this chapter, or a geologic repository for the disposal of high-level radioactive waste under part 60 or 63 of this chapter; or supplies basic components for a facility or activity licensed, other than for export, under parts 30, 40, 50, 52, 60, 61, 63, 70, 71, or part 72 of this chapter;

(3) Each individual, corporation, partnership, or other entity doing business within the United States, and each director and responsible officer of such an organization, applying for a design certification rule under part 52 of this chapter; or supplying basic components with respect to that design certification, and each individual, corporation, partnership, or other entity doing business within the United States, and each director and responsible officer of such an organization, whose application for design certification has been granted under part 52 of this chapter, or who has supplied or is supplying basic components with respect to that design certification;

(4) Each individual, corporation, partnership, or other entity doing business within the United States, and each director and responsible officer of such an organization, applying for or holding a standard design approval under part 52 of this chapter; or supplying basic components with respect to a standard design approval under part 52 of this chapter;

(b) For persons licensed to construct a facility under either a construction permit issued under § 50.23 of this chapter or a combined license under part 52 of this chapter (for the period of construction until the date that the Commission makes the finding under § 52.103(g) of this chapter), or to manufacture a facility under part 52 of this chapter, evaluation of potential defects and failures to comply and reporting of defects and failures to comply under § 50.55(e) of this chapter satisfies each person's evaluation, notification, and reporting obligation to report defects and failures to comply under this part and the responsibility of individual directors and responsible officers of these licensees to report defects under Section 206 of the Energy Reorganization Act of 1974.

(c) For persons licensed to operate a nuclear power plant under part 50 or part 52 of this chapter, evaluation of potential defects and appropriate reporting of defects under §§ 50.72, 50.73, or § 73.71 of this chapter, satisfies each person's evaluation, notification, and reporting obligation to report defects under this part, and the responsibility of individual directors and responsible officers of these licensees to report defects under Section 206 of the Energy Reorganization Act of 1974.

(d) Nothing in these regulations should be deemed to preclude either an individual, a manufacturer, or a supplier of a commercial grade item (as defined in § 21.3) not subject to the regulations in this part from reporting to the Commission, a known or suspected defect or failure to comply and, as authorized by law, the identity of anyone so reporting will be withheld from disclosure. NRC regional offices and headquarters will accept collect telephone calls from individuals who wish to speak to NRC representatives concerning nuclear safety-related

problems. The location and telephone numbers of the four regions (answered during regular working hours), are listed in appendix D to part 20 of this chapter. The telephone number of the NRC Operations Center (answered 24 hours a day--including holidays) is (301) 816-5100.

(e) The regulations in this part apply in accordance with 10 CFR 76.60 to each individual, partnership, corporation, or other entity required to obtain a certificate of compliance or an approved compliance plan under part 76 of this chapter.

[56 FR 36089, July 31, 1991, as amended at 59 FR 14086, Mar. 25, 1994; 59 FR 48959, Sept. 23, 1994; 60 FR 48373, Sept. 19, 1995; 66 FR 55790, Nov. 2, 2001; 72 FR 49486, Aug. 28, 2007]

§ 21.3 Definitions.

[Top of File]

As used in this part:

Basic component. (1)(i) When applied to nuclear power plants licensed under 10 CFR part 50 or part 52 of this chapter, basic component means a structure, system, or component, or part thereof that affects its safety function necessary to assure:

(A) The integrity of the reactor coolant pressure boundary;

(B) The capability to shut down the reactor and maintain it in a safe shutdown condition; or

(C) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

(ii) Basic components are items designed and manufactured under a quality assurance program complying with appendix B to part 50 of this chapter, or commercial grade items which have successfully completed the dedication process.

(2) When applied to standard design certifications under subpart C of part 52 of this chapter and standard design approvals under part 52 of this chapter, basic component means the design or procurement information approved or to be approved within the scope of the design certification or approval for a structure, system, or component, or part thereof, that affects its safety function necessary to assure:

(i) The integrity of the reactor coolant pressure boundary;

(ii) The capability to shut down the reactor and maintain it in a safeshutdown condition; or

(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in §§ 50.34(a)(1), 50.67(b)(2), or 100.11 of this chapter, as applicable.

(3) When applied to other facilities and other activities licensed under 10 CFR parts 30, 40, 50 (other than nuclear power plants), 60, 61, 63, 70, 71, or 72 of this chapter, basic component means a structure, system, or component, or part thereof, that affects their safety function, that is directly procured by the licensee of a facility or activity subject to the regulations in this part and in which a defect or failure to comply with any applicable regulation in this chapter, order, or license issued by the Commission could create a substantial safety hazard.

(4) In all cases, basic component includes safety-related design, analysis, inspection, testing, fabrication, replacement of parts, or consulting services that are associated with the component hardware, design certification, design approval, or information in support of an early site permit application under part 52 of this chapter, whether these services are performed by the component supplier or others.

Commercial grade item. (1) When applied to nuclear power plants licensed pursuant to 10 CFR Part 30, 40, 50, 60, commercial grade item means a structure, system, or component, or part thereof that affects its safety function, that was not designed and manufactured as a basic component. Commercial grade items do not include items where the design and manufacturing process require in-process inspections and verifications to ensure that defects or failures to comply are identified and corrected (i.e., one or more critical characteristics of the item cannot be verified).

(2) When applied to facilities and activities licensed pursuant to 10 CFR Parts 30, 40, 50 (other than nuclear power plants), 60, 61, 63, 70, 71, or 72, commercial grade item means an item that is:

(i) Not subject to design or specification requirements that are unique to those facilities or activities;

(ii) Used in applications other than those facilities or activities; and

(iii) To be ordered from the manufacturer/supplier on the basis of specifications set forth in the manufacturer's published product description (for example, a catalog).

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Constructing or *construction* means the analysis, design, manufacture, fabrication, placement, erection, installation, modification, inspection, or testing of a facility or activity which is subject to the regulations in this part and consulting services related to the facility or activity that are safety related.

Critical characteristics. When applied to nuclear power plants licensed pursuant to 10 CFR Part 50, critical characteristics are those important design, material, and performance characteristics of a commercial grade item that, once verified, will provide reasonable assurance that the item will perform its intended safety function.

Dedicating entity. When applied to nuclear power plants licensed pursuant to 10 CFR Part 50, dedicating entity means the organization that performs the dedication process. Dedication may be performed by the manufacturer of the item, a third-party dedicating entity, or the licensee itself. The dedicating entity, pursuant to § 21.21(c) of this part, is responsible for identifying and evaluating deviations, reporting defects and failures to comply for the dedicated item, and maintaining auditable records of the dedication process.

Dedication. (1) When applied to nuclear power plants licensed pursuant to 10 CFR Part 30, 40, 50, 60, dedication is an acceptance process undertaken to provide reasonable assurance that a commercial grade item to be used as a basic component will perform its intended safety function and, in this respect, is deemed equivalent to an item designed and manufactured under a 10 CFR Part 50, appendix B, quality assurance program. This assurance is achieved by identifying the critical characteristics of the item and verifying their acceptability by inspections, tests, or analyses performed by the purchaser or third-party dedicating entity after delivery, supplemented as necessary by one or more of the following: commercial grade surveys; product inspections or witness at holdpoints at the manufacturer's facility, and analysis of historical records for acceptable performance. In all cases, the dedication process must be conducted in accordance with the applicable provisions of 10 CFR Part 50, appendix B. The process is considered complete when the item is designated for use as a basic component.

(2) When applied to facilities and activities licensed pursuant to 10 CFR Parts 30, 40, 50 (other than nuclear power plants), 60, 61, 63, 70, 71, or 72, dedication occurs after receipt when that item is designated for use as a basic component.

Defect means:

(1) A deviation in a basic component delivered to a purchaser for use in a facility or an activity subject to the regulations in this part if, on the basis of an evaluation, the deviation could create a substantial safety hazard;

(2) The installation, use, or operation of a basic component containing a defect as defined in this section;

(3) A deviation in a portion of a facility subject to the early site permit, standard design certification, standard design approval, construction permit, combined license or manufacturing licensing requirements of part 50 or part 52 of this chapter, provided the deviation could, on the basis of an evaluation, create a substantial safety hazard and the portion of the facility containing the deviation has been offered to the purchaser for acceptance;

(4) A condition or circumstance involving a basic component that could contribute to the exceeding of a safety limit, as defined in the technical specifications of a license for operation issued under part 50 or part 52 of this chapter; or

(5) An error, omission or other circumstance in a design certification, or standard design approval that, on the basis of an evaluation, could create a substantial safety hazard.

Deviation means a departure from the technical requirements included in a procurement document, or specified in early site permit information, a standard design certification or standard design approval.

Director means an individual, appointed or elected according to law, who is authorized to manage and direct the affairs of a corporation, partnership or other entity. In the case of an individual proprietorship, director means the individual.

Discovery means the completion of the documentation first identifying the existence of a deviation or failure to comply potentially associated with a substantial safety hazard within the evaluation procedures discussed in § 21.21. (a).

Evaluation means the process of determining whether a particular deviation could create a substantial hazard or determining whether a failure to comply is associated with a substantial safety hazard.

Notification means the telephonic communication to the NRC Operations Center or written transmittal of information to the NRC Document Control Desk.

Operating or operation means the operation of a facility or the conduct of a licensed activity which is subject to the regulations in this part and consulting services related to operations that are safety related.

Procurement document means a contract that defines the requirements which facilities or basic components must meet in order to be considered acceptable by the purchaser.

Responsible officer means the president, vice-president or other individual in the organization of a corporation, partnership, or other entity who is vested with executive authority over activities subject to this part.

Substantial safety hazard means a loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety for any facility or activity licensed or otherwise approved or regulated by the NRC, other than for export, under parts 30, 40, 50, 52, 60, 61, 63, 70, 71, or 72 of this chapter.

Supplying or supplies means contractually responsible for a basic component used or to be used in a facility or activity which is subject to the regulations in this part.

[42 FR 28893, June 6, 1977; 42 FR 36803, July 18, 1977, as amended at 43 FR 48622, Oct. 19, 1978; 46 FR 58283, Dec. 1, 1981; 47 FR 57480, Dec. 27, 1982; 56 FR 36089, July 31, 1991; 59 FR 5519, Feb. 7, 1994; 60 FR 48373, Sept. 19, 1995; 61 FR 65171, Dec. 11, 1996; 64 FR 72000, Dec. 23, 1999; 66 FR 55790, Nov. 2, 2001; 72 FR 49486, Aug. 28, 2007]

§ 21.4 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 21.5 Communications.

[Top of File]

Except where otherwise specified in this part, written communications and reports concerning the regulations in this part must be addressed to the NRC's Document Control Desk, and sent by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, Electronic Information Exchange, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/eie.html*, by calling (301) 415–6030, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. In the case of a licensee or permit holder, a copy of the communication must also be sent to the appropriate Regional Administrator at the address specified in appendix D to part 20 of this chapter.

[56 FR 36089, July 31, 1991 as amended at 68 FR 58802, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 72 FR 49487, Aug. 28, 2007]

§ 21.6 Posting requirements.

[Top of File]

(a)(1) Each individual, partnership, corporation, dedicating entity, or other entity subject to the regulations in this part shall post current copies of --

(i) The regulations in this part;

(ii) Section 206 of the Energy Reorganization Act of 1974; and

(iii) Procedures adopted pursuant to the regulations in this part.

(2) These documents must be posted in a conspicuous position on any premises within the United States where the activities subject to this part are conducted.

(b) If posting of the regulations in this part or the procedures adopted pursuant to the regulations in this part is not practicable, the licensee or firm subject to the regulations in this part may, in addition to posting section 206, post a notice which describes the regulations/ procedures, including the name of the individual to whom reports may be made, and states where they may be examined.

(c) The effective date of this section has been deferred until January 6, 1978.

[42 FR 28893, June 6, 1977, as amended at 60 FR 48374, Sept. 19, 1995]

§ 21.7 Exemptions.

[Top of File]

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest. Suppliers of commercial grade items are exempt from the provisions of this part to the extent that they supply commercial grade items.

[42 FR 28893, June 6, 1977, as amended at 43 FR 48622, Oct. 19, 1978]

§ 21.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0035.

(b) The approved information collection requirements contained in this part appear in §§ 21.7, 21.21, and 21.51.

[62 FR 52185, Oct. 6, 1997]

Notification

[Top of File]

§ 21.21 Notification of failure to comply or existence of a defect and its evaluation.

(a) Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall adopt appropriate procedures to --

(1) Evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable, and, except as provided in paragraph (a)(2) of this section, in all cases within 60 days of discovery, in order to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected, and

(2) Ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person as discussed in § 21.21(d)(5). The interim report should describe the deviation or failure to comply that is being evaluated and should also state when the evaluation will be completed. This interim report must be submitted in writing within 60 days of discovery of the deviation or failure to comply.

(3) Ensure that a director or responsible officer subject to the regulations of this part is informed as soon as practicable, and, in all cases, within the 5 working days after completion of the evaluation described in paragraphs (a)(1) or (a)(2) of this section if the manufacture, construction, or operation of a facility or activity, a basic component supplied for such facility or activity, or the design certification or design approval under part 52 of this chapter—

(i) Fails to comply with the Atomic Energy Act of 1954, as amended, or any applicable rule, regulation, order, or license of the Commission or standard design approval under part 52 of this chapter, relating to a substantial safety hazard, or

(ii) Contains a defect.

(b) If the deviation or failure to comply is discovered by a supplier of basic components, or services associated with basic components, and the supplier determines that it does not have the capability to perform the evaluation to determine if a defect exists, then the supplier must inform the purchasers or affected licensees within five working days of this determination so that the purchasers or affected licensees may evaluate the deviation or failure to comply, pursuant to § 21.21(a).

(c) A dedicating entity is responsible for --

(1) Identifying and evaluating deviations and reporting defects and failures to comply associated with substantial safety hazards for dedicated items; and

(2) Maintaining auditable records for the dedication process.

(d)(1) A director or responsible officer subject to the regulations of this part or a person designated under § 21.21(d)(5) must notify the Commission when he or she obtains information reasonably indicating a failure to comply or a defect affecting --

(i) The manufacture, construction or operation of a facility or an activity within the United States that is subject to the licensing requirements under parts 30, 40, 50, 52, 60, 61, 63, 70, 71, or 72 of this chapter and that is within his or her organization's responsibility; or

(ii) A basic component that is within his or her organization's responsibility and is supplied for a facility or an activity within the United States that is subject to the licensing, design certification, or approval requirements under parts 30, 40, 50, 52, 60, 61, 63, 70, 71, or 72 of this chapter.

(2) The notification to NRC of a failure to comply or of a defect under paragraph (d)(1) of this section and the evaluation of a failure to comply or a defect under paragraphs (a)(1) and (a)(2) of this section, are not required if the director or responsible officer has actual knowledge that the Commission has been notified in writing of the defect or the failure to comply.

(3) Notification required by paragraph (d)(1) of this section must be made as follows --

(i) Initial notification by facsimile, which is the preferred method of notification, to the NRC Operations Center at (301) 816 - 5151 or by telephone at (301) 816 - 5100 within two days following receipt of information by the director or responsible corporate officer under paragraph (a)(1) of this section, on the identification of a defect or a failure to comply. Verification that the facsimile has been received should be made by calling the NRC Operations Center. This paragraph does not apply to interim reports described in § 21.21(a)(2).

(ii) Written notification to the NRC at the address specified in § 21.5 within 30 days following receipt of information by the director or responsible corporate officer under paragraph (a)(3) of this section, on the identification of a defect or a failure to comply.

(4) The written report required by this paragraph shall include, but need not be limited to, the following information, to the extent known:

(i) Name and address of the individual or individuals informing the Commission.

(ii) Identification of the facility, the activity, or the basic component supplied for such facility or such activity within the United States which fails to comply or contains a defect.

(iii) Identification of the firm constructing the facility or supplying the basic component which fails to comply or contains a defect.

(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by such defect or failure to comply.

(v) The date on which the information of such defect or failure to comply was obtained.

(vi) In the case of a basic component which contains a defect or fails to comply, the number and location of these components in use at, supplied for, being supplied for, or may be supplied for, manufactured, or being manufactured for one or more facilities or activities subject to the regulations in this part.

(vii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

(viii) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to purchasers or licensees.

(ix) In the case of an early site permit, the entities to whom an early site permit was transferred.

(5) The director or responsible officer may authorize an individual to provide the notification required by this paragraph, provided that, this shall not relieve the director or responsible officer of his or her responsibility under this paragraph.

(e) Individuals subject to this part may be required by the Commission to supply additional information related to a defect or failure to comply. Commission action to obtain additional information may be based on reports of defects from other reporting entities.

[42 FR 28893, June 6, 1977, as amended at 46 FR 58283, Dec. 1, 1981; 47 FR 57480, Dec. 27, 1982; 52 FR 31611, Aug. 21, 1987; 56 FR 36089, July 31, 1991; 59 FR 14086, Mar. 25, 1994; 60 FR 48374, Sept. 19, 1995; 66 FR 55790, Nov. 2, 2001; 67 FR 77652, Dec. 19, 2002; 72 FR 49487, Aug. 28, 2007]

Procurement Documents

[Top of File]

§ 21.31 Procurement documents.

Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall ensure that each procurement document for a facility, or a basic component issued by him, her or it on or after January 6, 1978, specifies, when applicable, that the provisions of 10 CFR Part 21 apply.

[60 FR 48374, Sept. 19, 1995]

Inspections, Records

[Top of File]

§ 21.41 Inspections.

Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall permit the Commission to inspect records, premises, activities, and basic components as necessary to accomplish the purposes of this part.

[60 FR 48374, Sept. 19, 1995]

§ 21.51 Maintenance and inspection of records.

[Top of File]

(a) Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall prepare and maintain records necessary to accomplish the purposes of this part, specifically --

(1) Retain evaluations of all deviations and failures to comply for a minimum of five years after the date of the evaluation;

(2) Suppliers of basic components must retain any notifications sent to purchasers and affected licensees for a minimum of five years after the date of the notification.

(3) Suppliers of basic components must retain a record of the purchasers of basic components for 10 years after delivery of the basic component or service associated with a basic component.

(4) Applicants for standard design certification under subpart B of part 52 of this chapter and others providing a design which is the subject of a design certification, during and following Commission adoption of a final design certification rule for that design, shall retain any notifications sent to purchasers and affected licensees for a minimum of 5 years after the date of the notification, and retain a record of the purchasers for 15 years after delivery of design which is the subject of the design certification rule or service associated with the design.

(5) Applicants for or holders of a standard design approval under subpart E of part 52 of this chapter and others providing a design which is the subject of a design approval shall retain any notifications sent to purchasers and affected licensees for a minimum of 5 years after the date of the notification, and retain a record of the purchasers for 15 years after delivery of the design which is the subject of the design approval or service associated with the design.

(b) Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall permit the Commission the opportunity to inspect records pertaining to basic components that relate to the identification and evaluation of deviations, and the reporting of defects and failures to comply, including (but not limited to) any advice given to purchasers or licensees on the placement, erection, installation, operation, maintenance, modification, or inspection of a basic component.

[56 FR 36090, July 31, 1991, as amended at 60 FR 48374, Sept. 19, 1995; 72 FR 49488, Aug. 28, 2007]

Enforcement

[Top of File]

§ 21.61 Failure to notify.

(a) Any director or responsible officer of an entity (including dedicating entity) that is not otherwise subject to the deliberate misconduct provisions of this chapter but is subject to the regulations in this part who knowingly and consciously fails to provide the notice required as by § 21.21 shall be subject to a civil penalty equal to the amount provided by section 234 of the Atomic Energy Act of 1954, as amended.

(b) Any NRC licensee or applicant for a license (including an applicant for, or holder of, a permit), applicant for a design certification under part 52 of this chapter during the pendency of its application, applicant for a design certification after Commission adoption of a final design certification rule for that design, or applicant for or holder of a standard design approval under part 52 of this chapter subject to the regulations in this part who fails to provide the notice required by § 21.21, or otherwise fails to comply with the applicable requirements of this part shall be subject to a civil penalty as provided by Section 234 of the Atomic Energy Act of 1954, as amended.

(c) The dedicating entity, pursuant to § 21.21(c) of this part, is responsible for identifying and evaluating deviations, reporting defects and failures to comply for the dedicated item, and maintaining auditable records of the dedication process. NRC enforcement action can be taken for failure to identify and evaluate deviations, failure to report defects and failures to comply, or failure to maintain auditable records.

[60 FR 48374, Sept. 19, 1995; 72 FR 49488, Aug. 28, 2007]

§ 21.62 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 21 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 21 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 21.1, 21.2, 21.3, 21.4 21.5, 21.7, 21.8, 21.61, and 21.62.

[57 FR 55071, Nov. 24, 1992]

PART 25—ACCESS AUTHORIZATION

[Top of File]

General Provisions

[Top of File]

§ 25.1 Purpose.

The regulations in this part establish procedures for granting, reinstating, extending, transferring, and terminating access authorizations of licensee personnel, licensee contractors or agents, and other persons (e.g., individuals involved in adjudicatory procedures as set forth in 10 CFR Part 2, subpart I) who may require access to classified information.

[62 FR 17867, Apr. 11, 1997]

§ 25.3 Scope.

[Top of File]

The regulations in this part apply to licensees, certificate holders, and others who may require access to classified information related to a license, certificate, an application for a license or certificate, or other activities as the Commission may determine.

[62 FR 17867, Apr. 11, 1997; 70 FR 32227, June 2, 2005]

§ 25.5 Definitions.

[Top of File]

Access authorization means an administrative determination that an individual (including a consultant) who is employed by or an applicant for employment with the NRC, NRC contractors, agents, licensees and certificate holders, or other person designated by the Executive Director for Operations, is eligible for a security clearance for access to classified information.

Act means the Atomic Energy Act of 1954 (68 Stat. 919), as amended.

Certificate holder means a facility operating under the provisions of Parts 71 or 76 of this chapter.

Classified information means either classified National Security Information, Restricted Data, or Formerly Restricted Data or any one of them. It is the generic term for information requiring protection in the interest of National Security whether classified under an Executive Order or the Atomic Energy Act.

Classified National Security Information means information that has been determined pursuant to E.O. 12958, as amended, or any predecessor order to require protection against unauthorized disclosure and that is so designated.

Cognizant Security Agency (CSA) means agencies of the Executive Branch that have been authorized by E.O. 12829 to establish an industrial security program for the purpose of safeguarding classified information under the jurisdiction of those agencies when disclosed or released to U.S. industry. These agencies are the Department of Defense, the Department of Energy, the Central Intelligence Agency, and the Nuclear Regulatory Commission. A facility has a single CSA which exercises primary authority for the protection of classified information at the facility. The CSA for the facility provides security representation for other government agencies with security interests at the facility. The Secretary of Defense has been designated as Executive Agent for the National Industrial Security Program.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

"L" access authorization means an access authorization granted by the Commission that is normally based on a national agency check with a law and credit investigation (NACLC) or an access national agency check and inquiries investigation (ANACI) conducted by the Office of Personnel Management.

License means a license issued pursuant to 10 CFR parts 50, 52, 60, 63, 70, or 72.

Matter means documents or material.

National Security Information means information that has been determined pursuant to Executive Order 12958, as amended, or any predecessor order to require protection against unauthorized disclosure and that is so designated.

Need-to-know means a determination made by an authorized holder of classified information that a prospective recipient requires access to

specific classified information to perform or assist in a lawful and authorized governmental function under the cognizance of the Commission.

Person means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the Department of Energy (DOE), except that the DOE shall be considered a person to the extent that its facilities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 and sections 104, 105 and 202 of the Uranium Mill Tailings Radiation Control Act of 1978, any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

"Q" access authorization means an access authorization granted by the Commission normally based on a single scope background investigation conducted by the Office of Personnel Management, the Federal Bureau of Investigation, or other U.S. Government agency which conducts personnel security investigations.

Restricted Data means all data concerning design, manufacture or utilization of atomic weapons, the production of special nuclear material, or the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Act.

Visit authorization letters (VAL) means a letter, generated by a licensee, certificate holder or other organization under the requirements of 10 CFR Parts 25 and/or 95, verifying the need-to-know and access authorization of an individual from that organization who needs to visit another authorized facility for the purpose of exchanging or acquiring classified information related to the license.

[45 FR 14481, Mar. 5, 1980, as amended at 46 FR 58283, Dec. 1, 1981; 47 FR 38683, Sept. 2, 1982; 48 FR 24320, June 1, 1983; 50 FR 36984, Sept. 11, 1985; 55 FR 11574, Mar. 29, 1990; 62 FR 17687, Apr. 11, 1997; 64 FR 15647, Apr. 1, 1999; 70 FR 32227, June 2, 2005]

§ 25.7 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 25.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0046.

(b) The approved information collection requirements contained in this part appear in §§ 25.11, 25.17, 25.21, 25.23, 25.25, 25.27, 25.29, 25.31, 25.33, and 25.35.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and control numbers under which they are approved are as follows:

(1) In §§ 25.17(b), 25.21(c), 25.27(a), 25.29, and 25.31, NRC Form 237 is approved under control number 3150-0050.

(2) In §§ 25.17(c), 25.21(c), 25.27(b), 25.29, and 25.31, SF-86 is approved under control number 3206-0007.

(3) In § 25.21(b), NRC Form 354 is approved under control number 3150-0026.

(4) In § 25.33, NRC Form 136 is approved under control number 3150-0049.

(5) In § 25.35, NRC Form 277 is approved under control number 3150-0051.

[49 FR 19624, May 9, 1984, as amended at 57 FR 3720, Jan. 31, 1992; 62 FR 17687, Apr. 11, 1997; 62 FR 52185, Oct. 6, 1997]

§ 25.9 Communications.

[Top of File]

Except where otherwise specified, communications and reports concerning the regulations in this part should be addressed to the Director, Division of Facilities and Security, Mail Stop T7-D57, and sent either by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed

guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[64 FR 15647, Apr. 1, 1999 as amended at 68 FR 58803, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 25.11 Specific exemptions.

[Top of File]

The NRC may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, that are--

(a) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security; or

(b) Coincidental with one or more of the following:

(1) An application of the regulation in the particular circumstances conflicts with other NRC rules or requirements;

(2) An application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule;

(3) When compliance would result in undue hardship or other costs that significantly exceed those contemplated when the regulation was adopted, or that significantly exceed those incurred by others similarly situated;

(4) When the exemption would result in benefit to the common defense and security that compensates for any decrease in the security that may result from the grant of the exemption;

(5) When the exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation;

(6) When there is any other material circumstance present that was not considered when the regulation was adopted that would be in the public interest to grant an exemption. If this condition is relied on exclusively for satisfying paragraph (b) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

[64 FR 15647, Apr. 1, 1999]

§ 25.13 Maintenance of records.

[Top of File]

(a) Each licensee or organization employing individuals approved for personnel security access authorization under this part, shall maintain records as prescribed within the part. These records are subject to review and inspection by CSA representatives during security reviews.

(b) Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[45 FR 14481, Mar. 5, 1980, as amended at 53 FR 19245, May 27, 1988; 62 FR 17687, Apr. 11, 1997]

Access Authorizations

[Top of File]

§ 25.15 Access permitted under "Q" or "L" access authorization.

(a) A "Q" access authorization permits an individual access on a need-to-know basis to (1) Secret and Confidential Restricted Data and (2) Secret and Confidential National Security Information including intelligence information, CRYPTO (i.e., cryptographic information) or other classified communications security (COMSEC) information.

(b) An "L" access authorization permits an individual access on a need-to-know basis to Confidential Restricted Data and Secret and Confidential National Security Information other than the categories specifically included in paragraph (a) of this section. In addition, access

to certain Confidential COMSEC information is permitted as authorized by a National Communications Security Committee waiver dated February 14, 1985.

(c) Each employee of the Commission is processed for one of the two levels of access authorization. Licensees and other persons will furnish National Security Information and/or Restricted Data to a Commission employee on official business when the employee has the appropriate level of NRC access authorization and need-to-know. Some individuals are permitted to begin NRC employment without an access authorization. However, no NRC employee shall be permitted access to any classified information until the appropriate level of access authorization has been granted to that employee by NRC.

[45 FR 14481, Mar. 5, 1980, as amended at 47 FR 9195, Mar. 4, 1982; 50 FR 36984, Sept. 11, 1985]

§ 25.17 Approval for processing applicants for access authorization.

[Top of File]

(a) Access authorizations must be requested for licensee employees or other persons (e.g., 10 CFR part 2, subpart I) who need access to classified information in connection with activities under 10 CFR parts 50, 52, 54, 60, 63, 70, 72, or 76.

(b) The request must be submitted to the facility CSA. If the NRC is the CSA, the procedures in § 25.17 (c) and (d) will be followed. If the NRC is not the CSA, the request will be submitted to the CSA in accordance with procedures established by the CSA. The NRC will be notified of the request by a letter that includes the name, Social Security number and level of access authorization.

(c) The request must include a completed personnel security packet (see § 25.17(d)) and request form (NRC Form 237) signed by a licensee, licensee contractor official, or other authorized person.

(d)(1) Each personnel security packet submitted must include the following completed forms:

(i) Questionnaire for National Security Positions (SF-86, Parts 1 and 2) (Part 2 is to be completed by the applicant and placed in a sealed envelope which is to be forwarded to NRC unopened. No licensee, licensee contractor official, or other person at a facility is permitted to review Part 2 information);

(ii) Two standard fingerprint cards (FD-258);

(iii) Security Acknowledgment (NRC Form 176); and

(iv) Other related forms where specified in accompanying instructions (NRC Form 254).

(2) Only a Security Acknowledgment (NRC Form 176) need be completed by any person possessing an active access authorization, or who is being processed for an access authorization, by another Federal agency. The active or pending access authorization must be at an equivalent level to that required by the NRC and be based on an adequate investigation not more than five years old.

(e) To avoid delays in processing requests for access authorizations, each security packet should be reviewed for completeness and correctness (including legibility of response on the forms) before submittal.

(f)(1) The Office of Personnel Management (OPM) bills NRC for the cost of each background investigation conducted in support of an application for access authorization. The combined cost of the OPM investigation and NRC's application processing overhead are recovered from the licensee through an authorization fee calculated with reference to current OPM personnel investigation billing rates {OPM rate + [(OPM rate × 31.7%), rounded to the nearest dollar] = NRC access authorization fee}. Updated OPM billing rates are published periodically in a Federal Investigations Notice (FIN) issued by OPM's Investigations Service. Copies of the current OPM billing schedule can be obtained by phoning the NRC's Personnel Security Branch, Division of Facilities and Security, Office of Administration at (301–415–7739). Any change in the NRC's access authorization fees will be applicable to each access authorization request received on or after the effective date of OPM's most recently published investigations billing schedule.

(2) Applications for access authorization or access authorization renewal processing that are submitted to the NRC for processing must be accompanied by a check or money order, payable to the U.S. Nuclear Regulatory Commission, representing the current cost for the processing of each ''Q'' and ''L'' access authorization, or renewal request. Applicants shall calculate the access authorization fee according to the stated formula {OPM rate + [(OPM rate × 31.7%), rounded to the nearest dollar] = NRC access authorization fee} and with reference to the table in appendix A to this part.

(3) Certain applications from individuals having current Federal access authorizations may be processed more expeditiously and at less cost, because the Commission, at its discretion, may decide to accept the certification of access authorization and investigative data from other Federal Government agencies that grant personnel access authorizations.

[62 FR 17687, Apr. 11, 1997; 68 FR 62512, Nov. 5, 2003; 70 FR 32227, June 2, 2005; 72 FR 27408, May 16, 2007]

§ 25.19 Processing applications.

[Top of File]

Each application for an access authorization or access authorization renewal must be submitted to the CSA. If the NRC is the CSA, the application and its accompanying fee must be submitted to the NRC Division of Facilities and Security. If necessary, the NRC Division of Facilities and Security may obtain approval from the appropriate Commission office exercising licensing or regulatory authority before processing the access authorization or access authorization renewal request. If the applicant is disapproved for processing, the NRC Division of Facilities and Security shall notify the submitter in writing and return the original application (security packet) and its accompanying fee.

[64 FR 15648, Apr. 1, 1999]

§ 25.21 Determination of initial and continued eligibility for access authorization.

[Top of File]

(a) Following receipt by the CSA of the reports of the personnel security investigations, the record will be reviewed to determine that granting an access authorization or renewal of access authorization will not endanger the common defense and security and is clearly consistent with the national interest. If this determination is made, access authorization will be granted or renewed. If the NRC is the CSA, questions as to initial or continued eligibility will be determined in accordance with Part 10 of Chapter I. If another agency is the CSA, that agency will, under the requirements of the NISPOM, have established procedures at the facility to resolve questions as to initial or continued eligibility for access authorization. These questions will be determined in accordance with established CSA procedures already in effect for the facility.

(b) The CSA must be promptly notified of developments that bear on continued eligibility for access authorization throughout the period for which the authorization is active (e.g., persons who marry subsequent to the completion of a personnel security packet must report this change by submitting a completed NRC Form 354, "Data Report on Spouse" or equivalent CSA form).

(c)(1) Except as provided in paragraph (c)(2) of this section, an NRC "Q" access authorization must be renewed every five years from the date of issuance. Except as provided in paragraph (c)(2) of this section, an NRC "L" access authorization must be renewed every ten years from the date of issuance. An application for renewal must be submitted at least 120 days before the expiration of the five-year period for a "Q" access authorization and the ten-year period for an "L" access authorization, and must include:

(i) A statement by the licensee or other person that the individual continues to require access to classified National Security Information or Restricted Data; and

(ii) A personnel security packet as described in § 25.17(d).

(2) Renewal applications and the required paperwork are not required for individuals who have a current and active access authorization from another Federal agency and who are subject to a reinvestigation program by that agency that is determined by the NRC to meet the NRC's requirements. (The DOE Reinvestigation Program has been determined to meet the NRC's requirements.) For these individuals, the submission of the SF-86 by the licensee or other person to the other Government agency pursuant to their reinvestigation requirements will satisfy the NRC's renewal submission and paperwork requirements, even if less than five years have passed since the date of issuance or renewal of the NRC "Q" access authorization, or if less than 10 years have passed since the date of issuance or renewal of the NRC "L" access authorization. Any NRC access authorization continued in response to the provisions of this paragraph will, thereafter, not be due for renewal until the date set by the other Government agency for the next reinvestigation of the individual pursuant to the other agency's reinvestigation program. However, the period of time for the initial and each subsequent NRC "Q" renewal application to the NRC may not exceed seven years or, in the case of an NRC "L" renewal application, twelve years. Any individual who is subject to the reinvestigation program requirements of another Federal agency but, for administrative or other reasons, does not submit reinvestigation forms to that agency within seven years for a "Q" renewal or twelve years for an "L" renewal of the previous submission, shall submit a renewal application to the NRC using the forms prescribed in § 25.17(d) before the expiration of the seven-year period for a "Q" renewal or twelve-year period for an "L" renewal.

(3) If the NRC is not the CSA, reinvestigation program procedures and requirements will be set by the CSA.

[62 FR 17688, Apr. 11, 1997, as amended at 64 FR 15648, Apr. 1, 1999]

§ 25.23 Notification of grant of access authorization.

[Top of File]

The determination to grant or renew access authorization will be furnished in writing to the licensee or organization that initiated the request. Upon receipt of the notification of original grant of access authorization, the licensee or organization shall obtain, as a condition for grant of access authorization and access to classified information, an executed "Classified Information Nondisclosure Agreement" (SF-312) from the affected individual. The SF-312 is an agreement between the United States and an individual who is cleared for access to classified information. An employee issued an initial access authorization shall execute a SF-312 before being granted access to classified information. The licensee or other organization shall forward the executed SF-312 to the CSA for retention. If the employee refuses to execute the SF-312, the licensee or other organization shall deny the employee access to classified information and submit a report to the CSA. The SF-312 must be signed and dated by the employee and witnessed. The employee's and witness' signatures must bear the same date. The individual shall also be given a security orientation briefing in accordance with § 95.33 of this chapter. Records of access authorization grant and renewal notification must be maintained by the licensee or other organization for three years after the access authorization has been terminated by the CSA. This information may also be furnished to other representatives of the Commission, to licensees, contractors, or other Federal agencies. Notifications of access authorization will not be given in writing to the affected individual except:

(a) In those cases when the determination was made as a result of a Personnel Security Hearing or by a Personnel Security Review Panel ; or

(b) When the individual also is the official designated by the licensee or other organization to whom written NRC notifications are forwarded.

[62 FR 17688, Apr. 11, 1997, as amended at 64 FR 15648, Apr. 1, 1999]

§ 25.25 Cancellation of requests for access authorization.

[Top of File]

When a request for an individual's access authorization or renewal of an access authorization is withdrawn or canceled, the requestor shall notify the CSA immediately by telephone so that the single scope background investigation, national agency check with law and credit investigation, or other personnel security action may be discontinued. The requestor shall identify the full name and date of birth of the individual, the date of request, and the type of access authorization or access authorization renewal requested. The requestor shall confirm each telephone notification promptly in writing.

[64 FR 15648, Apr. 1, 1999]

§ 25.27 Reopening of cases in which requests for access authorizations are cancelled.

[Top of File]

(a) In conjunction with a new request for access authorization (NRC Form 237 or CSA equivalent) for individuals whose cases were previously canceled, new fingerprint cards (FD09257) in duplicate and a new Security Acknowledgment (NRC Form 176), or CSA equivalents, must be furnished to the CSA along with the request.

(b) Additionally, if 90 days or more have elapsed since the date of the last Questionnaire for National Security Positions (SF-86), or CSA equivalent, the individual must complete a personnel security packet (see § 25.17(d)). The CSA, based on investigative or other needs, may require a complete personnel security packet in other cases as well. A fee, equal to the amount paid for an initial request, will be charged only if a new or updating investigation by the NRC is required.

[62 FR 17689, Apr. 11, 1997, as amended at 64 FR 15648, Apr. 1, 1999]

§ 25.29 Reinstatement of access authorization.

[Top of File]

(a) An access authorization can be reinstated provided that:

(1) No more than 24 months has lapsed since the date of termination of the clearance;

(2) There has been no break in employment with the employer since the date of termination of the clearance;

(3) There is no known adverse information;

(4) The most recent investigation must not exceed 5 years (Top Secret, Q) or 10 years (Secret, L); and

(5) The most recent investigation must meet or exceed the scope of the investigation required for the level of access authorization that is to be reinstated or granted.

(b) An access authorization can be reinstated at the same, or lower, level by submission of a CSA-designated form to the CSA. The employee may not have access to classified information until receipt of written confirmation of reinstatement and an up-to-date personnel security packet will be furnished with the request for reinstatement of an access authorization. A new Security Acknowledgment will be obtained in all cases. Where personnel security packets are not required, a request for reinstatement must state the level of access authorization to be reinstated and the full name and date of birth of the individual to establish positive identification. A fee, equal to the amount paid for an initial request, will be charged only if a new or updating investigation by the NRC is required.

[62 FR 17689, Apr. 11, 1997]

§ 25.31 Extensions and transfers of access authorizations.

[Top of File]

(a) The NRC Division of Facilities and Security may, on request, extend the authorization of an individual who possesses an access authorization in connection with a particular employer or activity to permit access to classified information in connection with an assignment

with another employer or activity.

(b) The NRC Division of Facilities and Security may, on request, transfer an access authorization when an individual's access authorization under one employer or activity is terminated, simultaneously with the individual being granted an access authorization for another employer or activity.

(c) Requests for an extension or transfer of an access authorization must state the full name of the person, date of birth, and level of access authorization. The Director, Division of Facilities and Security, may require a new personnel security packet (see § 25.17(c)) to be completed by the applicant. A fee, equal to the amount paid for an initial request, will be charged only if a new or updating investigation by the NRC is required.

(d) The date of an extension or transfer of access authorization may not be used to determine when a request for renewal of access authorization is required. Access authorization renewal requests must be timely submitted, in accordance with § 25.21(c).

[45 FR 14481, Mar. 5, 1980, as amended at 48 FR 24320, June 1, 1983; 57 FR 3721, Jan. 31, 1992; 62 FR 17689, Apr. 11, 1997; 64 FR 15648, Apr. 1, 1999]

§ 25.33 Termination of access authorizations.

[Top of File]

(a) Access authorizations will be terminated when:

(1) An access authorization is no longer required;

(2) An individual is separated from the employment or the activity for which he or she obtained an access authorization for a period of 90 days or more; or

(3) An individual, pursuant to 10 CFR part 10 or other CSA-approved adjudicatory standards, is no longer eligible for an access authorization.

(b) A representative of the licensee or other organization that employs the individual whose access authorization will be terminated shall immediately notify the CSA when the circumstances noted in paragraph (a)(1) or (a)(2) of this section exist; inform the individual that his or her access authorization is being terminated, and the reason; and that he or she will be considered for reinstatement of an access authorization if he or she resumes work requiring the authorization.

(c) When an access authorization is to be terminated, a representative of the licensee or other organization shall conduct a security termination briefing of the individual involved, explain the Security Termination Statement (NRC Form 136 or CSA approved form) and have the individual complete the form. The representative shall promptly forward the original copy of the completed Security Termination Statement to CSA.

[62 FR 17689, Apr. 11, 1997, as amended at 64 FR 15649]

Classified Visits

[Top of File]

§ 25.35 Classified visits.

(a) The number of classified visits must be held to a minimum. The licensee, certificate holder, applicant for a standard design certification under part 52 of this chapter (including an applicant after the Commission has adopted a final standard design certification rule under part 52 of this chapter), or other facility, or an applicant for or holder of a standard design approval under part 52 of this chapter shall determine that the visit is necessary and that the purpose of the visit cannot be achieved without access to, or disclosure of, classified information. All classified visits require advance notification to, and approval of, the organization to be visited. In urgent cases, visit information may be furnished by telephone and confirmed in writing.

(b) Representatives of the Federal Government, when acting in their official capacities as inspectors, investigators, or auditors, may visit a licensee, certificate holder, or other facility without furnishing advanced notification, provided these representatives present appropriate Government credentials upon arrival. Normally, however, Federal representatives will provide advance notification in the form of an NRC Form 277, "Request for Visit or Access Approval," with the "need-to-know" certified by the appropriate NRC office exercising licensing or regulatory authority and verification of an NRC access authorization by the Division of Facilities and Security.

(c) The licensee, certificate holder, or others shall include the following information in all Visit Authorization Letters (VAL) which they prepare.

(1) Visitor's name, address, and telephone number and certification of the level of the facility security clearance;

(2) Name, date and place of birth, and citizenship of the individual intending to visit;

(3) Certification of the proposed visitor's personnel clearance and any special access authorizations required for the visit;

(4) Name of person(s) to be visited;

(5) Purpose and sufficient justification for the visit to allow for a determination of the necessity of the visit; and

(6) Date or period during which the VAL is to be valid.

(d) Classified visits may be arranged for a 12 month period. The requesting facility shall notify all places honoring these visit arrangements of any change in the individual's status that will cause the visit request to be canceled before its normal termination date.

(e) The responsibility for determining need-to-know in connection with a classified visit rests with the individual who will disclose classified information during the visit. The licensee, certificate holder or other facility shall establish procedures to ensure positive identification of visitors before the disclosure of any classified information.

[62 FR 17689, Apr. 11, 1997, as amended at 64 FR 15649, Apr. 1, 1999; 72 FR 49488, Aug. 28, 2007]

Violations

[Top of File]

§ 25.37 Violations.

(a) An injunction or other court order may be obtained to prohibit a violation of any provision of:

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) Any regulation or order issued under these Acts.

(b) National Security Information is protected under the requirements and sanctions of Executive Order 12958, as amended.

[48 FR 24320, June 1, 1983, as amended at 57 FR 55072, Nov. 24, 1992; 64 FR 15649, Apr. 1, 1999; 70 FR 32227, June 2, 2005]

§ 25.39 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 25 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 25 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 25.1, 25.3, 25.5, 25.7, 25.8, 25.9, 25.11, 25.19, 25.25, 25.27, 25.29, 25.31, 25.37, and 25.39.

[57 FR 55072, Nov. 24, 1992]

Appendix A to Part 25--Fees for NRC Access Authorization

[Top of File]

The NRC application fee for an access authorization of type * * *	Is the sum of the current OPM billing rate charged for an investigation of type * * *	Plus the NRC's processing fee (rounded to the nearest dollar), which is equal to the OPM billing rate for the type of investigation referenced multiplied by * * * (percent)
Initial "L" access authorization[1]	ANACI--Access National Agency Check with Inquiries (Standard Service, Code B).	31.7
Initial "L" access authorization [1]expedited processing	ANACI--Access National Agency Check with Inquiries (Expedite Handling, Code A).	31.7

Reinstatement of "L" access authorization[2]	No fee assessed for most applications.	
Renewal of access authorization[1]	NACLC—Access National Agency Check with Inquiries (Standard Service, Code B).	31.7
Initial "Q" access authorization	SSBI--Single Scope Background Investigation (120 Day Service, Code C).	31.7
Initial "Q" access authorization (expedited processing)	SSBI--Single Scope Background Investigation (35 Day Service, Code A).	31.7
Reinstatement of "Q" access authorization[2]	No fee assessed for most applications.	
Renewal of "Q" access authorization[1]	SSBI–PR—Single Scope Background Investigation (120 Day Service, Code C).	31.7

[1]If the NRC determines, based on its review of available data, that a single scope investigation is necessary, the appropriate fee for an Initial ''Q'' access authorization will be assessed before the conduct of investigation.

[2]Full fee will only be charged if an investigation is required.

[64 FR 15649, Apr. 1, 1999; 68 FR 62512, Nov. 5, 2003; 68 FR 65765, Nov. 21, 2003; 72 FR 27408, May 16, 2007]

PART 26--FITNESS FOR DUTY PROGRAMS

[Top of File]

Subpart A—Administrative Provisions

[Top of File]

§ 26.1 Purpose.

This part prescribes requirements and standards for the establishment, implementation, and maintenance of fitness-for-duty (FFD) programs.

[58 FR 31469, June 3, 1993; 73 FR 17177 Mar. 31, 2008]

§ 26.3 Scope.

[Top of File]

(a) Licensees who are authorized to operate a nuclear power reactor under 10 CFR 50.57, and holders of a combined license under 10 CFR Part 52 after the Commission has made the finding under 10 CFR 52.103(g) shall comply with the requirements of this part, except for subpart K of this part. Licensees who receive their authorization to operate a nuclear power reactor under 10 CFR 50.57 after the date of publication of this final rule in the **Federal Register** and holders of a combined license under 10 CFR Part 52 after the Commission has made the finding under 10 CFR 52.103(g) shall implement the FFD program before the receipt of special nuclear material in the form of fuel assemblies.

(b) Licensees who are authorized to possess, use, or transport formula quantities of strategic special nuclear material (SSNM) under Part 70 of this chapter, and any corporation, firm, partnership, limited liability company, association, or other organization who obtains a certificate of compliance or an approved compliance plan under Part 76 of this chapter, only if the entity elects to engage in activities involving formula quantities of SSNM shall comply with the requirements of this part, except for subparts I and K of this part.

(c) Before the receipt of special nuclear material in the form of fuel assemblies, the following licensees and other entities shall comply with the requirements of this part, except for subpart I of this part; and, no later than the receipt of special nuclear material in the form of fuel assemblies, the following licensees and other entities shall comply with the requirements of this part:

(1) Combined license applicants (under Part 52 of this chapter) who have been issued a limited work authorization under § 50.10(e), if the limited work authorization authorizes the applicant to install the foundations, including the placement of concrete, for safety- and security-related structures, systems, and components (SSCs) under the limited work authorization;

(2) Combined license holders (under Part 52 of this chapter) before the Commission has made the finding under § 52.103(g);

(3) Construction permit applicants (under Part 50 of this chapter) who have been issued a limited work authorization under § 50.10(e), if the limited work authorization authorizes the applicant to install the foundations, including the placement of concrete, for safety- and security-related SSCs under the limited work authorization;

(4) Construction permit holders (under Part 50 of this chapter); and

(5) Early site permit holders who have been issued a limited work authorization under § 50.10(e), if the limited work authorization authorizes the early site permit holder to install the foundations, including the placement of concrete, for safety- and security-related SSCs under the limited work authorization.

(d) Contractor/vendors (C/Vs) who implement FFD programs or program elements, to the extent that the licensees and other entities specified in paragraphs (a) through (c) of this section rely on those C/V FFD programs or program elements to meet the requirements of this part, shall comply with the requirements of this part.

(e) This part does not apply to either spent fuel storage facility licensees or non-power reactor licensees who possess, use, or transport formula quantities of irradiated SSNM.

[54 FR 24494, June 7, 1989, as amended at 58 FR 31469, June 3, 1993; 73 FR 17177 Mar. 31, 2008]

§ 26.4 FFD program applicability to categories of individuals.

[Top of File]

(a) All persons who are granted unescorted access to nuclear power reactor protected areas by the licensees in § 26.3(a) and, as applicable, (c) and perform the following duties shall be subject to an FFD program that meets all of the requirements of this part, except subpart K of this part:

(1) Operating or onsite directing of the operation of systems and components that a risk-informed evaluation process has shown to be significant to public health and safety;

(2) Performing health physics or chemistry duties required as a member of the onsite emergency response organization minimum shift complement;

(3) Performing the duties of a fire brigade member who is responsible for understanding the effects of fire and fire suppressants on safe shutdown capability;

(4) Performing maintenance or onsite directing of the maintenance of SSCs that a risk-informed evaluation process has shown to be significant to public health and safety; and

(5) Performing security duties as an armed security force officer, alarm station operator, response team leader, or watchperson, hereinafter referred to as security personnel.

(b) All persons who are granted unescorted access to nuclear power reactor protected areas by the licensees in § 26.3(a) and, as applicable, (c) and who do not perform the duties described in paragraph (a) of this section shall be subject to an FFD program that meets all of the requirements of this part, except §§ 26.205 through 26.209 and subpart K of this part.

(c) All persons who are required by a licensee in § 26.3(a) and, as applicable, (c) to physically report to the licensee's Technical Support Center or Emergency Operations Facility by licensee emergency plans and procedures shall be subject to an FFD program that meets all of the requirement of this part, except §§ 26.205 through 26.209 and subpart K of this part.

(d) Any individual whose duties for the licensees and other entities in § 26.3(b) require him or her to have the following types of access or perform the following activities shall be subject to an FFD program that meets all of the requirements of this part, except subparts I and K of this part:

(1) All persons who are granted unescorted access to Category IA material;

(2) All persons who create or have access to procedures or records for safeguarding SSNM;

(3) All persons who measure Category IA material;

(4) All persons who transport or escort Category IA material; and

(5) All persons who guard Category IA material.

(e) When construction activities begin, any individual whose duties for the licensees and other entities in § 26.3(c) require him or her to have the following types of access or perform the following activities at the location where the nuclear power plant will be constructed and operated shall be subject to an FFD program that meets all of the requirements of this part, except subparts I and K of this part:

(1) Serves as security personnel required by the NRC, until the licensees or other entities receive special nuclear material in the form of fuel assemblies, at which time individuals who serve as security personnel required by the NRC must meet the requirements applicable to security personnel in paragraph (a)(5) of this section;

(2) Performs quality assurance, quality control, or quality verification activities related to safety- or security-related construction activities;

(3) Based on a designation under § 26.406 by a licensee or other entity, monitors the fitness of the individuals specified in paragraph (f) of this section;

(4) Witnesses or determines inspections, tests, and analyses certification required under Part 52 of this chapter;

(5) Supervises or manages the construction of safety- or security-related SSCs; or

(6) Directs, as defined in § 26.5, or implements the access authorization program, including—

(i) Having access to the information used by the licensee or other entity to make access authorization determinations, including information stored in electronic format;

(ii) Making access authorization determinations;

(iii) Issuing entry-control picture badges in accordance with access authorization determinations;

(iv) Conducting background investigations or psychological assessments used by the licensee or other entity to make access authorization

determinations, except that he or she shall be subject to behavioral observation only when he or she is present at the location where the nuclear power plant will be constructed and operated, and licensees and other entities may rely on a local hospital or other organization that meets the requirements of 49 CFR Part 40, "Procedures for Department of Transportation Workplace Drug and Alcohol Testing Programs" (65 FR 41944; August 9, 2001) to collect his or her specimens for drug and alcohol testing;

(v) Adjudicating reviews or appeals of access authorization determinations;

(vi) Auditing the access authorization program; or

(vii) Performing any of the activities or having any of the duties listed in paragraph (e)(6) of this section for any C/V upon whom the licensee's or other entity's access authorization program will rely.

(f) Any individual who is constructing or directing the construction of safety- or security-related SSCs shall be subject to an FFD program that meets the requirements of subpart K of this part, unless the licensee or other entity subjects these individuals to an FFD program that meets all of the requirements of this part, except for subparts I and K of this part.

(g) All FFD program personnel who are involved in the day-to-day operations of the program, as defined by the procedures of the licensees and other entities in § 26.3(a) through (c), and, as applicable, (d), and whose duties require them to have the following types of access or perform the following activities shall be subject to an FFD program that meets all of the requirements of this part, except subparts I and K of this part, and, at the licensee's or other entity's discretion, subpart C of this part:

(1) All persons who can link test results with the individual who was tested before an FFD policy violation determination is made, including, but not limited to the MRO;

(2) All persons who make determinations of fitness;

(3) All persons who make authorization decisions;

(4) All persons involved in selecting or notifying individuals for testing; and

(5) All persons involved in the collection or onsite testing of specimens.

(h) Individuals who have applied for authorization to have the types of access or perform the activities described in paragraphs (a) through (d) of this section shall be subject to §§ 26.31(c)(1), 26.35(b), 26.37, 26.39, and the applicable requirements of subparts C, and E through H of this part.

(i) The following individuals are not subject to an FFD program under this part:

(1) Individuals who are not employed by a licensee or other entity in this part, who do not routinely provide FFD program services to a licensee or other entity in this part, and whose normal workplace is not at the licensee's or other entity's facility, but who may be called on to provide an FFD program service, including, but not limited to, collecting specimens for drug and alcohol testing, performing behavioral observation, or providing input to a determination of fitness. Such individuals may include, but are not limited to, hospital, employee assistance program (EAP) or substance abuse treatment facility personnel, or other medical professionals;

(2) NRC employees, law enforcement personnel, or offsite emergency fire and medical response personnel while responding on site;

(3) SSNM transporter personnel who are subject to U.S. Department of Transportation drug and alcohol FFD programs that require random testing for drugs and alcohol; and

(4) The FFD program personnel of a program that is regulated by another Federal agency or State on which a licensee or other entity relies to meet the requirements of this part, as permitted under §§ 26.4(j), 26.31(b)(2), and 26.405(e), if the FFD program personnel are not employed by the licensee or other entity and their normal workplace is not at the licensee's or other entity's facility.

(j) Individuals who are subject to this part and who are also subject to a program regulated by another Federal agency or State need be covered by only those elements of an FFD program that are not included in the Federal agency or State program, as long as all of the following conditions are met:

(1) The individuals are subject to pre-access (or pre-employment), random, for-cause, and post-event testing for the drugs and drug metabolites specified in § 26.31(d)(1) at or below the cutoff levels specified in § 26.163(a)(1) for initial drug testing and in § 26.163(b)(1) for confirmatory drug testing;

(2) The individuals are subject to pre-access (or pre-employment), random, for-cause, and post-event testing for alcohol at or below the cutoff levels specified in § 26.103(a) and breath specimens are subject to confirmatory testing, if required, with an EBT that meets the requirements specified in § 26.91;

(3) Urine specimens are tested for validity and the presence of drugs and drug metabolites at a laboratory certified by the Department of Health and Human Services (HHS);

(4) Training is provided to address the knowledge and abilities (KAs) listed in § 26.29(a)(1) through (a)(10); and

(5) Provisions are made to ensure that the testing agency or organization notifies the licensee or other entity granting authorization of any FFD policy violation.

[73 FR 17177 Mar. 31, 2008]

§ 26.5 Definitions.

[Top of File]

Acute fatigue means fatigue from causes (e.g., restricted sleep, sustained wakefulness, task demands) occurring within the past 24 hours.

Adulterated specimen means a urine specimen that has been altered, as evidenced by test results showing either a substance that is not a normal constituent of urine or showing an abnormal concentration of an endogenous substance.

Alertness means the ability to remain awake and sustain attention.

Aliquot means a portion of a specimen that is used for testing. It is taken as a sample representing the whole specimen.

Analytical run means the process of testing a group of urine specimens for validity or for the presence of drugs and/or drug metabolites. For the purposes of defining the periods within which performance testing must be conducted by any licensee testing facility or HHS-certified laboratory that continuously processes specimens, an analytical run is defined as no more than an 8-hour period. For a facility that analyzes specimens in batches, an analytical run is defined as a group of specimens that are handled and tested together.

Authorization means that a licensee or other entity in § 26.3 has determined that an individual has met the requirements of this part to be granted or maintain the types of access or perform the duties specified in § 26.4(a) through (e), and, at the licensee's or other entity's discretion, § 26.4(f) or (g).

Best effort means documented actions that a licensee or other entity who is subject to subpart C of this part takes to obtain suitable inquiry and employment information in order to determine whether an individual may be granted authorization, when the primary source of information refuses or indicates an inability or unwillingness to provide the information within 3 business days of the request and the licensee or other entity relies on a secondary source to meet the requirement.

Blood alcohol concentration (BAC) means the mass of alcohol in a volume of blood.

Calibrator means a solution of known concentration which is used to define expected outcomes of a measurement procedure or to compare the response obtained with the response of a test specimen/sample. The concentration of the analyte of interest in the calibrator is known within limits ascertained during its preparation. Calibrators may be used to establish a cutoff concentration and/or a calibration curve over a range of interest.

Category IA material means SSNM that is directly usable in the manufacture of a nuclear explosive device, except if the material meets any of the following criteria:

(1) The dimensions are large enough (at least 2 meters in one dimension, greater than 1 meter in each of two dimensions, or greater than 25 centimeters in each of three dimensions) to preclude hiding the item on an individual;

(2) The total weight of an encapsulated item of SSNM is such that it cannot be carried inconspicuously by one person (i.e., at least 50 kilograms gross weight); or

(3) The quantity of SSNM (less than 0.05 formula kilograms) in each container requires protracted diversions to accumulate 5 formula kilograms.

Chain of custody means procedures to account for the integrity of each specimen or aliquot by tracking its handling and storage from the point of specimen collection to final disposition of the specimen and its aliquots. "Chain of custody" and "custody and control" are synonymous and may be used interchangeably.

Circadian variation in alertness and performance means the increases and decreases in alertness and cognitive/motor functioning caused by human physiological processes (e.g., body temperature, release of hormones) that vary on an approximately 24-hour cycle.

Collection site means a designated place where individuals present themselves for the purpose of providing a specimen of their urine, oral fluids, and/or breath to be analyzed for the presence of drugs or alcohol.

Collector means a person who is trained in the collection procedures of subpart E, instructs and assists a specimen donor at a collection site, and receives and makes an initial examination of the specimen(s) provided by the donor.

Commission means the U.S. Nuclear Regulatory Commission (NRC) or its duly authorized representatives.

Confirmatory drug or alcohol test means a second analytical procedure to identify the presence of alcohol or a specific drug or drug

metabolite in a specimen. The purpose of a confirmatory test is to ensure the reliability and accuracy of an initial test result.

Confirmatory validity test means a second test performed on a different aliquot of the original urine specimen to further support a validity test result.

Confirmed test result means a test result that demonstrates that an individual has used drugs and/or alcohol in violation of the requirements of this part or has attempted to subvert the testing process by submitting an adulterated or substituted urine specimen. For drugs, adulterants, and substituted specimens, a confirmed test result is determined by the Medical Review Officer (MRO), after discussion with the donor subsequent to the MRO's receipt of a positive confirmatory drug test result from the HHS-certified laboratory and/or a confirmatory substituted or adulterated validity test result from the HHS-certified laboratory for that donor. For alcohol, a confirmed test result is based on a positive confirmatory alcohol test result from an evidential breath testing device (EBT) without MRO review of the test result.

Constructing or construction activities mean, for the purposes of this part, the tasks involved in building a nuclear power plant that are performed at the location where the nuclear power plant will be constructed and operated. These tasks include fabricating, erecting, integrating, and testing safety- and security-related SSCs, and the installation of their foundations, including the placement of concrete.

Contractor/vendor (C/V) means any company, or any individual not employed by a licensee or other entity specified in § 26.3(a) through (c), who is providing work or services to a licensee or other entity covered in § 26.3(a) through (c), either by contract, purchase order, oral agreement, or other arrangement.

Control means a sample used to monitor the status of an analysis to maintain its performance within predefined limits.

Cumulative fatigue means the increase in fatigue over consecutive sleep-wake periods resulting from inadequate rest.

Cutoff level means the concentration or decision criteria established for designating and reporting a test result as positive, of questionable validity (referring to validity screening or initial validity test results from a licensee testing facility), or adulterated, substituted, dilute, or invalid (referring to initial or confirmatory test results from an HHS-certified laboratory).

Dilute specimen means a urine specimen with creatinine and specific gravity concentrations that are lower than expected for human urine.

Directing means the exercise of control over a work activity by an individual who is directly involved in the execution of the work activity, and either makes technical decisions for that activity without subsequent technical review, or is ultimately responsible for the correct performance of that work activity.

Donor means the individual from whom a specimen is collected.

Eight (8)-hour shift schedule means a schedule that averages not more than 9 hours per workday over the entire shift cycle.

Employment action means a change in job responsibilities or removal from a job, or the employer-mandated implementation of a plan for substance abuse treatment in order to avoid a change in or removal from a job, because of the individual's use of drugs or alcohol.

Fatigue means the degradation in an individual's cognitive and motor functioning resulting from inadequate rest.

Formula quantity means SSNM in any combination in a quantity of 5000 grams or more computed by the formula, grams=(grams contained U–235)+2.5 (grams U–233+grams plutonium). This class of material is sometimes referred to as a Category I quantity of material.

HHS-certified laboratory means a laboratory that is certified to perform urine drug testing under the Department of Health and Human Services Mandatory Guidelines for Federal Workplace Drug Testing Programs (the HHS Guidelines), which were published in the **Federal Register** on April 11, 1988 (53 FR 11970), and as amended, June 9, 1994 (59 FR 29908), November 13, 1998 (63 FR 63483), and April 13, 2004 (69 FR 19643).

Illegal drug means, for the purposes of this regulation, any drug that is included in Schedules I to V of section 202 of the Controlled Substances Act [21 U.S.C. 812], but not when used pursuant to a valid prescription or when used as otherwise authorized by law.

Increased threat condition means an increase in the protective measure level, relative to the lowest protective measure level applicable to the site during the previous 60 days, as promulgated by an NRC Advisory.

Initial drug test means a test to differentiate "negative" specimens from those that require confirmatory drug testing.

Initial validity test means a first test used to determine whether a specimen is adulterated, dilute, substituted, or invalid, and may require confirmatory validity testing.

Invalid result means the result reported by an HHS-certified laboratory for a specimen that contains an unidentified adulterant, contains an unidentified interfering substance, has an abnormal physical characteristic, contains inconsistent physiological constituents, or has an endogenous substance at an abnormal concentration that prevents the laboratory from completing testing or obtaining a valid drug test result.

Legal action means a formal action taken by a law enforcement authority or court of law, including an arrest, an indictment, the filing of

charges, a conviction, or the mandated implementation of a plan for substance abuse treatment in order to avoid a permanent record of an arrest or conviction, in response to any of the following activities:

(1) The use, sale, or possession of illegal drugs;

(2) The abuse of legal drugs or alcohol; or

(3) The refusal to take a drug or alcohol test.

Licensee testing facility means a drug and specimen validity testing facility that is operated by a licensee or other entity who is subject to this part to perform tests of urine specimens.

Limit of detection (LOD) means the lowest concentration of an analyte that an analytical procedure can reliably detect, which could be significantly lower than the established cutoff levels.

Limit of quantitation (LOQ) means the lowest concentration of an analyte at which the concentration of the analyte can be accurately determined under defined conditions.

Maintenance means, for the purposes of § 26.4(a)(4), the following onsite maintenance activities: Modification, surveillance, post-maintenance testing, and corrective and preventive maintenance.

Medical Review Officer (MRO) means a licensed physician who is responsible for receiving laboratory results generated by a Part 26 drug testing program and who has the appropriate medical training to properly interpret and evaluate an individual's drug and validity test results together with his or her medical history and any other relevant biomedical information.

Nominal means the limited flexibility that is permitted in meeting a scheduled due date for completing a recurrent activity that is required under this part, such as the nominal 12-month frequency required for FFD refresher training in § 26.29(c)(2) and the nominal 12-month frequency required for certain audits in § 26.41(c)(1). Completing a recurrent activity at a nominal frequency means that the activity may be completed within a period that is 25 percent longer or shorter than the period required in this part. The next scheduled due date would be no later than the current scheduled due date plus the required frequency for completing the activity.

Other entity means any corporation, firm, partnership, limited liability company, association, C/V, or other organization who is subject to this part under § 26.3(a) through (c), but is not licensed by the NRC.

Oxidizing adulterant means a substance that acts alone or in combination with other substances to oxidize drugs or drug metabolites to prevent the detection of the drugs or drug metabolites, or a substance that affects the reagents in either the initial or confirmatory drug test. Examples of these agents include, but are not limited to, nitrites, pyridinium chlorochromate, chromium (VI), bleach, iodine/iodide, halogens, peroxidase, and peroxide.

Positive result means, for drug testing, the result reported by a licensee testing facility or HHS-certified laboratory when a specimen contains a drug or drug metabolite equal to or greater than the cutoff concentration. A result reported by an HHS-certified laboratory that a specimen contains a drug or drug metabolite below the cutoff concentration is also a positive result when the laboratory has conducted the special analysis permitted in § 26.163(a)(2). For alcohol testing, a positive result means the result reported by a collection site when the BAC indicated by testing a specimen exceeds the cutoff concentrations established in this part.

Potentially disqualifying FFD information means information demonstrating that an individual has—

(1) Violated a licensee's or other entity's FFD policy;

(2) Had authorization denied or terminated unfavorably under §§ 26.35(c)(2), 26.53(i), 26.63(d), 26.65(g), 26.67(c), 26.69(f), or 26.75(b) through (e);

(3) Used, sold, or possessed illegal drugs;

(4) Abused legal drugs or alcohol;

(5) Subverted or attempted to subvert a drug or alcohol testing program;

(6) Refused to take a drug or alcohol test;

(7) Been subjected to a plan for substance abuse treatment (except for self-referral); or

(8) Had legal action or employment action, as defined in this section, taken for alcohol or drug use.

Protected area has the same meaning as in § 73.2(g) of this chapter: An area encompassed by physical barriers and to which access is controlled.

Quality control sample means a sample used to evaluate whether an analytical procedure is operating within predefined tolerance limits.

Calibrators, controls, negative samples, and blind samples are collectively referred to as "quality control samples" and each is individually referred to as a "sample."

Questionable validity means the results of validity screening or initial validity tests at a licensee testing facility indicating that a urine specimen may be adulterated, substituted, dilute, or invalid.

Reviewing official means an employee of a licensee or other entity specified in § 26.3(a) through (c), who is designated by the licensee or other entity to be responsible for reviewing and evaluating any potentially disqualifying FFD information about an individual, including, but not limited to, the results of a determination of fitness, as defined in § 26.189, in order to determine whether the individual may be granted or maintain authorization.

Safety-related structures, systems, and components (SSCs) mean, for the purposes of this part, those structures, systems, and components that are relied on to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposure comparable to the guidelines in 10 CFR 50.34(a)(1).

Security-related SSCs mean, for the purposes of this part, those structures, systems, and components that the licensee will rely on to implement the licensee's physical security and safeguards contingency plans that either are required under Part 73 of this chapter if the licensee is a construction permit applicant or holder or an early site permit holder, as described in § 26.3(c)(3) through (c)(5), respectively, or are included in the licensee's application if the licensee is a combined license applicant or holder, as described in § 26.3(c)(1) and (c)(2), respectively.

Shift cycle means a series of consecutive work shifts and days off that is planned by the licensee or other entity to repeat regularly, thereby constituting a continuous shift schedule.

Standard means a reference material of known purity or a solution containing a reference material at a known concentration.

Strategic special nuclear material(SSNM) means uranium-235 (contained in uranium enriched to 20 percent or more in the uranium-235 isotope), uranium-233, or plutonium.

Substance abuse means the use, sale, or possession of illegal drugs, or the abuse of prescription and over-the-counter drugs, or the abuse of alcohol.

Substituted specimen means a specimen with creatinine and specific gravity values that are so diminished or so divergent that they are not consistent with normal human physiology.

Subversion and subvert the testing process mean a willful act to avoid being tested or to bring about an inaccurate drug or alcohol test result for oneself or others at any stage of the testing process (including selection and notification of individuals for testing, specimen collection, specimen analysis, and test result reporting), and adulterating, substituting, or otherwise causing a specimen to provide an inaccurate test result.

Supervises or manages means the exercise of control over a work activity by an individual who is not directly involved in the execution of the work activity, but who either makes technical decisions for that activity without subsequent technical review, or is ultimately responsible for the correct performance of that work activity.

Ten (10)-hour shift schedule means a schedule that averages more than 9 hours, but not more than 11 hours, per workday over the entire shift cycle.

Transporter means a general licensee, under 10 CFR 70.20(a), who is authorized to possess formula quantities of SSNM, in the regular course of carriage for another or storage incident thereto, and includes the driver or operator of any conveyance, and the accompanying guards or escorts.

Twelve (12)-hour shift schedule means a schedule that averages more than 11 hours, but not more than 12 hours, per workday over the entire shift cycle.

Unit outage means, for the purposes of this part, that the reactor unit is disconnected from the electrical grid.

Validity screening test means a test to determine the need for initial validity testing of a urine specimen, using a non-instrumented test in which the endpoint result is obtained by visual evaluation (read by the human eye), or a test that is instrumented to the extent that results are machine-read.

Validity screening test lot means a group of validity screening tests that were made from the same starting material.

[73 FR 17179 Mar. 31, 2008]

§ 26.7 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding on the Commission.

[73 FR 17181 Mar. 31, 2008]

§ 26.8 Information collection requirements: OMB approval.

[Top of File]

(a) The NRC has submitted the information collection requirements contained in this part for approval by the Office of Management and Budget (OMB), as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150–0146.

(b) The approved information collection requirements contained in this part appear in §§ 26.9, 26.27, 26.29, 26.31, 26.33, 26.35, 26.37, 26.39, 26.41, 26.53, 26.55, 26.57, 26.59, 26.61, 26.63, 26.65, 26.67, 26.69, 26.75, 26.77, 26.85, 26.87, 26.89, 26.91, 26.93, 26.95, 26.97, 26.99, 26.101, 26.103, 26.107, 26.109, 26.111, 26.113, 26.115, 26.117, 26.119, 26.125, 26.127, 26.129, 26.135, 26.137, 26.139, 26.153, 26.155, 26.157, 26.159, 26.163, 26.165, 26.167, 26.168, 26.169, 26.183, 26.185, 26.187, 26.189, 26.203, 26.205, 26.207, 26.211, 26.401, 26.403, 26.405, 26.406, 26.407, 26.411, 26.413, 26.415, 26.417, 26.711, 26.713, 26.715, 26.717, 26.719, and 26.821.

[54 FR 24494, June 7, 1989, as amended at 62 FR 52185, Oct. 6, 1997; 67 FR 67099, Nov. 4, 2002; 73 FR 17181 Mar. 31, 2008]

§ 26.9 Specific exemptions.

[Top of File]

Upon application of any interested person or on its own initiative, the Commission may grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

[73 FR 17182 Mar. 31, 2008]

§ 26.11 Communications.

[Top of File]

Except where otherwise specified in this part, all communications, applications, and reports concerning the regulations in this part must be sent either by mail addressed to ATTN: NRC Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland, between the hours of 8:15 a.m. and 4 p.m. eastern time; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, e-mail, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/eie.html*, by calling (301) 415–6030, by e-mail to *EIE@nrc.gov*, or by writing to the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. Copies of all communications must be sent to the appropriate regional office and resident inspector (addresses for the NRC Regional Offices are listed in Appendix D to Part 20 of this chapter).

[73 FR 17182 Mar. 31, 2008]

Subpart B—Program Elements

[Top of File]

§ 26.21 Fitness-for-duty program.

The licensees and other entities specified in § 26.3(a) through (c) shall establish, implement, and maintain FFD programs that, at a minimum, comprise the program elements contained in this subpart. The individuals specified in § 26.4(a) through (e) and (g), and, at the licensee's or other entity's discretion, § 26.4(f), and, if necessary, § 26.4(j) shall be subject to these FFD programs. Licensees and other entities may rely on the FFD program or program elements of a C/V, as defined in § 26.5, if the C/V's FFD program or program elements meet the applicable requirements of this part.

[73 FR 17182 Mar. 31, 2008]

§ 26.23 Performance objectives.

[Top of File]

Fitness-for-duty programs must—

(a) Provide reasonable assurance that individuals are trustworthy and reliable as demonstrated by the avoidance of substance abuse;

(b) Provide reasonable assurance that individuals are not under the influence of any substance, legal or illegal, or mentally or physically impaired from any cause, which in any way adversely affects their ability to safely and competently perform their duties;

(c) Provide reasonable measures for the early detection of individuals who are not fit to perform the duties that require them to be subject to the FFD program;

(d) Provide reasonable assurance that the workplaces subject to this part are free from the presence and effects of illegal drugs and alcohol; and

(e) Provide reasonable assurance that the effects of fatigue and degraded alertness on individuals' abilities to safely and competently perform their duties are managed commensurate with maintaining public health and safety.

[73 FR 17182 Mar. 31, 2008]

§ 26.25 [Reserved].

[Top of File]

[73 FR 17182 Mar. 31, 2008]

§ 26.27 Written policy and procedures.

[Top of File]

(a) *General*. Each licensee and other entity shall establish, implement, and maintain written policies and procedures to meet the general performance objectives and applicable requirements of this part.

(b) *Policy*. The FFD policy statement must be clear, concise, and readily available, in its most current form, to all individuals who are subject to the policy. Methods of making the statement readily available include, but are not limited to, posting the policy in multiple work areas, providing individuals with brochures, or allowing individuals to print the policy from a computer. The policy statement must be written in sufficient detail to provide affected individuals with information on what is expected of them and what consequences may result from a lack of adherence to the policy. At a minimum, the written policy statement must—

(1) Describe the consequences of the following actions:

(i) The use, sale, or possession of illegal drugs on or off site;

(ii) The abuse of legal drugs and alcohol; and

(iii) The misuse of prescription and over-the-counter drugs;

(2) Describe the requirement that individuals who are notified that they have been selected for random testing must report to the collection site within the time period specified by the licensee or other entity;

(3) Describe the actions that constitute a refusal to provide a specimen for testing, the consequences of a refusal to test, as well as the consequences of subverting or attempting to subvert the testing process;

(4) Prohibit the consumption of alcohol, at a minimum—

(i) Within an abstinence period of 5 hours preceding the individual's arrival at the licensee's or other entity's facility, except as permitted in § 26.27(c)(3); and

(ii) During the period of any tour of duty;

(5) Convey that abstinence from alcohol for the 5 hours preceding any scheduled tour of duty is considered to be a minimum that is necessary, but may not be sufficient, to ensure that the individual is fit for duty;

(6) Address other factors that could affect FFD, such as mental stress, fatigue, or illness, and the use of prescription and over-the-counter medications that could cause impairment;

(7) Provide a description of any program that is available to individuals who are seeking assistance in dealing with drug, alcohol, fatigue, or other problems that could adversely affect an individual's ability to safely and competently perform the duties that require an individual to be subject to this subpart;

(8) Describe the consequences of violating the policy;

(9) Describe the individual's responsibility to report legal actions, as defined in § 26.5;

(10) Describe the responsibilities of managers, supervisors, and escorts to report FFD concerns; and

(11) Describe the individual's responsibility to report FFD concerns.

(c) *Procedures*. Each licensee and other entity shall prepare, implement, and maintain written procedures that describe the methods to be used in implementing the FFD policy and the requirements of this part. The procedures must—

(1) Describe the methods and techniques to be used in testing for drugs and alcohol, including procedures for protecting the privacy and other rights (including due process) of an individual who provides a specimen, procedures for protecting the integrity of the specimen, and procedures used to ensure that the test results are valid and attributable to the correct individual;

(2) Describe immediate and followup actions that will be taken, and the procedures to be used, in those cases in which individuals are determined to have—

(i) Been involved in the use, sale, or possession of illegal drugs;

(ii) Consumed alcohol to excess before the mandatory pre-work abstinence period, or consumed any alcohol during the mandatory pre-work abstinence period or while on duty, as determined by a test that measures BAC;

(iii) Attempted to subvert the testing process by adulterating or diluting specimens (in vivo or in vitro), substituting specimens, or by any other means;

(iv) Refused to provide a specimen for analysis; or

(v) Had legal action taken relating to drug or alcohol use, as defined in § 26.5;

(3) Describe the process that the licensee or other entity will use to ensure that individuals who are called in to perform an unscheduled working tour are fit for duty. At a minimum—

(i) The procedure must require the individual who is called in to state whether the individual considers himself or herself fit for duty and whether he or she has consumed alcohol within the pre-duty abstinence period stated in the policy;

(ii) If the individual has consumed alcohol within this period and the individual is called in for an unscheduled working tour, including an unscheduled working tour to respond to an emergency, the procedure must—

(A) Require a determination of fitness by breath alcohol analysis or other means;

(B) Permit the licensee or other entity to assign the individual to duties that require him or her to be subject to this subpart, if the results of the determination of fitness indicate that the individual is fit to safely and competently perform his or her duties;

(C) Prohibit the licensee or other entity from assigning the individual to duties that require him or her to be subject to this subpart, if the individual is not required to respond to an emergency and the results of the determination of fitness indicate that the individual may be impaired;

(D) State that consumption of alcohol during the 5-hour abstinence period required in paragraph (b)(4)(i) of this section may not by itself preclude a licensee or other entity from using individuals who are needed to respond to an emergency. However, if the determination of fitness indicates that an individual who has been called in for an unscheduled working tour to respond to an emergency may be impaired, the procedure must require the establishment of controls and conditions under which the individual who has been called in can perform work, if necessary; and

(E) State that no sanctions may be imposed on an individual who is called in to perform any unscheduled working tour for having consumed alcohol within the pre-duty abstinence period stated in the policy.

(iii) If the individual reports that he or she considers himself or herself to be unfit for duty for other reasons, including illness, fatigue, or other potentially impairing conditions, and the individual is called in, the procedure must require the establishment of controls and conditions under which the individual can perform work, if necessary;

(4) Describe the process to be followed if an individual's behavior raises a concern regarding the possible use, sale, or possession of illegal drugs on or off site; the possible possession or consumption of alcohol on site; or impairment from any cause which in any way could adversely affect the individual's ability to safely and competently perform his or her duties. The procedure must require that individuals who have an FFD concern about another individual's behavior shall contact the personnel designated in the procedures to report the concern.

(d) *Review*. The NRC may, at any time, review the written policy and procedures to assure that they meet the performance objectives and requirements of this part.

[54 FR 24494, June 7, 1989, as amended at 58 FR 31470, June 3, 1993; 73 FR 17182 Mar. 31, 2008]

§ 26.29 Training.

[Top of File]

(a) *Training content*. Licensees and other entities shall ensure that the individuals who are subject to this subpart have the following KAs:

(1) Knowledge of the policy and procedures that apply to the individual, the methods that will be used to implement them, and the consequences of violating the policy and procedures;

(2) Knowledge of the individual's role and responsibilities under the FFD program;

(3) Knowledge of the roles and responsibilities of others, such as the MRO and the human resources, FFD, and EAP staffs;

(4) Knowledge of the EAP services available to the individual;

(5) Knowledge of the personal and public health and safety hazards associated with abuse of illegal and legal drugs and alcohol;

(6) Knowledge of the potential adverse effects on job performance of prescription and over-the-counter drugs, alcohol, dietary factors, illness, mental stress, and fatigue;

(7) Knowledge of the prescription and over-the-counter drugs and dietary factors that have the potential to affect drug and alcohol test results;

(8) Ability to recognize illegal drugs and indications of the illegal use, sale, or possession of drugs;

(9) Ability to observe and detect performance degradation, indications of impairment, or behavioral changes; and

(10) Knowledge of the individual's responsibility to report an FFD concern and the ability to initiate appropriate actions, including referrals to the EAP and person(s) designated by the licensee or other entity to receive FFD concerns.

(b) *Comprehensive examination*. Individuals who are subject to this subpart shall demonstrate the successful completion of training by passing a comprehensive examination that addresses the KAs in paragraph (a) of this section. The examination must include a comprehensive random sampling of all KAs with questions that test each KA, including at least one question for each KA. The minimum passing score required must be 80 percent. Remedial training and testing are required for individuals who fail to answer correctly at least 80 percent of the test questions. The examination may be administered using a variety of media, including, but not limited to, hard-copy test booklets with separate answer sheets or computer-based questions.

(c) *Training administration*. Licensees and other entities shall ensure that individuals who are subject to this subpart are trained, as follows:

(1) Training must be completed before the licensee or other entity grants initial authorization, as defined in § 26.55, and must be current before the licensee or other entity grants an authorization update, as defined in § 26.57, or authorization reinstatement, as defined in § 26.59;

(2) Individuals shall complete refresher training on a nominal 12-month frequency, or more frequently where the need is indicated. Indications of the need for more frequent training include, but are not limited to, an individual's failure to properly implement FFD program procedures and the frequency, nature, or severity of problems discovered through audits or the administration of the program. Individuals who pass a comprehensive annual examination that meets the requirements in paragraph (b) of this section may forgo the refresher training; and

(3) Initial and refresher training may be delivered using a variety of media (including, but not limited to, classroom lectures, required reading, video, or computer-based training systems). The licensee or other entity shall monitor the completion of training and provide a qualified instructor or designated subject matter expert to answer questions during the course of training.

(d) *Acceptance of training*. Licensees and other entities may accept training of individuals who have been subject to another training program that meets the requirements of this section and who have, within the past 12 months, either had initial or refresher training, or have successfully passed a comprehensive examination that meets the requirements in paragraph (b) of this section.

[73 FR 17183 Mar. 31, 2008]

§ 26.31 Drug and alcohol testing.

(a) *General*. To provide a means to deter and detect substance abuse, licensees and other entities who are subject to this part shall implement drug and alcohol testing programs for individuals who are subject to this subpart.

(b) *Assuring the honesty and integrity of FFD program personnel*. (1) Licensees and other entities who are subject to this subpart shall carefully select and monitor FFD program personnel, as defined in § 26.4(g), based on the highest standards of honesty and integrity, and shall implement measures to ensure that these standards are maintained. The measures must ensure that the honesty and integrity of these individuals are not compromised and that FFD program personnel are not subject to influence attempts attributable to personal relationships with any individuals who are subject to testing, an undetected or untreated substance abuse problem, or other factors. At a minimum, these measures must include the following considerations:

(i) Licensees and other entities shall complete appropriate background investigations, credit and criminal history checks, and psychological assessments of FFD program personnel before assignment to tasks directly associated with administration of the FFD program. The background investigations, credit and criminal history checks, and psychological assessments that are conducted to grant unescorted access authorization to individuals under a nuclear power plant licensee's access authorization program are acceptable to meet the requirements of this paragraph. The credit and criminal history checks and psychological assessments must be updated nominally every 5 years;

(ii) Individuals who have personal relationships with a donor may not perform any assessment or evaluation procedures, including, but not limited to, determinations of fitness. These personal relationships may include, but are not limited to, supervisors, coworkers within the same work group, and relatives of the donor;

(iii) Except if a directly observed collection is required, a collector who has a personal relationship with the donor may collect specimens from the donor only if the integrity of specimen collections in these instances is assured through the following means:

(A) The collection must be monitored by an individual who does not have a personal relationship with the donor and who is designated by the licensee or other entity for this purpose, including, but not limited to, security force or quality assurance personnel; and

(B) Individuals who are designated to monitor collections in these instances shall be trained to monitor specimen collections and the preparation of specimens for transfer or shipping under the requirements of this part;

(iv) If a specimen must be collected under direct observation, the collector or an individual who serves as the observer, as permitted under § 26.115(e), may not have a personal relationship with the donor; and

(v) FFD program personnel shall be subject to a behavioral observation program designed to assure that they continue to meet the highest standards of honesty and integrity. When an MRO and MRO staff are on site at a licensee's or other entity's facility, the MRO and MRO staff shall be subject to behavioral observation.

(2) Licensees and other entities may rely on a local hospital or other organization that meets the requirements of 49 CFR Part 40, "Procedures for Department of Transportation Workplace Drug and Alcohol Testing Programs" (65 FR 41944; August 9, 2001) to collect specimens for drug and alcohol testing from the FFD program personnel listed in § 26.4(g).

(c) *Conditions for testing*. Licensees and other entities shall administer drug and alcohol tests to the individuals who are subject to this subpart under the following conditions:

(1) *Pre-access*. In order to grant initial, updated, or reinstated authorization to an individual, as specified in subpart C of this part;

(2) *For cause*. In response to an individual's observed behavior or physical condition indicating possible substance abuse or after receiving credible information that an individual is engaging in substance abuse, as defined in § 26.5;

(3) *Post-event*. As soon as practical after an event involving a human error that was committed by an individual who is subject to this subpart, where the human error may have caused or contributed to the event. The licensee or other entity shall test the individual(s) who committed the error(s), and need not test individuals who were affected by the event whose actions likely did not cause or contribute to the event. The individual(s) who committed the human error(s) shall be tested if the event resulted in—

(i) A significant illness or personal injury to the individual to be tested or another individual, which within 4 hours after the event is recordable under the Department of Labor standards contained in 29 CFR 1904.7, "General Recording Criteria," and subsequent amendments thereto, and results in death, days away from work, restricted work, transfer to another job, medical treatment beyond first aid, loss of consciousness, or other significant illness or injury as diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness;

(ii) A radiation exposure or release of radioactivity in excess of regulatory limits; or

(iii) Actual or potential substantial degradations of the level of safety of the plant;

(4) Followup. As part of a followup plan to verify an individual's continued abstinence from substance abuse; and

(5) Random. On a statistically random and unannounced basis, so that all individuals in the population subject to testing have an equal probability of being selected and tested.

(d) *General requirements for drug and alcohol testing*. (1) Substances tested. At a minimum, licensees and other entities shall test for marijuana metabolite, cocaine metabolite, opiates (codeine, morphine, 6-acetylmorphine), amphetamines (amphetamine, methamphetamine), phencyclidine, adulterants, and alcohol.

(i) In addition, licensees and other entities may consult with local law enforcement authorities, hospitals, and drug counseling services to determine whether other drugs with abuse potential are being used in the geographical locale of the facility and by the local workforce that may not be detected in the panel of drugs and drug metabolites specified in paragraph (d)(1) of this section.

(A) When appropriate, the licensee or other entity may add other drugs identified under paragraph (d)(1)(i) of this section to the panel of substances for testing, but only if the additional drugs are listed in Schedules I through V of section 202 of the Controlled Substances Act [21 U.S.C. 812].

(B) The licensee or other entity shall establish appropriate cutoff limits for these substances.

(C) The licensee or other entity shall establish rigorous testing procedures for these substances that are consistent with the intent of this part, so that the MRO can evaluate the use of these substances.

(D) The licensee or other entity may not conduct an analysis for any drug or drug metabolites except those identified in paragraph (d)(1) of this section unless the assay and cutoff levels to be used are certified in writing as scientifically sound and legally defensible by an independent, qualified forensic toxicologist who has no relationships with manufacturers of the assays or instruments to be used or the HHS-certified laboratory that will conduct the testing for the licensee or other entity, which could be construed as a potential conflict of interest. The forensic toxicologist may not be an employee of the licensee or entity, and shall either be a Diplomate of the American Board of Forensic Toxicology or currently holds, has held, or is eligible to hold, the position of Responsible Person at an HHS-certified laboratory, as specified in § 26.155(a). All new assays and cutoff levels must be properly validated consistent with established forensic toxicological standards before implementation. Certification of the assay and cutoff levels is not required if the HHS Guidelines are revised to authorize use of the assay in testing for the additional drug or drug metabolites and the licensee or other entity uses the cutoff levels established in the HHS Guidelines for the drug or drug metabolites, or if the licensee or other entity received written approval of the NRC to test for the additional drug or drug metabolites before April 30, 2008.

(ii) When conducting post-event, followup, and for-cause testing, as defined in § 26.31(c), licensees and other entities may test for any drugs listed on Schedules I through V of section 202 of the Controlled Substances Act [21 U.S.C. 812] that an individual is suspected of having abused, and may consider any drugs or metabolites so detected when determining appropriate action under subpart D of this part. If the drug or metabolites for which testing will be performed under this paragraph are not included in the FFD program's drug panel, the assay and cutoff levels to be used in testing for the additional drugs must be certified by a forensic toxicologist under paragraph (d)(1)(i)(D) of this section. Test results that fall below the established cutoff levels may not be considered when determining appropriate action under subpart D of this part, except if the specimen is dilute and the licensee or other entity has requested the HHS-certified laboratory to evaluate the specimen under §§ 26.163(a)(2) or 26.185(g)(3).

(iii) The licensee or other entity shall document the additional drug(s) for which testing will be performed in written policies and procedures in which the substances for which testing will be performed are described.

(2) *Random testing*. Random testing must—

(i) Be administered in a manner that provides reasonable assurance that individuals are unable to predict the time periods during which specimens will be collected. At a minimum, the FFD program shall—

(A) Take reasonable steps to either conceal from the workforce that collections will be performed during a scheduled collection period or create the appearance that specimens are being collected during a portion of each day on at least 4 days in each calendar week at each site. In the latter instance, the portions of each day and the days of the week must vary in a manner that cannot be predicted by donors; and

(B) Collect specimens on an unpredictable schedule, including weekends, backshifts, and holidays, and at various times during a shift;

(ii) At a minimum, be administered by the FFD program on a nominal weekly frequency;

(iii) Require individuals who are selected for random testing to report to the collection site as soon as reasonably practicable after notification, within the time period specified in the FFD program policy;

(iv) Ensure that all individuals in the population subject to testing have an equal probability of being selected and tested;

(v) Require that individuals who are off site when selected for testing, or who are on site and are not reasonably available for testing when selected, shall be tested at the earliest reasonable and practical opportunity when both the donor and collectors are available to collect specimens for testing and without prior notification to the individual that he or she has been selected for testing;

(vi) Provide that an individual completing a test is immediately eligible for another unannounced test; and

(vii) Ensure that the sampling process used to select individuals for random testing provides that the number of random tests performed annually is equal to at least 50 percent of the population that is subject to the FFD program.

(3) *Drug testing*. (i) Testing of urine specimens for drugs and validity, except validity screening and initial drug and validity tests performed by licensee testing facilities under paragraph (d)(3)(ii) of this section, must be performed in a laboratory that is certified by HHS for that purpose, consistent with its standards and procedures for certification. Specimens sent to HHS-certified laboratories must be subject to initial validity and initial drug testing by the laboratory. Specimens that yield positive initial drug test results or are determined by initial validity testing to be of questionable validity must be subject to confirmatory testing by the laboratory, except for invalid specimens that cannot be tested. Licensees and other entities shall ensure that laboratories report results for all specimens sent for testing, including blind performance test samples.

(ii) Licensees and other entities may conduct validity screening, initial validity, and initial drug tests of urine aliquots to determine which specimens are valid and negative and need no further testing, provided that the licensee's or other entity's staff possesses the necessary training and skills for the tasks assigned, the staff's qualifications are documented, and adequate quality controls for the testing are implemented.

(iii) At a minimum, licensees and other entities shall apply the cutoff levels specified in § 26.163(a)(1) for initial drug testing at either the licensee testing facility or HHS-certified laboratory, and in § 26.163(b)(1) for confirmatory drug testing at the HHS-certified laboratory. At their discretion, licensees and other entities may implement programs with lower cutoff levels in testing for drugs and drug metabolites.

(A) If a licensee or other entity implements lower cutoff levels, and the MRO determines that an individual has violated the FFD policy using the licensee's or other entity's more stringent cutoff levels, the individual shall be subject to all management actions and sanctions required by the licensee's or other entity's FFD policy and this part, as if the individual had a confirmed positive drug test result using the cutoff levels specified in this subpart. The licensee or other entity shall document the more stringent cutoff levels in any written policies and procedures in which cutoff levels for drug testing are described.

(B) The licensee or other entity shall uniformly apply the cutoff levels listed in § 26.163(a)(1) for initial drug testing and in § 26.163(b)(1) for confirmatory drug testing, or any more stringent cutoff levels implemented by the FFD program, to all tests performed under this part and equally to all individuals who are tested under this part, except as permitted in §§ 26.31(d)(1)(ii), 26.163(a)(2), and 26.165(c)(2).

(C) In addition, the scientific and technical suitability of any more stringent cutoff levels must be evaluated and certified, in writing, by a forensic toxicologist who meets the requirements set forth in § 26.31(d)(1)(i)(D). Certification of the more stringent cutoff levels is not required if the HHS Guidelines are revised to lower the cutoff levels for the drug or drug metabolites in Federal workplace drug testing programs and the licensee or other entity implements the cutoff levels published in the HHS Guidelines, or if the licensee or other entity received written approval of the NRC to test for lower cutoff levels before April 30, 2008.

(4) *Alcohol testing*. Initial tests for alcohol must be administered by breath or oral fluids analysis using alcohol analysis devices that meet the requirements of § 26.91(a). If the initial test shows a BAC of 0.02 percent or greater, a confirmatory test for alcohol must be performed. The confirmatory test must be performed with an EBT that meets the requirements of § 26.91(b).

(5) *Medical conditions*. (i) If an individual has a medical condition that makes collection of breath, oral fluids, or urine specimens difficult or hazardous, the MRO may authorize an alternative evaluation process, tailored to the individual case, to meet the requirements of this part for drug and alcohol testing. The alternative process must include measures to prevent subversion and achieve results that are comparable to those produced by urinalysis for drugs and breath analysis for alcohol.

(ii) If an individual requires medical attention, including, but not limited to, an injured worker in an emergency medical facility who is required to have a post-event test, treatment may not be delayed to conduct drug and alcohol testing.

(6) *Limitations of testing*. Specimens collected under NRC regulations may only be designated or approved for testing as described in this part and may not be used to conduct any other analysis or test without the written permission of the donor. Analyses and tests that may not be conducted include, but are not limited to, DNA testing, serological typing, or any other medical or genetic test used for diagnostic or specimen identification purposes.

[73 FR 17184 Mar. 31, 2008]

§ 26.33 Behavioral observation.

[Top of File]

Licensees and other entities shall ensure that the individuals who are subject to this subpart are subject to behavioral observation. Behavioral observation must be performed by individuals who are trained under § 26.29 to detect behaviors that may indicate possible use, sale, or possession of illegal drugs; use or possession of alcohol on site or while on duty; or impairment from fatigue or any cause that, if left unattended, may constitute a risk to public health and safety or the common defense and security. Individuals who are subject to this subpart shall report any FFD concerns about other individuals to the personnel designated in the FFD policy.

[73 FR 17186 Mar. 31, 2008]

§ 26.35 Employee assistance programs.

[Top of File]

(a) Each licensee and other entity who is subject to this part shall maintain an EAP to strengthen the FFD program by offering confidential assessment, short-term counseling, referral services, and treatment monitoring to individuals who have problems that could adversely

affect the individuals' abilities to safely and competently perform their duties. Employee assistance programs must be designed to achieve early intervention and provide for confidential assistance.

(b) Licensees and other entities need not provide EAP services to a C/V's employees, including those whose work location is a licensee's or other entity's facility, or to individuals who have applied for, but have not yet been granted, authorization under subpart C of this part.

(c) The EAP staff shall protect the identity and privacy of any individual (including those who have self-referred) seeking assistance from the EAP, except if the individual waives the right to privacy in writing or a determination is made that the individual's condition or actions pose or have posed an immediate hazard to himself or herself or others.

(1) Licensees and other entities may not require the EAP to routinely report the names of individuals who self-refer to the EAP or the nature of the assistance the individuals sought.

(2) If EAP personnel determine that an individual poses or has posed an immediate hazard to himself or herself or others, EAP personnel shall so inform FFD program management, and need not obtain a written waiver of the right to privacy from the individual. The individual conditions or actions that EAP personnel shall report to FFD program management include, but are not limited to, substantive reasons to believe that the individual—

(i) Is likely to commit self-harm or harm to others;

(ii) Has been impaired from using drugs or alcohol while in a work status and has a continuing substance abuse disorder that makes it likely he or she will be impaired while in a work status in the future; or

(iii) Has ever engaged in any acts that would be reportable under § 26.719(b)(1) through (b)(3).

(3) If a licensee or other entity receives a report from EAP personnel under paragraph (c)(2) of this section, the licensee or other entity shall ensure that the requirements of §§ 26.69(d) and 26.77(b) are implemented, as applicable.

[73 FR 17186 Mar. 31, 2008]

§ 26.37 Protection of information.

[Top of File]

(a) Each licensee or other entity who is subject to this subpart who collects personal information about an individual for the purpose of complying with this part, shall establish, use, and maintain a system of files and procedures that protects the individual's privacy.

(b) Licensees and other entities shall obtain a signed consent that authorizes the disclosure of the personal information collected and maintained under this part before disclosing the personal information, except for disclosures to the following individuals:

(1) The subject individual or his or her representative, when the individual has designated the representative in writing for specified FFD matters;

(2) Assigned MROs and MRO staff;

(3) NRC representatives;

(4) Appropriate law enforcement officials under court order;

(5) A licensee's or other entity's representatives who have a need to have access to the information to perform their assigned duties under the FFD program, including determinations of fitness, FFD program audits, or some human resources functions;

(6) The presiding officer in a judicial or administrative proceeding that is initiated by the subject individual;

(7) Persons deciding matters under review in § 26.39; and

(8) Other persons pursuant to court order.

(c) Personal information that is collected under this subpart must be disclosed to other licensees and entities, including C/Vs, or their authorized representatives, who are legitimately seeking the information for authorization decisions as required by this part and who have obtained a signed release from the subject individual.

(d) Upon receipt of a written request by the subject individual or his or her designated representative, the FFD program, including but not limited to, the collection site, HHS-certified laboratory, substance abuse expert (SAE), or MRO, possessing such records shall promptly provide copies of all FFD records pertaining to the individual, including, but not limited to, records pertaining to a determination that the individual has violated the FFD policy, drug and alcohol test results, MRO reviews, determinations of fitness, and management actions pertaining to the subject individual. The licensee or other entity shall obtain records related to the results of any relevant laboratory certification, review, or revocation-of-certification proceedings from the HHS-certified laboratory and provide them to the subject individual

on request.

(e) A licensee's or other entity's contracts with HHS-certified laboratories and C/Vs providing specimen collection services, and licensee testing facility procedures, must require test records to be maintained in confidence, except as provided in paragraphs (b), (c), and (d) of this section.

(f) This section does not authorize the licensee or other entity to withhold evidence of criminal conduct from law enforcement officials.

[73 FR 17186 Mar. 31, 2008]

§ 26.39 Review process for fitness-for-duty policy violations.

[Top of File]

(a) Each licensee and other entity who is subject to this subpart shall establish procedures for the review of a determination that an individual who they employ or who has applied for authorization has violated the FFD policy. The procedure must provide for an objective and impartial review of the facts related to the determination that the individual has violated the FFD policy.

(b) The procedure must provide notice to the individual of the grounds for the determination that the individual has violated the FFD policy, and must provide an opportunity for the individual to respond and submit additional relevant information.

(c) The procedure must ensure that the individual who conducts the review is not associated with the administration of the FFD program [see the description of FFD program personnel in § 26.4(g)]. Individuals who conduct the review may be management personnel.

(d) If the review finds in favor of the individual, the licensee or other entity shall update the relevant records to reflect the outcome of the review and delete or correct all information the review found to be inaccurate.

(e) When a C/V is administering an FFD program on which licensees and other entities rely, and the C/V determines that its employee, subcontractor, or applicant has violated its FFD policy, the C/V shall ensure that the review procedure required in this section is provided to the individual. Licensees and other entities who rely on a C/V's FFD program need not provide the review procedure required in this section to a C/V's employee, subcontractor, or applicant when the C/V is administering its own FFD program and the FFD policy violation was determined under the C/V's program.

[73 FR 17187 Mar. 31, 2008]

§ 26.41 Audits and corrective action.

[Top of File]

(a) *General*. Each licensee and other entity who is subject to this subpart is responsible for the continuing effectiveness of the FFD program, including FFD program elements that are provided by C/Vs, the FFD programs of any C/Vs that are accepted by the licensee or other entity, any FFD program services that are provided to the C/V by a subcontractor, and the programs of the HHS-certified laboratories on whom the licensee or other entity and its C/Vs rely. Each licensee and other entity shall ensure that these programs are audited and that corrective actions are taken to resolve any problems identified.

(b) *FFD program*. Each licensee and other entity who is subject to this subpart shall ensure that the entire FFD program is audited as needed, but no less frequently than nominally every 24 months. Licensees and other entities are responsible for determining the appropriate frequency, scope, and depth of additional auditing activities within the nominal 24-month period based on the review of FFD program performance, including, but not limited to, the frequency, nature, and severity of discovered problems, testing errors, personnel or procedural changes, and previous audit findings.

(c) *C/Vs and HHS-certified laboratories*. (1) FFD services that are provided to a licensee or other entity by C/V personnel who are off site or are not under the direct daily supervision or observation of the licensee's or other entity's personnel and HHS-certified laboratories must be audited on a nominal 12-month frequency.

(2) Audits of HHS-certified laboratories that are conducted for licensees and other entities who are subject to this subpart need not duplicate areas inspected in the most recent HHS certification inspection. However, the licensee and other entity shall review the HHS certification inspection records and reports to identify any areas in which the licensee or other entity uses services that the HHS certification inspection did not address. The licensee or other entity shall ensure that any such areas are audited on a nominal 12-month frequency. Licensees and other entities need not audit organizations and professionals who may provide an FFD program service to the licensee or other entity, but who are not routinely involved in providing services to a licensee's or other entity's FFD program, as specified in § 26.4(i)(1).

(d) *Contracts*. (1) The contracts of licensees and other entities contracts with C/Vs and HHS-certified laboratories must reserve the right to audit the C/V, the C/V's subcontractors providing FFD program services, and the HHS-certified laboratories at any time, including at unannounced times, as well as to review all information and documentation that is reasonably relevant to the audits.

(2) Licensees' and other entities' contracts with C/Vs and HHS-certified laboratories must also permit the licensee or other entity to obtain copies of and take away any documents, including reviews and inspections pertaining to a laboratory's certification by HHS, and any other

data that may be needed to assure that the C/V, its subcontractors, or the HHS-certified laboratory are performing their functions properly and that staff and procedures meet applicable requirements. In a contract with a licensee or other entity who is subject to this subpart, an HHS-certified laboratory may reasonably limit the use and dissemination of any documents copied or taken away by the licensee's or other entity's auditors in order to ensure the protection of proprietary information and donors' privacy.

(3) In addition, before awarding a contract, the licensee or other entity shall ensure completion of pre-award inspections and/or audits of the procedural aspects of the HHS-certified laboratory's drug-testing operations, except as provided in paragraph (g)(5) of this section.

(e) *Conduct of audits*. Audits must focus on the effectiveness of the FFD program or program element(s), as appropriate, and must be conducted by individuals who are qualified in the subject(s) being audited. The individuals performing the audit of the FFD program or program element(s) shall be independent from both the subject FFD program's management and from personnel who are directly responsible for implementing the FFD program.

(f) *Audit results*. The result of the audits, along with any recommendations, must be documented and reported to senior corporate and site management. Each audit report must identify conditions that are adverse to the proper performance of the FFD program, the cause of the condition(s), and recommended corrective actions. The licensee or other entity shall review the audit findings and take corrective actions, including re-auditing of the deficient areas where indicated, to preclude, within reason, repetition of the condition. The resolution of the audit findings and corrective actions must be documented.

(g) *Sharing of audits*. Licensees and other entities may jointly conduct audits, or may accept audits of C/Vs and HHS-certified laboratories that were conducted by other licensees and entities who are subject to this subpart, if the audit addresses the services obtained from the C/V or HHS-certified laboratory by each of the sharing licensees and other entities.

(1) Licensees and other entities shall review audit records and reports to identify any areas that were not covered by the shared or accepted audit.

(2) Licensees and other entities shall ensure that FFD program elements and services on which the licensee or entity relies are audited, if the program elements and services were not addressed in the shared audit.

(3) Sharing licensees and other entities need not re-audit the same C/V or HHS-certified laboratory for the same period of time.

(4) Each sharing licensee and other entity shall maintain a copy of the shared audit and HHS certification inspection records and reports, including findings, recommendations, and corrective actions.

(5) If an HHS-certified laboratory loses its certification, in whole or in part, a licensee or other entity is permitted to immediately use another HHS-certified laboratory that has been audited within the previous 12 months by another NRC licensee or entity who is subject to this subpart. Within 3 months after the change, the licensee or other entity shall ensure that an audit is completed of any areas that have not been audited by another licensee or entity who is subject to this subpart within the past 12 months.

[73 FR 17187 Mar. 31, 2008]

Subpart C—Granting and Maintaining Authorization

[Top of File]

§ 26.51 Applicability.

The requirements in this subpart apply to the licensees and other entities identified in § 26.3(a), (b), and, as applicable, (c) for the categories of individuals in § 26.4(a) through (d), and, at the licensee's or other entity's discretion, in § 26.4(g) and, if necessary, § 26.4 (j). The requirements in this subpart also apply to the licensees and other entities specified in § 26.3(c), as applicable, for the categories of individuals in § 26.4(e). At the discretion of a licensee or other entity in § 26.3(c), the requirements of this subpart also may be applied to the categories of individuals identified in § 26.4(f). In addition, the requirements in this subpart apply to the entities in § 26.3(d) to the extent that a licensee or other entity relies on the C/V to meet the requirements of this subpart. Certain requirements in this subpart also apply to the individuals specified in § 26.4(h).

[73 FR 17188 Mar. 31, 2008]

§ 26.53 General provisions.

[Top of File]

(a) In order to grant authorization to an individual, a licensee or other entity shall ensure that the requirements in this subpart have been met for either initial authorization, authorization update, authorization reinstatement, or authorization with potentially disqualifying FFD information, as applicable.

(b) For individuals who have previously held authorization under this part but whose authorization has since been favorably terminated, the licensee or other entity shall implement the requirements for either initial authorization, authorization update, or authorization reinstatement, based on the total number of days that the individual's authorization is interrupted, to include the day after the individual's last period of authorization was terminated and the intervening days until the day on which the licensee or other entity grants authorization

to the individual. If potentially disqualifying FFD information is disclosed or discovered about an individual, licensees and other entities shall implement the applicable requirements in § 26.69 in order to grant or maintain an individual's authorization.

(c) The licensee or other entity shall ensure that an individual has met the applicable FFD training requirements in §§ 26.29 and 26.203(c) before granting authorization to the individual.

(d) Licensees and other entities who are seeking to grant authorization to an individual who is maintaining authorization under another FFD program that is implemented by a licensee or entity who is subject to this subpart may rely on the transferring FFD program to satisfy the requirements of this subpart. The individual may maintain his or her authorization if he or she continues to be subject to either the receiving FFD program or the transferring FFD program, or a combination of elements from both programs that collectively satisfy the applicable requirements of this part. The receiving FFD program shall ensure that the program elements to which the individual is subject under the transferring FFD program remain current.

(e) Licensees and other entities in § 26.3(a) through (c) may also rely on a C/V's FFD program or program elements when granting or maintaining the authorization of an individual who is or has been subject to the C/V's FFD program, if the C/V's program or program elements meet the applicable requirements of this part.

(1) A C/V's FFD program may grant and maintain an individual's authorization, as defined in § 26.5, under the C/V's FFD program. However, only a licensee or other entity in § 26.3(a) through (c) may grant or maintain an individual's authorization to have the types of access or perform the duties specified in § 26.4(a) through (e) and (g), and, at the licensee's or other entity's discretion, § 26.4(f).

(2) If a C/V's FFD program denies or unfavorably terminates an individual's authorization, and the individual is performing any duties for a licensee or other entity that are specified in § 26.4(a) through (e) and (g), or, at the licensee's or other entity's discretion, § 26.4(f), then the C/V shall inform the affected licensee or other entity of the denial or unfavorable termination. The licensee or other entity shall deny or unfavorably terminate the individual's authorization to perform those duties on the day that the licensee or other entity receives the information from the C/V, or implement the applicable process in § 26.69 to maintain the individual's authorization.

(3) If an individual is maintaining authorization under a C/V's FFD program, a licensee or other entity in § 26.3(a) through (c) may grant authorization to the individual to have the types of access and perform the duties specified in § 26.4(a) through (e) and (g), and, at the licensee's or other entity's discretion, § 26.4(f), and maintain his or her authorization, if the individual continues to be subject to either the receiving FFD program or a combination of elements from the receiving FFD program and the C/V's program that collectively satisfy the applicable requirements of this part. The receiving licensee's or other entity's FFD program shall ensure that the program elements to which the individual is subject under the C/V's FFD program remain current.

(f) Licensees and other entities who are seeking to grant authorization to an individual who has been subject to an FFD program under subpart K may not rely on that program or its program elements to meet the requirements of this subpart, except if the program or program element(s) of the FFD program for construction satisfy the applicable requirements of this part.

(g) The licensees and other entities specified in § 26.3(a) and, as applicable, (c) and (d), shall identify any violation of any requirement of this part to any licensee who has relied on or intends to rely on the FFD program element that is determined to be in violation of this part.

(h) The licensees and other entities specified in § 26.3(a) and, as applicable, (c) and (d), may not initiate any actions under this subpart without the knowledge and written consent of the subject individual. The individual may withdraw his or her consent at any time. If an individual withdraws his or her consent, the licensee or other entity may not initiate any elements of the authorization process specified in this subpart that were not in progress at the time the individual withdrew his or her consent, but shall complete and document any elements that are in progress at the time consent is withdrawn. The licensee or other entity shall record the individual's application for authorization; his or her withdrawal of consent; the reason given by the individual for the withdrawal, if any; and any pertinent information gathered from the elements that were completed (e.g., the results of pre-access drug tests, information obtained from the suitable inquiry). The licensee or other entity to whom the individual has applied for authorization shall inform the individual that—

(1) Withdrawal of his or her consent will withdraw the individual's current application for authorization under the licensee's or other entity's FFD program; and

(2) Other licensees and entities will have access to information documenting the withdrawal as a result of the information sharing that is required under this part.

(i) The licensees and other entities specified in § 26.3(a) and, as applicable, (c) and(d), shall inform, in writing, any individual who is applying for authorization that the following actions related to providing and sharing the personal information required under this subpart are sufficient cause for denial or unfavorable termination of authorization:

(1) Refusal to provide written consent for the suitable inquiry;

(2) Refusal to provide or the falsification of any personal information required under this part, including, but not limited to, the failure to report any previous denial or unfavorable termination of authorization;

(3) Refusal to provide written consent for the sharing of personal information with other licensees or other entities required under this part; and

(4) Failure to report any legal actions, as defined in § 26.5.

[73 FR 17188 Mar. 31, 2008]

§ 26.55 Initial authorization.

[Top of File]

(a) Before granting authorization to an individual who has never held authorization under this part or whose authorization has been interrupted for a period of 3 years or more and whose last period of authorization was terminated favorably, the licensee or other entity shall ensure that—

(1) A self-disclosure has been obtained and reviewed under the applicable requirements of § 26.61;

(2) A suitable inquiry has been completed under the applicable requirements of § 26.63;

(3) The individual has been subject to pre-access drug and alcohol testing under the applicable requirements of § 26.65; and

(4) The individual is subject to random drug and alcohol testing under the applicable requirements of § 26.67.

(b) If potentially disqualifying FFD information is disclosed or discovered, the licensee or other entity may not grant authorization to the individual, except under § 26.69.

[73 FR 17189 Mar. 31, 2008]

§ 26.57 Authorization update.

[Top of File]

(a) Before granting authorization to an individual whose authorization has been interrupted for more than 365 days but less than 3 years and whose last period of authorization was terminated favorably, the licensee or other entity shall ensure that—

(1) A self-disclosure has been obtained and reviewed under the applicable requirements of § 26.61;

(2) A suitable inquiry has been completed under the applicable requirements of § 26.63;

(3) The individual has been subject to pre-access drug and alcohol testing under the applicable requirements of § 26.65; and

(4) The individual is subject to random drug and alcohol testing under the applicable requirements of § 26.67.

(b) If potentially disqualifying FFD information is disclosed or discovered, the licensee or other entity may not grant authorization to the individual, except under § 26.69.

[73 FR 17189 Mar. 31, 2008]

§ 26.59 Authorization reinstatement.

[Top of File]

(a) In order to grant authorization to an individual whose authorization has been interrupted for a period of more than 30 days but no more than 365 days and whose last period of authorization was terminated favorably, the licensee or other entity shall ensure that—

(1) A self-disclosure has been obtained and reviewed under the applicable requirements of § 26.61;

(2) A suitable inquiry has been completed under the requirements of § 26.63 within 5 business days of reinstating authorization. If the suitable inquiry is not completed within 5 business days due to circumstances that are outside of the licensee's or other entity's control and the licensee or other entity is not aware of any potentially disqualifying information regarding the individual within the past 5 years, the licensee or other entity may maintain the individual's authorization for an additional 5 business days. If the suitable inquiry is not completed within 10 business days of reinstating authorization, the licensee or other entity shall administratively withdraw the individual's authorization until the suitable inquiry is completed;

(3) The individual has been subject to pre-access drug and alcohol testing under the applicable requirements of § 26.65; and

(4) The individual is subject to random drug and alcohol testing under the applicable requirements of § 26.67.

(b) If a licensee or other entity administratively withdraws an individual's authorization under paragraph (a)(2) of this section, and until the suitable inquiry is completed, the licensee or other entity may not record the administrative action to withdraw authorization as an unfavorable termination and may not disclose it in response to a suitable inquiry conducted under the provisions of § 26.63, a background investigation conducted under the provisions of this chapter, or any other inquiry or investigation. The individual may not be required to

disclose the administrative action in response to requests for self-disclosure of potentially disqualifying FFD information, except if the individual's authorization was subsequently denied or terminated unfavorably by the licensee or other entity.

(c) Before granting authorization to an individual whose authorization has been interrupted for a period of no more than 30 days and whose last period of authorization was terminated favorably, the licensee or other entity shall ensure that—

(1) A self-disclosure has been obtained and reviewed under the applicable requirements of § 26.61;

(2) The individual has been subject to pre-access drug and alcohol testing under the applicable requirements of § 26.65, if the individual's authorization was interrupted for more than 5 days; and

(3) The individual is subject to random drug and alcohol testing under the applicable requirements of § 26.67.

(d) If potentially disqualifying FFD information is disclosed or discovered, the licensee or other entity may not gant authorization to the individual, except under § 26.69.

[73 FR 17189 Mar. 31, 2008]

§ 26.61 Self-disclosure and employment history.

[Top of File]

(a) Before granting authorization, the licensee or other entity shall ensure that a written self-disclosure and employment history has been obtained from the individual who is applying for authorization, except as follows:

(1) If an individual previously held authorization under this part, and the licensee or other entity has verified that the individual's last period of authorization was terminated favorably, and the individual has been subject to a behavioral observation program that includes arrest reporting, which meets the requirements of this part, throughout the period since the individual's last authorization was terminated, the granting licensee or other entity need not obtain the self-disclosure or employment history in order to grant authorization; and

(2) If the individual's last period of authorization was terminated favorably within the past 30 days, the licensee or other entity need not obtain the employment history.

(b) The written self-disclosure must—

(1) State whether the individual has—

(i) Violated a licensee's or other entity's FFD policy;

(ii) Had authorization denied or terminated unfavorably under §§ 26.35(c)(2), 26.53(i), 26.63(d), 26.65(g), 26.67(c), 26.69(f), or 26.75(b) through (e);

(iii) Used, sold, or possessed illegal drugs;

(iv) Abused legal drugs or alcohol;

(v) Subverted or attempted to subvert a drug or alcohol testing program;

(vi) Refused to take a drug or alcohol test;

(vii) Been subject to a plan for substance abuse treatment (except for self-referral); or (viii) Had legal action or employment action, as defined in § 26.5, taken for alcohol or drug use;

(2) Address the specific type, duration, and resolution of any matter disclosed, including, but not limited to, the reason(s) for any unfavorable termination or denial of authorization; and

(3) Address the shortest of the following periods:

(i) The past 5 years;

(ii) Since the individual's eighteenth birthday; or

(iii) Since the individual's last period of authorization was terminated, if authorization was terminated favorably within the past 3 years.

(c) The individual shall provide a list of all employers, including the employer by whom the individual claims to have been employed on the day before he or she completes the employment history, if any, with dates of employment, for the shortest of the following periods:

(1) The past 3 years;

(2) Since the individual's eighteenth birthday; or

(3) Since authorization was last terminated, if authorization was terminated favorably within the past 3 years.

[73 FR 17190 Mar. 31, 2008]

§ 26.63 Suitable inquiry.

[Top of File]

(a) In order to grant authorization, licensees and other entities shall ensure that a suitable inquiry has been conducted, on a best effort basis, to verify the individual's self-disclosed information and determine whether any potentially disqualifying FFD information is available, except if all of the following conditions are met:

(1) The individual previously held authorization under this part;

(2) The licensee or other entity has verified that the individual's last period of authorization was terminated favorably; and

(3) The individual has been subject to a behavioral observation program that includes arrest reporting, which meets the requirements of this part, throughout the period of interruption.

(b) To meet the suitable inquiry requirement, licensees and other entities may rely on the information that other licensees and entities who are subject to this subpart have gathered for previous periods of authorization. Licensees and other entities may also rely on those licensees' and entities' determinations of fitness that were conducted under § 26.189, as well as their reviews and resolutions of potentially disqualifying FFD information, for previous periods of authorization.

(c) The licensee or other entity shall ensure that the suitable inquiry has been conducted, on a best effort basis, by questioning former employers, and the employer by whom the individual claims to have been employed on the day before he or she completes the employment history, if an employment history is required under § 26.61.

(1) For the claimed employment period, the suitable inquiry must ascertain the reason for termination, eligibility for rehire, and other information that could reflect on the individual's fitness to be granted authorization.

(2) If the claimed employment was military service, the licensee or other entity who is conducting the suitable inquiry shall request a characterization of service, reason for separation, and any disciplinary actions related to potentially disqualifying FFD information. If the individual's last duty station cannot provide this information, the licensee or other entity may accept a hand-carried copy of the DD 214 presented by the individual which on face value appears to be legitimate. The licensee or other entity may also accept a copy of a DD 214 provided by the custodian of military records.

(3) If a company, previous employer, or educational institution to whom the licensee or other entity has directed a request for information refuses to provide information or indicates an inability or unwillingness to provide information within 3 business days of the request, the licensee or other entity shall document this refusal, inability, or unwillingness in the licensee's or other entity's record of the investigation, and obtain a confirmation of employment or educational enrollment and attendance from at least one alternate source, with suitable inquiry questions answered to the best of the alternate source's ability. This alternate source may not have been previously used by the licensee or other entity to obtain information about the individual's character. If the licensee or other entity uses an alternate source because employer information is not forthcoming within 3 business days of the request, the licensee or other entity need not delay granting authorization to wait for any employer response, but shall evaluate and document the response if it is received.

(d) When any licensee or other entity in § 26.3(a) through (d) is legitimately seeking the information required for an authorization decision under this subpart and has obtained a signed release from the subject individual authorizing the disclosure of information, any licensee or other entity who is subject to this part shall disclose whether the subject individual's authorization was denied or terminated unfavorably as a result of a violation of an FFD policy and shall make available the information on which the denial or unfavorable termination of authorization was based, including, but not limited to, drug or alcohol test results, treatment and followup testing requirements or other results from a determination of fitness, and any other information that is relevant to an authorization decision.

(e) In conducting a suitable inquiry, a licensee or other entity may obtain information and documents by electronic means, including, but not limited to, telephone, facsimile, or e-mail. The licensee or other entity shall make a record of the contents of the telephone call and shall retain that record, and any documents or electronic files obtained electronically, under §§ 26.711 and 26.713(a), (b), and (c), as applicable.

(f) For individuals about whom no potentially disqualifying FFD information is known (or about whom potentially disqualifying FFD information is known, but it has been resolved by a licensee or other entity who is subject to this subpart) at the time at which the suitable inquiry is initiated, the licensee or other entity shall ensure that a suitable inquiry has been conducted as follows:

(1) Initial authorization. The period of the suitable inquiry must be the past 3 years or since the individual's eighteenth birthday, whichever is shorter. For the 1-year period immediately preceding the date on which the individual applies for authorization, the licensee or other entity shall ensure that the suitable inquiry has been conducted with every employer, regardless of the length of employment. For the remaining 2-year period, the licensee or other entity shall ensure that the suitable inquiry has been conducted with the employer by whom

the individual claims to have been employed the longest within each calendar month, if the individual claims employment during the given calendar month.

(2) Authorization update. The period of the suitable inquiry must be the period since authorization was terminated. For the 1-year period immediately preceding the date on which the individual applies for authorization, the licensee or other entity shall ensure that the suitable inquiry has been conducted with every employer, regardless of the length of employment. For the remaining period since authorization was terminated, the licensee or other entity shall ensure that the suitable inquiry has been conducted with the employer by whom the individual claims to have been employed the longest within each calendar month, if the individual claims employment during the given calendar month.

(3) Authorization reinstatement after an interruption of more than 30 days. The period of the suitable inquiry must be the period since authorization was terminated. The licensee or other entity shall ensure that the suitable inquiry has been conducted with the employer by whom the individual claims to have been employed the longest within the calendar month, if the individual claims employment during the given calendar month.

[73 FR 17190 Mar. 31, 2008]

§ 26.65 Pre-access drug and alcohol testing.

[Top of File]

(a) *Purpose*. This section contains pre-access testing requirements for granting authorization to an individual who either has never held authorization or whose last period of authorization was terminated favorably and about whom no potentially disqualifying FFD information has been discovered or disclosed that was not previously reviewed and resolved by a licensee or other entity under the requirements of this subpart.

(b) *Accepting tests conducted within the past 30 days*. If an individual has negative results from drug and alcohol tests that were conducted under the requirements of this part before the individual applied for authorization from the licensee or other entity, and the specimens for such testing were collected within the 30-day period preceding the day on which the licensee or other entity grants authorization to the individual, the licensee or other entity may rely on the results of those drug and alcohol tests to meet the requirements for pre-access testing in this section.

(c) *Initial authorization and authorization update*. Before granting authorization to an individual who has never held authorization or whose authorization has been interrupted for a period of more than 365 days, the licensee or other entity shall verify that the results of pre-access drug and alcohol tests, which must be performed within the 30-day period preceding the day the licensee or other entity grants authorization to the individual, are negative. The licensee or other entity need not conduct pre-access testing if—

(1) The individual previously held authorization under this part and has been subject to a drug and alcohol testing program that includes random testing and a behavioral observation program that includes arrest reporting, which both meet the requirements of this part, from the date the individual's last authorization was terminated through the date the individual is granted authorization; or

(2) The licensee or other entity relies on negative results from drug and alcohol tests that were conducted under the requirements of this part at any time before the individual applied for authorization, and the individual has remained subject to a drug and alcohol testing program that includes random testing and a behavioral observation program that includes arrest reporting, which both meet the requirements of this part, beginning on the date the drug and alcohol testing was conducted through the date the individual is granted authorization and thereafter.

(d) *Authorization reinstatement after an interruption of more than 30 days*. (1) To reinstate authorization for an individual whose authorization has been interrupted for a period of more than 30 days but no more than 365 days, except as permitted in paragraph (d)(2) of this section, the licensee or other entity shall—

(i) Verify that the individual has negative results from alcohol testing and collect a specimen for drug testing within the 30-day period preceding the day the licensee reinstates the individual's authorization; and

(ii) Verify that the drug test results are negative within 5 business days of specimen collection or administratively withdraw authorization until the drug test results are received.

(2) The licensee or other entity need not conduct pre-access testing of these individuals if—

(i) The individual previously held authorization under this part and has been subject to a drug and alcohol testing program that includes random testing and a behavioral observation program that includes arrest reporting, which both meet the requirements of this part, beginning on the date the individual's last authorization was terminated through the date the individual is granted authorization; or

(ii) The licensee or other entity relies on negative results from drug and alcohol tests that were conducted under the requirements of this part at any time before the individual applied for authorization, and the individual remains subject to a drug and alcohol testing program that includes random testing and a behavioral observation program that includes arrest reporting, which both meet the requirements of this part, beginning on the date the drug and alcohol testing was conducted through the date the individual is granted authorization.

(e) *Authorization reinstatement after an interruption of 30 or fewer days.* (1) The licensee or other entity need not conduct pre-access testing before granting authorization to an individual whose authorization has been interrupted for 5 or fewer days. In addition, the licensee

or other entity need not conduct pre-access testing if the individual has been subject to a drug and alcohol testing program that includes random testing and a behavioral observation program that includes arrest reporting, which both meet the requirements of this part, from the date the individual's last authorization was terminated through the date the individual is granted authorization.

(2) In order to reinstate authorization for an individual whose authorization has been interrupted for a period of more than 5 days but not more than 30 days, except as permitted in paragraph (e)(1) of this section, the licensee or other entity shall take the following actions:

(i) The licensee or other entity shall subject the individual to random selection for pre-access drug and alcohol testing at a one-time probability that is equal to or greater than the normal testing rate specified in § 26.31(d)(2)(vii) calculated for a 30-day period;

(ii) If the individual is not selected for pre-access testing under paragraph (e)(2)(i) of this section, the licensee or other entity need not perform pre-access drug and alcohol tests; or

(iii) If the individual is selected for pre-access testing under this paragraph, the licensee or other entity shall—

(A) Verify that the individual has negative results from alcohol testing and collect a specimen for drug testing before reinstating authorization; and

(B) Verify that the drug test results are negative within 5 business days of specimen collection or administratively withdraw authorization until negative drug test results are received.

(f) *Administrative withdrawal of authorization*. If a licensee or other entity administratively withdraws an individual's authorization under paragraphs (d)(1)(ii) or (e)(2)(iii)(B) of this section, and until the drug test results are known, the licensee or other entity may not record the administrative action to withdraw authorization as an unfavorable termination. The individual may not be required to disclose the administrative action in response to requests for self-disclosure of potentially disqualifying FFD information, except if the individual's authorization was subsequently denied or terminated unfavorably by a licensee or entity. Immediately on receipt of negative test results, the licensee or other entity shall ensure that any matter that could link the individual to the temporary administrative action is eliminated from the donor's personnel record and other records.

(g) *Sanctions*. If an individual has confirmed positive, adulterated, or substituted test results from any drug, validity, or alcohol tests that may be required in this section, the licensee or other entity shall, at a minimum and as appropriate—

(1) Deny authorization to the individual, as required by § 26.75(b), (d), (e)(2), or (g);

(2) Terminate the individual's authorization, if it has been reinstated, under § 26.75(e)(1) or (f); or

(3) Grant authorization to the individual under § 26.69.

[73 FR 17191 Mar. 31, 2008]

§ 26.67 Random drug and alcohol testing of individuals who have applied for authorization.

[Top of File]

(a) When the licensee or other entity collects specimens from an individual for any pre-access testing that may be required under §§ 26.65 or 26.69, and thereafter, the licensee or other entity shall subject the individual to random testing under § 26.31(d)(2), except if—

(1) The licensee or other entity does not grant authorization to the individual; or

(2) The licensee or other entity relies on drug and alcohol tests that were conducted before the individual applied for authorization to meet the applicable requirements for pre-access testing. If the licensee or other entity relies on drug and alcohol tests that were conducted before the individual applied for authorization, the licensee or other entity shall subject the individual to random testing when the individual arrives at a licensee's or other entity's facility for in-processing and thereafter.

(b) If an individual is selected for one or more random tests after any applicable requirement for pre-access testing in §§ 26.65 or 26.69 has been met, the licensee or other entity may grant authorization before random testing is completed, if the individual has met all other applicable requirements for authorization.

(c) If an individual has confirmed positive, adulterated, or substituted test results from any drug, validity, or alcohol test required in this section, the licensee or other entity shall, at a minimum and as appropriate—

(1) Deny authorization to the individual, as required by § 26.75(b), (d), (e)(2), or (g);

(2) Terminate the individual's authorization, if it has been granted, as required by § 26.75(e)(1) or (f); or

(3) Grant authorization to the individual under § 26.69.

[73 FR 17192 Mar. 31, 2008]

§ 26.69 Authorization with potentially disqualifying fitness-for-duty information.

[Top of File]

(a) *Purpose*. This section defines the management actions that licensees and other entities who are subject to this subpart shall take to grant or maintain, at the licensee's or other entity's discretion, the authorization of an individual who is in the following circumstances:

(1) Potentially disqualifying FFD information within the past 5 years has been disclosed or discovered about the individual by any means, including, but not limited to, the individual's self-disclosure, the suitable inquiry, drug and alcohol testing, the administration of any FFD program under this part, a self-report of a legal action, behavioral observation, or other sources of information, including, but not limited to, any background investigation or credit and criminal history check conducted under the requirements of this chapter; and

(2) The potentially disqualifying FFD information has not been reviewed and favorably resolved by a previous licensee or other entity under this section.

(b) *Authorization after a first confirmed positive drug or alcohol test result or a 5-year denial of authorization*. The requirements in this paragraph apply to individuals whose authorization was denied or terminated unfavorably for a first violation of an FFD policy involving a confirmed positive drug or alcohol test result and individuals whose authorization was denied for 5 years under § 26.75(c), (d), (e)(2), or (f). To grant, and subsequently maintain, the individual's authorization, the licensee or other entity shall—

(1) Obtain and review a selfdisclosure and employment history from the individual that addresses the shorter period of either the past 5 years or since the individual's last period of authorization was terminated, and verify that the self-disclosure does not contain any previously undisclosed potentially disqualifying FFD information before granting authorization;

(2) Complete a suitable inquiry with every employer by whom the individual claims to have been employed during the period addressed in the employment history obtained under paragraph (b)(1) of this section, and obtain and review any records that other licensees or entities who are subject to this part may have developed related to the unfavorable termination or denial of authorization;

(3) If the individual was subject to a 5-year denial of authorization under this part, verify that he or she has abstained from substance abuse for at least the past 5 years;

(4) Ensure that an SAE has conducted a determination of fitness and concluded that the individual is fit to safely and competently perform his or her duties.

(i) If the individual's authorization was denied or terminated unfavorably for a first confirmed positive drug or alcohol test result, ensure that clinically appropriate treatment and followup testing plans have been developed by an SAE before granting authorization;

(ii) If the individual was subject to a 5-year denial of authorization, ensure that any recommendations for treatment and followup testing from an SAE's determination of fitness are initiated before granting authorization; and

(iii) Verify that the individual is in compliance with, and successfully completes, any followup testing and treatment plans.

(5) Within 10 business days before granting authorization, perform a pre-access alcohol test, collect a specimen for drug testing under direct observation, and ensure that the individual is subject to random testing thereafter. Verify that the pre-access drug and alcohol test results are negative before granting authorization.

(6) If the individual's authorization was denied or terminated unfavorably for a first confirmed positive drug or alcohol test result and a licensee or other entity grants authorization to the individual, ensure that the individual is subject to unannounced testing at least quarterly for 3 calendar years after the date the individual is granted authorization. Both random and followup tests, as defined in § 26.31(c), satisfy this requirement. Verify that the individual has negative test results from a minimum of 15 tests distributed over the 3-year period, except as follows:

(i) If the individual does not continuously hold authorization during the 3-year period, the licensee or other entity shall ensure that at least one unannounced test is conducted in any quarter during which the individual holds authorization;

(ii) If the 15 tests are not completed within the 3-year period specified in this paragraph due to periods during which the individual does not hold authorization, the followup testing program may be extended up to 5 calendar years to complete the 15 tests;

(iii) If the individual does not hold authorization during the 5-year period a sufficient number of times or for sufficient periods of time to complete the 15 tests required in this paragraph, the licensee or other entity shall ensure that an SAE conducts a determination of fitness to assess whether further followup testing is required and implement the SAE's recommendations; and

(7) Verify that any drug and alcohol tests required in this paragraph, and any other drug and alcohol tests that are conducted under this part since authorization was terminated or denied, yield results indicating no further drug abuse, as determined by the MRO after review, or alcohol abuse, as determined by the result of confirmatory alcohol testing.

(c) *Granting authorization with other potentially disqualifying FFD information*. The requirements in this paragraph apply to an individual who has applied for authorization, and about whom potentially disqualifying FFD information has been discovered or disclosed that is not a

first confirmed positive drug or alcohol test result or a 5-year denial of authorization. If potentially disqualifying FFD information is obtained about an individual by any means, including, but not limited to, the individual's self-disclosure, the suitable inquiry, the administration of any FFD program under this part, a self-report of a legal action, behavioral observation, or other sources of information, including, but not limited to, any background investigation or credit and criminal history check conducted under the requirements of this chapter, before granting authorization to the individual, the licensee or other entity shall—

(1) Obtain and review a selfdisclosure and employment history that addresses the shortest of the following periods:

(i) The past 5 years;

(ii) Since the individual's eighteenth birthday; or

(iii) Since the individual's last period of authorization was terminated;

(2) Complete a suitable inquiry with every employer by whom the individual claims to have been employed during the period addressed in the employment history required under paragraph (c)(1) of this section. If the individual held authorization within the past 5 years, obtain and review any records that other licensees or entities who are subject to this part may have developed with regard to potentially disqualifying FFD information about the individual from the past 5 years;

(3) If the designated reviewing official determines that a determination of fitness is required, verify that a professional with the appropriate qualifications, as specified in § 26.187(a), has indicated that the individual is fit to safely and competently perform his or her duties;

(4) Ensure that the individual is in compliance with, or has completed, any plans for treatment and drug and alcohol testing from the determination of fitness, which may include the collection of a urine specimen under direct observation; and

(5) Verify that the results of pre-access drug and alcohol tests are negative before granting authorization, and that the individual is subject to random testing after the specimens have been collected for pre-access testing and thereafter.

(d) *Maintaining authorization with other potentially disqualifying FFD information*. If an individual is authorized when other potentially disqualifying FFD information is disclosed or discovered, in order to maintain the individual's authorization, the licensee or other entity shall —

(1) Ensure that the licensee's or other entity's designated reviewing official completes a review of the circumstances associated with the information;

(2) If the designated reviewing official concludes that a determination of fitness is required, verify that a professional with the appropriate qualifications, as specified in § 26.187(a), has indicated that the individual is fit to safely and competently perform his or her duties; and

(3) If the reviewing official determines that maintaining the individual's authorization is warranted, implement any recommendations for treatment and followup drug and alcohol testing from the determination of fitness, which may include the collection of urine specimens under direct observation, and ensure that the individual complies with and successfully completes the treatment plans.

(e) *Accepting followup testing and treatment plans from another FFD program*. Licensees and other entities may rely on followup testing, treatment plans, and determinations of fitness that meet the requirements of § 26.189 and were conducted under the FFD program of another licensee or entity who is subject to this subpart.

(1) If an individual leaves the FFD program in which a treatment and/or followup testing plan was required under paragraphs (b), (c), or (d) of this section, the licensee or other entity who imposed the treatment and/or followup testing plan shall ensure that information documenting the treatment and/or followup testing plan is identified to any subsequent licensee or other entity who seeks to grant authorization to the individual. If the individual is granted authorization by the same or another licensee or entity, the licensee or other entity who grants authorization to the individual shall ensure that any followup testing requirements are met and that the individual complies with any treatment plan, with accountability assumed by the granting licensee or other entity. If it is impractical for the individual to comply with a treatment plan that was developed under another FFD program because of circumstances that are outside of the individual's or licensee's or other entity's control (e.g., geographical distance, closure of a treatment facility), then the granting FFD program shall ensure that an SAE develops a comparable treatment plan, with accountability for monitoring the individual's compliance with the plan assumed by the granting licensee or other entity.

(2) If the previous licensee or other entity determined that the individual successfully completed any required treatment and followup testing, and the individual's last period of authorization was terminated favorably, the receiving licensee or entity may rely on the previous determination of fitness and no further review or followup is required.

(f) *Sanctions*. If an individual has confirmed positive, adulterated, or substituted test results from any drug, validity, or alcohol test required in this section, the licensee or other entity shall, at a minimum and as appropriate—

(1) Deny authorization to the individual, as required by § 26.75(b), (d), (e)(2), or (g); or

(2) Terminate the individual's authorization, if it has been granted, as required by § 26.75(e)(1) or (f).

[73 FR 17192 Mar. 31, 2008]

§ 26.71 Maintaining authorization.

[Top of File]

(a) Individuals may maintain authorization under the following conditions:

(1) The individual complies with the licensee's or other entity's FFD policies and procedures, as described in § 26.27, including the responsibility to report any legal actions, as defined in § 26.5;

(2) The individual remains subject to a drug and alcohol testing program that meets the requirements of § 26.31, including random testing;

(3) The individual remains subject to a behavioral observation program that meets the requirements of § 26.33; and

(4) The individual successfully completes required FFD training on the schedule specified in § 26.29(c).

(b) If an authorized individual is not subject to an FFD program that meets the requirements of this section for more than 30 continuous days, then the licensee or other entity shall terminate the individual's authorization and the individual shall meet the requirements in this subpart, as applicable, to regain authorization.

[54 FR 24494, June 7, 1989, as amended at 57 FR 55444, Nov. 25, 1992; 73 FR 17194 Mar. 31, 2008]

Subpart D—Management Actions and Sanctions To Be Imposed

[Top of File]

§ 26.73 Applicability.

The requirements in this subpart apply to the licensees and other entities identified in § 26.3(a), (b), and, as applicable, (c) for the categories of individuals specified in § 26.4(a) through (d) and (g). The requirements in this subpart also apply to the licensees and other entities specified in § 26.3(c), as applicable, for the categories of individuals in § 26.4(e). At the discretion of a licensee or other entity in § 26.3(c), the requirements of this subpart also may be applied to the categories of individuals identified in § 26.4(f). In addition, the requirements in this subpart apply to the entities in § 26.3(d) to the extent that a licensee or other entity relies on the C/V to meet the requirements of this subpart. The regulations in this subpart also apply to the individuals specified in § 26.4(h) and (j), as appropriate.

[54 FR 24494, June 7, 1989; 54 FR 47451, Nov. 14, 1989, as amended at 58 FR 31470, June 3, 1993; 73 FR 17194 Mar. 31, 2008]

§ 26.75 Sanctions.

[Top of File]

(a) This section defines the minimum sanctions that licensees and other entities shall impose when an individual has violated the drug and alcohol provisions of an FFD policy. A licensee or other entity may impose more stringent sanctions, except as specified in paragraph (h) of this section.

(b) Any act or attempted act to subvert the testing process, including, but not limited to, refusing to provide a specimen and providing or attempting to provide a substituted or adulterated specimen, for any test required under § 26.31(c) must result in the immediate unfavorable termination of the individual's authorization and permanent denial of authorization thereafter.

(c) Any individual who is determined to have been involved in the sale, use, or possession of illegal drugs or the consumption of alcohol within a protected area of any nuclear power plant, within a facility that is licensed to possess or use formula quantities of SSNM, within a transporter's facility or vehicle, or while performing the duties that require the individual to be subject to this subpart shall immediately have his or her authorization unfavorably terminated and denied for a minimum of 5 years from the date of the unfavorable termination of authorization.

(d) Any individual who resigns or withdraws his or her application for authorization before authorization is terminated or denied for a first violation of the FFD policy involving a confirmed positive drug or alcohol test result shall immediately have his or her authorization denied for a minimum of 5 years from the date of termination or denial. If an individual resigns or withdraws his or her application for authorization before his or her authorization is terminated or denied for any violation of the FFD policy, the licensee or other entity shall record the resignation or withdrawal, the nature of the violation, and the minimum sanction that would have been required under this section had the individual not resigned or withdrawn his or her application for authorization.

(e) Lacking any other evidence to indicate the use, sale, or possession of illegal drugs or consumption of alcohol on site, a confirmed positive drug or alcohol test result must be presumed to be an indication of offsite drug or alcohol use in violation of the FFD policy.

(1) The first violation of the FFD policy involving a confirmed positive drug or alcohol test result must, at a minimum, result in the immediate unfavorable termination of the individual's authorization for at least 14 days from the date of the unfavorable termination.

(2) Any subsequent confirmed positive drug or alcohol test result, including during an assessment or treatment period, must result in the denial of authorization for a minimum of 5 years from the date of denial.

(f) Paragraph (e) of this section does not apply to the misuse of prescription and over-the-counter drugs, except if the MRO determines that misuse of the prescription or over-the-counter drug represents substance abuse. Sanctions for misuse of prescription and over-the-counter drugs must be sufficient to deter misuse of those substances.

(g) For individuals whose authorization was denied for 5 years under paragraphs (c), (d), (e)(2), or (f) of this section, any subsequent violation of the drug and alcohol provisions of an FFD policy must immediately result in permanent denial of authorization.

(h) A licensee or other entity may not terminate an individual's authorization and may not subject the individual to other administrative action based solely on a positive test result from any initial drug test, other than positive initial test results for marijuana or cocaine metabolites from a specimen that is reported to be valid on the basis of either validity screening or initial validity testing performed at a licensee testing facility, unless other evidence, including information obtained under the process set forth in § 26.189, indicates that the individual is impaired or might otherwise pose a safety hazard. The licensee or other entity may not terminate an individual's authorization or subject an individual to any other administrative action under this section based on the results of validity screening or initial validity testing performed at a licensee testing facility indicating that a specimen is of questionable validity.

(i) With respect to positive initial drug test results from a licensee testing facility for marijuana and cocaine metabolites from a valid specimen, licensee testing facility personnel may inform licensee or other entity management of the positive initial drug test result and the specific drugs or metabolites identified, and licensees or other entities may administratively withdraw the donor's authorization or take lesser administrative actions against the donor, provided that the licensee or other entity complies with the following conditions:

(1) For the drug for which action will be taken, at least 85 percent of the specimens that were determined to be positive as a result of initial drug tests at the licensee testing facility during the past 12-month data reporting period submitted to the NRC under § 26.717 were subsequently reported as positive by the HHS-certified laboratory as the result of confirmatory testing;

(2) There is no loss of compensation or benefits to the donor during the period of temporary administrative action;

(3) Immediately on receipt of a negative report from the HHS-certified laboratory or MRO, any matter that could link the donor to the temporary administrative action is eliminated from the donor's personnel record and other records; and

(4) Licensees and other entities may not disclose the temporary administrative action against an individual whose initial drug test result is not subsequently confirmed by the MRO as a violation of the FFD policy in response to a suitable inquiry conducted under the provisions of § 26.63, a background investigation conducted under the provisions of this chapter, or to any other inquiry or investigation.

(i) To ensure that no records are retained, access to the system of files and records must be provided to personnel who are conducting reviews, inquiries into allegations, or audits under the provisions of § 26.41, and to NRC inspectors.

(ii) The licensee or other entity shall provide the donor with a written statement that the records specified in §§ 26.713 and 26.715 have not been retained with respect to the temporary administrative action and shall inform the donor in writing that the temporary administrative action that was taken will not be disclosed and need not be disclosed by the individual in response to requests for self-disclosure of potentially disqualifying FFD information.

[73 FR 17194 Mar. 31, 2008]

§ 26.77 Management actions regarding possible impairment.

[Top of File]

(a) This section defines management actions that licensees and other entities who are subject to this subpart must take when an individual who is subject to this subpart shows indications that he or she may not be fit to safely and competently perform his or her duties.

(b) If an individual appears to be impaired or the individual’s fitness is questionable, except as permitted under §§ 26.27(c)(3), 26.207, and 26.209, the licensee or other entity shall take immediate action to prevent the individual from performing the duties that require him or her to be subject to this subpart.

(1) If an observed behavior or physical condition creates a reasonable suspicion of possible substance abuse, the licensee or other entity shall perform drug and alcohol testing. The results must be negative before the individual returns to performing the duties that require the individual to be subject to this subpart. However, if the physical condition is the smell of alcohol with no other behavioral or physical indications of impairment, then only an alcohol test is required and the results must be negative before the individual returns to performing his or her duties.

(2) If a licensee or C/V who is subject to subpart I of this part is certain that the observed behavior or physical condition is the result solely of fatigue, the licensee or C/V shall ensure that a fatigue assessment is conducted under § 26.211. If the results of the fatigue assessment confirm that the observed behavior or physical condition is the result solely of fatigue, the licensee or C/V need not perform drug and alcohol tests or implement the determination of fitness process otherwise required by § 26.189.

(3) For other indications of possible impairment that do not create a reasonable suspicion of substance abuse (or fatigue, in the case of licensees and C/Vs who are subject to subpart I of this part), the licensee or other entity may permit the individual to return to performing

his or her duties only after the impairing or questionable conditions are resolved and a determination of fitness indicates that the individual is fit to safely and competently perform his or her duties.

(c) If a licensee or other entity has a reasonable belief that an NRC employee or NRC contractor may be under the influence of any substance, or is otherwise unfit for duty, the licensee or other entity may not deny access but shall escort the individual. In any such instance, the licensee or other entity shall immediately notify the appropriate Regional Administrator by telephone, followed by written notification (e.g., e-mail or fax) to document the oral notification. If the Regional Administrator cannot be reached, the licensee or other entity shall notify the NRC Operations Center.

[73 FR 17195 Mar. 31, 2008]

Subpart E—Collecting Specimens for Testing

[Top of File]

§ 26.81 Purpose and applicability.

This subpart contains requirements for collecting specimens for drug testing and conducting alcohol tests by or on behalf of the licensees and other entities in § 26.3(a) through (d) for the categories of individuals specified in § 26.4(a) through (d) and (g). At the discretion of a licensee or other entity in § 26.3(c), specimen collections and alcohol tests must be conducted either under this subpart for the individuals specified in § 26.4(e) and (f) or the licensee or other entity may rely on specimen collections and alcohol tests conducted under the requirements of 49 CFR Part 40 for the individuals specified in § 26.4(e) and (f). The requirements of this subpart do not apply to specimen collections and alcohol tests that are conducted under the requirements of 49 CFR Part 40, as permitted in this paragraph and under §§ 26.4 (j) and 26.31(b)(2) and Subpart K.

[73 FR 17195 Mar. 31, 2008]

§ 26.83 Specimens to be collected.

[Top of File]

Except as permitted under § 26.31(d)(5), licensees and other entities who are subject to this subpart shall—

(a) Collect either breath or oral fluids for initial tests for alcohol. Breath must be collected for confirmatory tests for alcohol; and

(b) Collect only urine specimens for both initial and confirmatory tests for drugs.

[73 FR 17195 Mar. 31, 2008]

§ 26.85 Collector qualifications and responsibilities.

[Top of File]

(a) *Urine collector qualifications*. Urine collectors shall be knowledgeable of the requirements of this part and the FFD policy and procedures of the licensee or other entity for whom collections are performed, and shall keep current on any changes to urine collection procedures. Collectors shall receive qualification training that meets the requirements of this paragraph and demonstrate proficiency in applying the requirements of this paragraph before serving as a collector. At a minimum, qualification training must provide instruction on the following subjects:

(1) All steps necessary to complete a collection correctly and the proper completion and transmission of the custody-and-control form;

(2) Methods to address "problem" collections, including, but not limited to, collections involving "shy bladder" and attempts to tamper with a specimen;

(3) How to correct problems in collections; and

(4) The collector's responsibility for maintaining the integrity of the specimen collection and transfer process, carefully ensuring the modesty and privacy of the donor, and avoiding any conduct or remarks that might be construed as accusatorial or otherwise offensive or inappropriate.

(b) *Alcohol collector qualifications*. Alcohol collectors shall be knowledgeable of the requirements of this part and the FFD policy and procedures of the licensee or other entity for whom collections are performed, and shall keep current on any changes to alcohol collection procedures. Collectors shall receive qualification training meeting the requirements of this paragraph and demonstrate proficiency in applying the requirements of this paragraph before serving as a collector. At a minimum, qualification training must provide instruction on the following subjects:

(1) The alcohol testing requirements of this part;

(2) Operation of the particular alcohol testing device(s) [i.e., the alcohol screening devices (ASDs) or EBTs] to be used, consistent with the most recent version of the manufacturers' instructions;

(3) Methods to address "problem" collections, including, but not limited to, collections involving "shy lung" and attempts to tamper with a specimen;

(4) How to correct problems in collections; and

(5) The collector's responsibility for maintaining the integrity of the specimen collection process, carefully ensuring the privacy of the donor, and avoiding any conduct or remarks that might be construed as accusatorial or otherwise offensive or inappropriate.

(c) *Alternative collectors*. A medical professional, technologist, or technician may serve as a collector without meeting the collector qualification requirements in paragraphs (a) or (b) of this section, as applicable, only if all of the following conditions are met:

(1) A collector who meets the requirements of paragraphs (a) or (b) of this section cannot reasonably be made available at the time the collection must occur;

(2) The individual is not employed by the licensee's or other entity's FFD program and his or her normal workplace is not at the licensee's or other entity's facility;

(3) The individual does not routinely provide FFD program services to the licensee or other entity;

(4) The individual is licensed or otherwise approved to practice in the jurisdiction in which the collection occurs; and

(5) The individual is provided with detailed, clearly-illustrated, written instructions for collecting specimens under this subpart and follows those instructions.

(d) *Personnel available to testify at proceedings*. The licensee or other entity shall ensure that qualified collection site personnel, when required, are available to testify in an administrative or disciplinary proceeding against an individual when that proceeding is based on positive drug or alcohol test results or adulterated or substituted test results from specimens collected by or under contract to the licensee or other entity.

(e) *Files*. Collection site personnel files must include each individual's resume of training and experience; certification or license, if any; references; job descriptions; records of performance evaluations and advancement; incident reports, if any; results of tests to establish employee competency for the position he or she holds, including, but not limited to, certification that collectors are proficient in administering alcohol tests consistent with the most recent manufacturer's instructions for the instruments and devices used; and appropriate data to support determinations of honesty and integrity conducted under § 26.31(b).

[73 FR 17195 Mar. 31, 2008]

§ 26.87 Collection sites.

[Top of File]

(a) Each FFD program must have one or more designated collection sites that have all necessary personnel, materials, equipment, facilities, and supervision to collect specimens for drug testing and to perform alcohol testing. Each collection site must provide for the collection, security, temporary storage, and shipping or transportation of urine specimens to a drug testing laboratory; the collection of oral fluids or breath specimens; and the security of alcohol testing devices and test results. A properly equipped mobile facility that meets the requirements of this section is an acceptable collection site.

(b) The collection site must provide for the donor’s visual privacy while the donor and collector are viewing the results of an alcohol test, and for individual privacy while the donor is submitting a urine specimen, except if a directly observed urine specimen collection is required. Unauthorized personnel may not be present for the specimen collection.

(c) Contracts for collection site services must permit representatives of the NRC, licensee, or other entity to conduct unannounced inspections and audits and to obtain all information and documentation that is reasonably relevant to the inspections and audits.

(d) Licensees and other entities shall take the following measures to prevent unauthorized access to the collection site that could compromise the integrity of the collection process or the specimens.

(1) Unauthorized personnel may not be permitted in any part of the designated collection site where specimens are collected or stored;

(2) A designated collection site must be secure. If a collection site is dedicated solely to specimen collection, it must be secure at all times. Methods of assuring security may include, but are not limited to, physical measures to control access, such as locked doors, alarms, or visual monitoring of the collection site when it is not occupied; and

(3) If a collection site cannot be dedicated solely to collecting specimens, the portion of the facility that is used for specimen collection must be secured and, during the time period during which a specimen is being collected, a sign must be posted to indicate that access is

permitted only for authorized personnel.

(e) The following steps must be taken to deter the dilution and adulteration of urine specimens at the collection site:

(1) Agents that color any source of standing water in the stall or room in which the donor will provide a specimen, including, but not limited to, the toilet bowl or tank, must be placed in the source of standing water, so that the reservoirs of water are neither yellow nor colorless;

(2) There must be no other source of water (e.g., no shower or sink) in the enclosure where urination occurs, or the source of water must be rendered unusable; and

(3) Chemicals or products that could be used to contaminate or otherwise alter the specimen must be removed from the collection site or secured. The collector shall inspect the enclosure in which urination will occur before each collection to ensure that no materials are available that could be used to subvert the testing process.

(f) In the exceptional event that a designated collection site is inaccessible and there is an immediate requirement to collect a urine specimen, including, but not limited to, an event investigation, then the licensee or other entity may use a public rest room, onsite rest room, or hospital examining room according to the following procedures:

(1) The facility must be secured by visual inspection to ensure that no unauthorized persons are present, and that undetected access (e.g., through a rear door not in the view of the collector) is impossible. Security during the collection may be maintained by restricting access to collection materials and specimens. In the case of a public rest room, a sign must be posted or an individual assigned to ensure that no unauthorized personnel are present during the entire collection procedure to avoid embarrassment of the donor and distraction of the collector.

(2) If practical, a water coloring agent that meets the requirements of § 26.87(e)(1) must be placed in the toilet bowl to be used by the donor and in any other accessible source of standing water, including, but not limited to, the toilet tank. The collector shall instruct the donor not to flush the toilet.

(3) A collector of the same gender as the donor shall accompany the donor into the area that will be used for specimen collection, but remain outside of the stall, if it is a multi-stalled rest room, or outside of the door to the room, if it is a single rest room, in which the donor will provide the specimen. If a collector of the same gender is not available, the collector shall select a same-gender person to accompany the donor. This person shall be instructed on the collection procedures specified in this subpart and his or her identity must be documented on the custody-and-control form.

(4) After the collector has possession of the specimen, the collector shall inspect the toilet bowl and area to ensure that there is no evidence of a subversion attempt and shall then flush the toilet. The collector shall instruct the donor to participate with the collector in completing the chain-of-custody procedures.

(5) If it is impractical to maintain continuous physical security of a collection site from the time a urine specimen is presented until the sealed container is transferred for shipment, the specimen must remain under the direct control of an individual who is authorized by the licensee or other entity until the specimen is prepared for transfer, storage, or shipping, as required by § 26.117. The authorized individual shall be instructed on his or her responsibilities for maintaining custody and control of the specimen and his or her custody of the specimen must be documented on the custody-and-control form.

[73 FR 17196 Mar. 31, 2008]

§ 26.89 Preparing to collect specimens for testing.

[Top of File]

(a) When an individual has been notified of a requirement for testing and does not appear at the collection site within the time period specified by FFD program procedures, the collector shall inform FFD program management that the individual has not reported for testing. FFD program management shall ensure that the necessary steps are taken to determine whether the individual's undue tardiness or failure to appear for testing constitutes a violation of the licensee's or other entity's FFD policy. If FFD program management determines that the undue tardiness or failure to report for testing represents an attempt to subvert the testing process, the licensee or other entity shall impose on the individual the sanctions in § 26.75(b). If FFD program management determines that the undue tardiness or failure to report does not represent a subversion attempt, the licensee or other entity may not impose sanctions but shall ensure that the individual is tested at the earliest reasonable and practical opportunity after locating the individual.

(b) Donors shall provide acceptable identification before testing.

(1) Acceptable identification includes photo-identification issued by a licensee or other entity who is subject to this part, or by the Federal, State, or local government. Licensees and other entities may not accept faxes or photocopies of identification.

(2) If the donor cannot produce acceptable identification before any testing that is required under this part other than pre-access testing, the collector shall proceed with the test and immediately inform FFD program management that the donor did not present acceptable identification. When so informed, FFD program management shall contact the individual's supervisor to verify in-person the individual's identity, or, if the supervisor is not available, take other steps to establish the individual's identity and determine whether the lack of identification was an attempt to subvert the testing process. The donor may not leave the collection site except under supervision until his or her identity has been established.

(3) If the donor is scheduled for pre-access testing and cannot produce acceptable identification, the collector may not proceed with the collection, and shall inform FFD program management that the individual did not present acceptable identification. When so informed, FFD program management will take the necessary steps to determine whether the lack of identification was an attempt to subvert the testing process.

(4) The collector shall explain the testing procedure to the donor, show the donor the form(s) to be used, and ask the donor to sign a consent-to-testing form. The donor may not be required to list prescription medications or over-the-counter preparations that he or she has recently used.

(c) The collector shall inform the donor that, if the donor refuses to cooperate in the specimen collection process (including, but not limited to, behaving in a confrontational manner that disrupts the testing process; admitting to the collector that he or she adulterated, diluted, or adulterated the specimen; is found to have a device, such as a prosthetic appliance, the purpose of which is to interfere with providing an actual urine specimen; or leaving the collection site before all of the collection procedures are completed), it will be considered a refusal to test, and sanctions for subverting the testing process will be imposed under § 26.75(b). If the donor refuses to cooperate in the collection procedures, the collector shall inform FFD program management to obtain guidance on the actions to be taken.

(d) In order to promote the security of specimens, avoid distraction of the collector, and ensure against any confusion in the identification of specimens, a collector shall conduct only one collection procedure at any given time. For this purpose, a urine collection procedure is complete when the urine specimen container has been sealed and initialed, the chain-of-custody form has been executed, and the donor has departed the collection site.

[73 FR 17197 Mar. 31, 2008]

§ 26.91 Acceptable devices for conducting initial and confirmatory tests for alcohol and methods of use.

[Top of File]

(a) *Acceptable alcohol screening devices*. Alcohol screening devices (ASDs), including devices that test specimens of oral fluids or breath, must be approved by the National Highway Traffic Safety Administration (NHTSA) and listed in the most current version of NHTSA's Conforming Products List (CPL) for such devices. An ASD that is listed in the NHTSA CPL may be used only for initial tests for alcohol, and may not be used for confirmatory tests.

(b) *Acceptable evidential breath testing devices*. Evidential breath testing devices listed in the NHTSA CPL for evidential devices that meet the requirements of paragraph (c) of this section must be used to conduct confirmatory alcohol tests, and may be used to conduct initial alcohol tests. Note that, among the devices listed in the CPL for EBTs, only those devices listed without an asterisk (*) may be used for confirmatory alcohol testing under this subpart.

(c) *EBT capabilities*. An EBT that is listed in the NHTSA CPL for evidential devices that has the following capabilities may be used for conducting initial alcohol tests and must be used for confirmatory alcohol tests under this subpart:

(1) Provides a printed result of each breath test;

(2) Assigns a unique number to each completed test, which the collector and donor can read before each test and which is printed on each copy of the test result;

(3) Prints, on each copy of the test result, the manufacturer's name for the device, its serial number, and the time of the test;

(4) Distinguishes alcohol from acetone at the 0.02 alcohol concentration level;

(5) Tests an air blank; and

(6) Permits performance of an external calibration check.

(d) *Quality assurance and quality control of ASDs*. (1) Licensees and other entities shall implement the most recent version of the quality assurance plan submitted to NHTSA for any ASD that is used for initial alcohol testing.

(2) Licensees and other entities may not use an ASD that fails the specified quality control checks or that has passed its expiration date.

(3) For ASDs that test breath specimens and meet EBT requirements for confirmatory testing, licensees and other entities shall also follow the device use and care requirements specified in paragraph (e) of this section.

(e) *Quality assurance and quality control of EBTs*. (1) Licensees and other entities shall implement the most recent version of the manufacturer's instructions for the use and care of the EBT consistently with the quality assurance plan submitted to NHTSA for the EBT, including performing external calibration checks no less frequently than at the intervals specified in the manufacturer's instructions.

(2) When conducting external calibration checks, licensees and other entities shall use only calibration devices appearing on NHTSA's CPL for "Calibrating Units for Breath Alcohol Tests."

(3) If an EBT fails an external check of calibration, the licensee or other entity shall take the EBT out of service. The EBT may not be used again for alcohol testing under this subpart until it is repaired and passes an external calibration check.

(4) In order to ensure that confirmed positive alcohol test results are derived from an EBT that is calibrated, the licensee or other entity shall implement one of the following procedures:

(i) If an EBT fails any external check of calibration, cancel every confirmed positive test result that was obtained using the EBT from any tests that were conducted after the EBT passed the last external calibration check; or

(ii) After every confirmed positive test result obtained from using an EBT, conduct an external check of calibration of the EBT in the presence of the donor. If the EBT fails the external calibration check, cancel the donor's test result and conduct another initial and confirmatory test on a different EBT as soon as practicable.

(5) Inspection, maintenance, and calibration of the EBT must be performed by its manufacturer or a maintenance representative or other individual who is certified either by the manufacturer or by a State health agency or other appropriate State agency.

[57 FR 55072, Nov. 24, 1992; 73 FR 17197 Mar. 31, 2008]

§ 26.93 Preparing for alcohol testing.

[Top of File]

(a) Immediately before collecting a specimen for alcohol testing, the collector shall—

(1) Ask the donor whether he or she, in the past 15 minutes, has had anything to eat or drink, belched, or put anything into his or her mouth (including, but not limited to, a cigarette, breath mint, or chewing gum), and instruct the donor that he or she should avoid these activities during the collection process;

(2) If the donor states that he or she has not engaged in the activities listed in paragraph (a)(1) of this section, alcohol testing may proceed;

(3) If the donor states that he or she has engaged in any of the activities listed in paragraph (a)(1) of this section, inform the donor that a 15-minute waiting period is necessary to prevent an accumulation of mouth alcohol from leading to an artificially high reading;

(4) Explain that it is to the donor's benefit to avoid the activities listed in paragraph (a)(1) of this section during the collection process;

(5) Explain that the initial and confirmatory tests, if a confirmatory test is necessary, will be conducted at the end of the waiting period, even if the donor has not followed the instructions; and

(6) Document that the instructions were communicated to the donor.

(b) With the exception of the 15-minute waiting period, if necessary, the collector shall begin for-cause alcohol and/or drug testing as soon as reasonably practical after the decision is made that for-cause testing is required. When for-cause alcohol testing is required, alcohol testing may not be delayed by collecting a specimen for drug testing.

[73 FR 17198 Mar. 31, 2008]

§ 26.95 Conducting an initial test for alcohol using a breath specimen.

[Top of File]

(a) The collector shall perform the initial breath test as soon as practical after the donor indicates that he or she has not engaged in the activities listed in § 26.93(a)(1) or after the 15-minute waiting period has elapsed, if required.

(b) To perform the initial test, the collector shall—

(1) Select, or allow the donor to select, an individually wrapped or sealed mouthpiece from the testing materials;

(2) Open the individually wrapped or sealed mouthpiece in view of the donor and insert it into the device as required by the manufacturer’s instructions;

(3) Instruct the donor to blow steadily and forcefully into the mouthpiece for at least 6 seconds or until the device indicates that an adequate amount of breath has been obtained;

(4) Show the donor the displayed or printed test result; and

(5) Ensure that the test result record can be associated with the donor and is maintained secure.

(c) Unless problems in administering the breath test require an additional collection, only one breath specimen may be collected for the initial test. If an additional collection(s) is required, the collector shall rely on the test result from the first successful collection to determine the need for confirmatory testing.

[73 FR 17198 Mar. 31, 2008]

§ 26.97 Conducting an initial test for alcohol using a specimen of oral fluids.

[Top of File]

(a) To perform the initial test, the collector shall—

(1) Check the expiration date on the device and show it to the donor (the device may not be used after its expiration date);

(2) Open an individually wrapped or sealed package containing the device in the presence of the donor;

(3) Offer the donor the choice of using the device or having the collector use it. If the donor chooses to use it, instruct the donor to insert the device into his or her mouth and use it in the manner described by the device's manufacturer;

(4) If the donor chooses not to use the device, or in all cases when a new test is necessary because the device failed to activate, insert the device into the donor's mouth, and gather oral fluids in the manner described by the device's manufacturer (wear single-use examination or similar gloves while doing so and change them following each test); and

(5) When the device is removed from the donor's mouth, follow the manufacturer's instructions regarding necessary next steps to ensure that the device has activated.

(b) If the steps in paragraph (a) of this section could not be completed successfully (e.g., the device breaks, the device is dropped on the floor, the device fails to activate), the collector shall—

(1) Discard the device and conduct a new test using a new device. The new device must be one that has been under the collector's control before the test;

(2) Record the reason for the new test;

(3) Offer the donor the choice of using the device or having the collector use it unless the donor, in the opinion of the collector, was responsible for the new test needing to be conducted. If the collector concludes that the donor was responsible, then the collector shall use the device to conduct the test; and

(4) Repeat the procedures in paragraph (a) of this section.

(c) If the second collection attempt in paragraph (b) of this section could not be completed, the collector shall—

(1) End the collection of oral fluids and document the reason(s) that the collection could not be completed; and

(2) Immediately conduct another initial test using an EBT.

(d) The collector shall read the result displayed on the device no sooner than the device's manufacturer instructs. In all cases, the collector shall read the result within 15 minutes of the test. The collector shall then show the device and its reading to the donor, record the result, and record that an ASD was used.

(e) Devices, swabs, gloves, and other materials used in collecting oral fluids may not be re-used.

[73 FR 17198 Mar. 31, 2008]

§ 26.99 Determining the need for a confirmatory test for alcohol.

[Top of File]

(a) If the initial test result is less than 0.02 percent BAC, the collector shall declare the test result as negative.

(b) If the initial test result is 0.02 percent BAC or higher, the collector shall ensure that the time at which the test was concluded (i.e., the time at which the test result was known) is recorded and inform the donor that a confirmatory test for alcohol is required.

[73 FR 17199 Mar. 31, 2008]

§ 26.101 Conducting a confirmatory test for alcohol.

[Top of File]

(a) The confirmatory test must begin as soon as possible, but no more than 30 minutes after the conclusion of the initial test.

(b) To complete the confirmatory test, the collector shall—

(1) In the presence of the donor, conduct an air blank on the EBT before beginning the confirmatory test and show the result to the donor;

(2) Verify that the reading is 0.00. If the reading is 0.00, the test may proceed. If not, then conduct another air blank;

(3) If the reading on the second air blank is 0.00, the test may proceed. If the reading is greater than 0.00, take the EBT out of service and proceed with the test using another EBT. If an EBT is taken out of service for this reason, the EBT may not be used for further testing until it is found to be within tolerance limits on an external check of calibration;

(4) Open an individually wrapped or sealed mouthpiece in view of the donor and insert it into the device as required by the manufacturer's instructions;

(5) Read the unique test number displayed on the EBT, and ensure that the donor reads the same number;

(6) Instruct the donor to blow steadily and forcefully into the mouthpiece for at least 6 seconds or until the device indicates that an adequate amount of breath has been obtained; and

(7) Show the donor the result displayed on or printed by the EBT, record the result, and document the time at which the confirmatory test result was known.

(c) Unless there are problems in administering the breath test that require an additional collection, the collector shall collect only one breath specimen for the confirmatory test. If an additional collection(s) is required because of problems in administering the breath test, the collector shall rely on the breath specimen from the first successful collection to determine the confirmatory test result. Collection procedures may not require collectors to calculate an average or otherwise combine results from two or more breath specimens to determine the confirmatory test result.

(d) If an EBT that meets the requirements of § 26.91(b) and (c) was used for the initial alcohol test, the same EBT may be used for confirmatory testing.

[73 FR 17199 Mar. 31, 2008]

§ 26.103 Determining a confirmed positive test result for alcohol.

[Top of File]

(a) A confirmed positive test result for alcohol must be declared under any of the following conditions:

(1) When the result of the confirmatory test for alcohol is 0.04 percent BAC or higher;

(2) When the result of the confirmatory test for alcohol is 0.03 percent BAC or higher and the donor had been in a work status for at least 1 hour at the time the initial test was concluded (including any breaks for rest, lunch, dental/doctor appointments, etc.); or

(3) When the result of the confirmatory test for alcohol is 0.02 percent BAC or higher and the donor had been in a work status for at least 2 hours at the time the initial test was concluded (including any breaks for rest, lunch, dental/doctor appointments, etc.).

(b) When the result of the confirmatory test for alcohol is equal to or greater than 0.01 percent BAC but less than 0.02 percent BAC and the donor has been in a work status for 3 hours or more at the time the initial test was concluded (including any breaks for rest, lunch, dental/doctor appointments, etc.), the collector shall declare the test result as negative and inform FFD program management. The licensee or other entity shall prohibit the donor from performing any duties that require the individual to be subject to this subpart and may not return the individual to performing such duties until a determination of fitness indicates that the donor is fit to safely and competently perform his or her duties.

[73 FR 17199 Mar. 31, 2008]

§ 26.105 Preparing for urine collection.

[Top of File]

(a) The collector shall ask the donor to remove any unnecessary outer garments, such as a coat or jacket, which might conceal items or

substances that the donor could use to tamper with or adulterate his or her urine specimen. The collector shall ensure that all personal belongings such as a purse or briefcase remain with the outer garments outside of the room or stall in which the urine specimen is collected. The donor may retain his or her wallet.

(b) The collector shall also ask the donor to empty his or her pockets and display the items in them to enable the collector to identify items that the donor could use to adulterate or substitute his or her urine specimen. The donor shall permit the collector to make this observation. If the donor refuses to show the collector the items in his or her pockets, this is considered a refusal to test. If an item is found that appears to have been brought to the collection site with the intent to adulterate or substitute the specimen, the collector shall contact the MRO or FFD program manager to determine whether a directly observed collection is required. If the item appears to have been inadvertently brought to the collection site, the collector shall secure the item and continue with the normal collection procedure. If the collector identifies nothing that the donor could use to adulterate or substitute the specimen, the donor may place the items back into his or her pockets.

(c) The collector shall instruct the donor to wash and dry his or her hands before urinating.

(d) After washing his or her hands, the donor shall remain in the presence of the collector and may not have access to any water fountain, faucet, soap dispenser, cleaning agent, or other materials that he or she could use to adulterate the urine specimen.

(e) The collector may select, or allow the donor to select, an individually wrapped or sealed collection container from the collection kit materials. Either the collector or the donor, with both present, shall unwrap or break the seal of the collection container. With the exception of the collection container, the donor may not take anything from the collection kit into the room or stall used for urination.

[73 FR 17199 Mar. 31, 2008]

§ 26.107 Collecting a urine specimen.

[Top of File]

(a) The collector shall direct the donor to go into the room or stall used for urination, provide a specimen of the quantity that has been predetermined by the licensee or other entity, as defined in § 26.109(a), not flush the toilet, and return with the specimen as soon as the donor has completed the void.

(1) The donor shall provide his or her urine specimen in the privacy of a room, stall, or otherwise partitioned area (private area) that allows for individual privacy, except if a directly observed collection is required, as described in § 26.115;

(2) Except in the case of a directly observed collection, no one may go with the donor into the room or stall in which the donor will provide his or her specimen; and

(3) The collector may set a reasonable time limit for voiding.

(b) The collector shall pay careful attention to the donor during the entire collection process to note any conduct that clearly indicates an attempt to tamper with a specimen (e.g., substitute urine is in plain view or an attempt to bring an adulterant or urine substitute into the private area used for urination). If any such conduct is detected, the collector shall document the conduct on the custody-and-control form and contact FFD program management to determine whether a directly observed collection is required, as described in § 26.115.

(c) After the donor has provided the urine specimen and submitted it to the collector, the donor shall be permitted to wash his or her hands. The collector shall inspect the toilet bowl and room or stall in which the donor voided to identify any evidence of a subversion attempt, and then flush the toilet.

[73 FR 17200 Mar. 31, 2008]

§ 26.109 Urine specimen quantity.

[Top of File]

(a) Licensees and other entities who are subject to this subpart shall establish a predetermined quantity of urine that donors are requested to provide when submitting a specimen. At a minimum, the predetermined quantity must include 30 milliliters (mL) to ensure that a sufficient quantity of urine is available for initial and confirmatory validity and drug tests at an HHS-certified laboratory, and for retesting of an aliquot of the specimen if requested by the donor under § 26.165(b). The licensee's or other entity's predetermined quantity may include more than 30 mL, if the testing program follows split specimen procedures, tests for additional drugs, or performs initial testing at a licensee testing facility. Where collected specimens are to be split under the provisions of this subpart, the predetermined quantity must include an additional 15 mL.

(b) If the quantity of urine in the first specimen provided by the donor is less than 30 mL, the collector shall take the following steps:

(1) The collector shall encourage the donor to drink a reasonable amount of liquid (normally, 8 ounces of water every 30 minutes, but not to exceed a maximum of 40 ounces over 3 hours) until the donor provides a specimen containing at least 30 mL. The collector shall provide

the donor with a separate collection container for each successive specimen;

(2) Once the donor provides a specimen of at least 30 mL, the collection must end. If the specimen quantity is at least 30 mL but is less than the licensee's or other entity's predetermined quantity, the licensee or other entity may not require the donor to provide additional specimens and may not impose any sanctions on the donor. If the donor provides a specimen of 30 mL or more, but the specimen quantity is less than the predetermined quantity, the collector shall forward the specimen to the HHS-certified laboratory for testing. If the donor provides a specimen of at least the predetermined quantity, the specimen may be processed under the FFD program's usual testing procedures;

(3) If the donor has not provided a specimen of at least 30 mL within 3 hours of the first unsuccessful attempt to provide a specimen of the predetermined quantity, the collector shall discontinue the collection and notify the FFD program manager or MRO to initiate the "shy bladder" procedures in § 26.119; and

(4) Neither the donor nor the collector may combine specimens. The collector shall discard specimens of less than 30 mL, except if there is reason to believe that the donor has diluted, adulterated, substituted, or otherwise tampered with the specimen, based on the collector's observations of the donor's behavior during the collection process or the specimen's characteristics, as specified in § 26.111. If the collector has a reason to believe that a specimen that is 15 mL or more, but less than 30 mL, has been diluted, adulterated, substituted, or altered, the collector shall prepare the suspect specimen for shipping to the HHS-certified laboratory and contact FFD program management to determine whether a directly observed collection is required, as described in § 26.115.

[73 FR 17200 Mar. 31, 2008]

§ 26.111 Checking the acceptability of the urine specimen.

[Top of File]

(a) Immediately after the donor provides the urine specimen to the collector, including specimens of less than 30 mL but greater than 15 mL, the collector shall measure the temperature of the specimen. The temperature-measuring device used must accurately reflect the temperature of the specimen and not contaminate the specimen. The time from urination to temperature measurement may not exceed 4 minutes. If the temperature of a urine specimen is outside the range of 90 °F to 100 °F (32 °C to 38 °C), that is a reason to believe the donor may have altered or substituted the specimen.

(b) Immediately after the donor provides a urine specimen, including specimens of less than 30 mL but equal to or greater than 15 mL, the collector shall also inspect the specimen to determine its color and clarity and look for any signs of contaminants or adulteration. The collector shall note any unusual findings on the custody-and-control form.

(c) If there is reason to believe that the donor may have attempted to dilute, substitute, or adulterate the specimen based on specimen temperature or other observations made during the collection, the collector shall contact the designated FFD program manager, who may consult with the MRO, to determine whether the donor has attempted to subvert the testing process or whether other circumstances may explain the observations. The FFD program manager or MRO may require the donor to provide a second specimen as soon as possible under direct observation. In addition, the collector shall inform the donor that he or she may volunteer to submit a second specimen under direct observation to counter the reason to believe the donor may have altered or substituted the specimen.

(d) Any specimen of 15 mL or more that the collector suspects has been diluted, substituted, or adulterated, and any specimen of 15 mL or more that has been collected under direct observation under paragraph (c) of this section, must be sent directly to the HHS-certified laboratory for initial and, if required, confirmatory testing, and may not be subject to initial testing at a licensee testing facility.

(e) As much of the suspect specimen as possible must be preserved.

(f) An acceptable specimen is free of any apparent contaminants, meets the required basic quantity of at least 30 mL, and is within the acceptable temperature range.

[73 FR 17200 Mar. 31, 2008]

§ 26.113 Splitting the urine specimen.

[Top of File]

(a) Licensees and other entities may, but are not required to, use split-specimen methods of collection.

(b) If the urine specimen is to be split into two specimen bottles, hereinafter referred to as Bottle A and Bottle B, the collector shall take the following steps:

(1) The collector shall instruct the donor to urinate into a specimen container;

(2) The collector, in the presence of the donor and after determining specimen temperature as described in § 26.111(a), shall split the urine specimen. The collector shall pour 30 mL of urine into Bottle A and a minimum of 15 mL of urine into Bottle B. If the quantity of urine available for Bottle B is less than 15 mL, the collector shall pour the remaining urine into Bottle B and forward the specimens in Bottles A

and B to the HHS-certified laboratory for drug and validity testing; and

(3) The collector shall ask the donor to observe the splitting of the urine specimen and to maintain visual contact with both specimen bottles until the custody-and-control form(s) for both specimens are completed, the specimens are sealed, and the specimens and form(s) are prepared for secure storage or shipping.

(c) Licensees and other entities may use aliquots of the specimen collected for validity screening and initial validity and drug testing at the licensee testing facility, as permitted under § 26.31(d)(3)(ii), or to test for additional drugs, as permitted under § 26.31(d)(1)(i)(A), but only if sufficient urine is available for this testing after the specimen has been split into Bottle A and Bottle B.

[73 FR 17201 Mar. 31, 2008]

§ 26.115 Collecting a urine specimen under direct observation.

[Top of File]

(a) Procedures for collecting urine specimens must provide for the donor's privacy unless directed by this subpart or the MRO or FFD program manager determines that a directly observed collection is warranted. The following circumstances constitute the exclusive grounds for performing a directly observed collection:

(1) The donor has presented, at this or a previous collection, a urine specimen that the HHS-certified laboratory reported as being substituted, adulterated, or invalid to the MRO and the MRO reported to the licensee or other entity that there is no adequate medical explanation for the result;

(2) The donor has presented, at this collection, a urine specimen that falls outside the required temperature range;

(3) The collector observes conduct clearly and unequivocally indicating an attempt to dilute, substitute, or adulterate the specimen; and

(4) A directly observed collection is required under § 26.69.

(b) Before collecting a urine specimen under direct observation, the collector shall obtain the agreement of the FFD program manager or MRO to obtain a urine specimen under direct observation. After obtaining agreement, the collector shall ensure that a specimen is collected under direct observation as soon as reasonably practicable.

(c) The collector shall explain to the donor the reason for direct observation of the collection under paragraph (a) of this section.

(d) The collector shall complete a new custody-and-control form for the specimen that is obtained from the directly observed collection. The collector shall record that the collection was observed and the reason(s) for the directly observed collection on the form.

(e) The collector shall ensure that the observer is the same gender as the individual. A person of the opposite gender may not act as the observer under any conditions. The observer may be a different person from the collector and need not be a qualified collector.

(f) If someone other than the collector is to observe the collection, the collector shall instruct the observer to follow the procedures in this paragraph. The individual who observes the collection shall follow these procedures:

(1) The observer shall instruct the donor to adjust his or her clothing to ensure that the area of the donor's body between the waist and knees is exposed;

(2) The observer shall watch the donor urinate into the collection container. Specifically, the observer shall watch the urine go from the donor's body into the collection container;

(3) If the observer is not the collector, the observer may not take the collection container from the donor, but shall observe the specimen as the donor takes it to the collector; and

(4) If the observer is not the collector, the collector shall record the observer's name on the custody-and-control form.

(g) If a donor declines to allow a directly observed collection that is required or permitted under this section, the donor's refusal constitutes an act to subvert the testing process.

(h) If a collector learns that a directly observed collection should have been performed but was not, the collector shall inform the FFD program manager, or his or her designee. The FFD program manager or designee shall ensure that a directly observed collection is immediately performed.

[73 FR 17201 Mar. 31, 2008]

§ 26.117 Preparing urine specimens for storage and shipping.

[Top of File]

(a) Both the donor and the collector shall keep the donor's urine specimen(s) in view at all times before the specimen(s) are sealed and labeled. If any specimen or aliquot is transferred to another container, the collector shall ask the donor to observe the transfer and sealing of the container with a tamper-evident seal.

(b) Both the collector and the donor shall be present (at the same time) during the procedures outlined in this section.

(c) The collector shall place an identification label securely on each container. The label must contain the date, the donor's specimen number, and any other identifying information provided or required by the FFD program. The collector shall also apply a tamper-evident seal on each container if it is separate from the label. The specimen bottle must be securely sealed to prevent undetected tampering.

(d) The donor shall initial the identification label(s) on the specimen bottle(s) for the purpose of certifying that the specimen was collected from him or her. The collector shall also ask the donor to read and sign a statement on the custody-and-control form certifying that the specimen(s) identified as having been collected from the donor is, in fact, the specimen(s) that he or she provided.

(e) The collector shall complete the custody-and-control form(s) and shall certify proper completion of the collection.

(f) The specimens and chain-of-custody forms must be packaged for transfer to the HHS-certified laboratory or the licensee's testing facility. If the specimens are not immediately prepared for transfer, they must be appropriately safeguarded during temporary storage.

(g) While any part of the chain-of-custody procedures is being performed, the specimens and custody documents must be under the control of the involved collector. The collector may not leave the collection site during the interval between presentation of the specimen by the donor and securing of the specimens with identifying labels bearing the donor's specimen identification numbers and seals initialed by the donor. If the involved collector momentarily leaves his or her workstation, the sealed specimens and custody-and-control forms must be secured or taken with him or her. If the collector is leaving for an extended period of time, the specimens must be packaged for transfer to the HHS-certified laboratory or the licensee testing facility and secured before the collector leaves the collection site.

(h) The specimen(s) sealed in a shipping container must be immediately transferred, appropriately safeguarded during temporary storage, or kept under the personal control of an authorized individual until transferred. These minimum procedures apply to the transfer of specimens to licensee testing facilities from collection sites (except where co-located) as well as to the shipping of specimens to HHS-certified laboratories. As an option, licensees and other entities may ship several specimens via courier in a locked or sealed shipping container.

(i) Collection site personnel shall ensure that a custody-and-control form is packaged with its associated urine specimen bottle. Unless a collection site and a licensee testing facility are co-located, the sealed and labeled specimen bottles, with their associated custody-and-control forms that are being transferred from the collection site to the drug testing laboratory must be placed in a second, tamper-evident shipping container. The second container must be designed to minimize the possibility of damage to the specimen during shipment (e.g., specimen boxes, shipping bags, padded mailers, or bulk insulated shipping containers with that capability), so that the contents of the shipping containers are no longer accessible without breaking a tamper-evident seal.

(j) Collection site personnel shall arrange to transfer the collected specimens to the HHS-certified laboratory or the licensee testing facility. Licensees and other entities shall take appropriate and prudent actions to minimize false negative results from specimen degradation. Specimens that have not been shipped to the HHS-certified laboratory or the licensee testing facility within 24 hours of collection and any specimen that is suspected of having been substituted, adulterated, or tampered with in any way must be maintained cooled to not more than 6°C (42.8 °F) until they are shipped to the HHS-certified laboratory. Specimens must be shipped from the collection site to the HHS-certified laboratory or the licensee testing facility as soon as reasonably practical but, except under unusual circumstances, the time between specimen shipment and receipt of the specimen at the licensee testing facility or HHS-certified laboratory should not exceed 2 business days.

(k) Couriers, express carriers, and postal service personnel do not have direct access to the custody-and-control forms or the specimen bottles. Therefore, there is no requirement that such personnel document chain of custody on the custody-and-control forms during transit. Custody accountability of the shipping containers during shipment must be maintained by a tracking system provided by the courier, express carrier, or postal service.

[73 FR 17201 Mar. 31, 2008]

§ 26.119 Determining "shy" bladder.

[Top of File]

(a) When a donor has not provided a specimen of at least 30 mL within the 3 hours permitted for urine collection, FFD program personnel shall direct the donor to obtain, within 5 business days, an evaluation from a licensed physician who is acceptable to the MRO and has expertise in the medical issues raised by the donor's failure to provide a sufficient specimen. The MRO may perform this evaluation if the MRO has the appropriate expertise.

(b) If another physician will perform the evaluation, the MRO shall provide the other physician with the following information and instructions:

(1) The donor was required to take a drug test, but was unable to provide a sufficient quantity of urine to complete the test;

(2) The potential consequences of refusing to take the required drug test; and

(3) The physician must agree to follow the requirements of paragraphs (c) through (f) of this section.

(c) The physician who conducts this evaluation shall make one of the following determinations:

(1) A medical condition has, or with a high degree of probability could have, precluded the donor from providing a sufficient amount of urine; or

(2) There is an inadequate basis for determining that a medical condition has, or with a high degree of probability could have, precluded the donor from providing a sufficient quantity of urine.

(d) For purposes of this section, a medical condition includes an ascertainable physiological condition (e.g., a urinary system dysfunction) or a medically documented pre-existing psychological disorder, but does not include unsupported assertions of "situational anxiety" or dehydration.

(e) The physician who conducts this evaluation shall provide a written statement of his or her determination and the basis for it to the MRO. This statement may not include detailed information on the donor's medical condition beyond what is necessary to explain the determination.

(f) If the physician who conducts this evaluation determines that the donor's medical condition is a serious and permanent or long-term disability that is highly likely to prevent the donor from providing a sufficient amount of urine for a very long or indefinite period of time, the physician shall set forth this determination and the reasons for it in the written statement to the MRO.

(g) The MRO shall seriously consider and assess the information provided by the physician in deciding whether the donor has a medical condition that has, or with a high degree of probability could have, precluded the donor from providing a sufficient amount of urine, as follows:

(1) If the MRO concurs with the physician's determination, then the MRO shall declare that the donor has not violated the FFD policy and the licensee or other entity shall take no further action with respect to the donor;

(2) If the MRO determines that the medical condition has not, or with a high degree of probability could not have, precluded the donor from providing a sufficient amount of urine, then the MRO shall declare that there has been a refusal to test; or

(3) If the MRO determines that the medical condition is highly likely to prevent the donor from providing a sufficient amount of urine for a very long or indefinite period of time, then the MRO shall authorize an alternative evaluation process, tailored to the individual case, for drug testing.

[73 FR 17202 Mar. 31, 2008]

Subpart F—Licensee Testing Facilities

[Top of File]

§ 26.121 Purpose.

This subpart contains requirements for facilities that are operated by licensees and other entities who are subject to this part to perform initial tests of urine specimens for validity, drugs, and drug metabolites.

[73 FR 17203 Mar. 31, 2008]

§ 26.123 Testing facility capabilities.

[Top of File]

Each licensee testing facility shall have the capability, at the same premises, to perform either validity screening tests or initial validity tests or both, and initial drug tests for each drug and drug metabolite for which testing is conducted.

[73 FR 17203 Mar. 31, 2008]

§ 26.125 Licensee testing facility personnel.

[Top of File]

(a) Each licensee testing facility shall have one or more individuals who are responsible for day-to-day operations and supervision of the testing technicians. The designated individual(s) shall have at least a bachelor's degree in the chemical or biological sciences, medical

technology, or equivalent. He or she shall also have training and experience in the theory and practice of the procedures used in the licensee testing facility, and a thorough understanding of quality control practices and procedures, the review, interpretation, and reporting of test results, and proper remedial actions to be taken in response to detection of abnormal test or quality control results.

(b) Other technicians or non-technical staff shall have the necessary training and skills for their assigned tasks. Technicians who perform urine specimen testing shall have documented proficiency in operating the testing instruments and devices used at the licensee testing facility.

(c) Licensee testing facility personnel files must include each individual's resume of training and experience; certification or license, if any; references; job descriptions; records of performance evaluations and advancement; incident reports, if any; results of tests that establish employee competency for the position he or she holds, including, but not limited to, certification that personnel are proficient in conducting testing in accordance with manufacturer's most recent instructions for the instruments and devices used and tests for color blindness; and appropriate data to support determinations of honesty and integrity required by this part.

[73 FR 17203 Mar. 31, 2008]

§ 26.127 Procedures.

[Top of File]

(a) Licensee testing facilities shall develop, implement, and maintain clear and well-documented procedures for accession, shipment, and testing of urine specimens.

(b) Written chain-of-custody procedures must describe the methods to be used to maintain control and accountability of specimens from receipt through completion of testing and reporting of results, during storage and shipping to the HHS-certified laboratory, and continuing until final disposition of the specimens.

(c) Licensee testing facilities shall develop, implement, and maintain written standard operating procedures for each assay performed for drug and specimen validity testing. If a licensee testing facility performs validity screening tests, the licensee testing facility shall develop, implement, and maintain written standard operating procedures for each test. The procedures must include, but are not limited to, detailed descriptions of—

(1) The principles of each test;

(2) Preparation of reagents, standards, and controls;

(3) Calibration procedures;

(4) Derivation of results;

(5) Linearity of the methods;

(6) Sensitivity of the methods;

(7) Cutoff values;

(8) Mechanisms for reporting results;

(9) Controls;

(10) Criteria for unacceptable specimens and results;

(11) Reagents and expiration dates; and

(12) References.

(d) Licensee testing facilities shall develop, implement, and maintain written procedures for instrument and test setup and normal operation, including the following:

(1) A schedule for checking critical operating characteristics for all instruments and validity screening tests;

(2) Tolerance limits for acceptable function checks; and

(3) Instructions for major troubleshooting and repair.

(e) Licensee testing facilities shall develop, implement, and maintain written procedures for remedial actions to be taken when systems, and instrumented and non-instrumented tests are out of acceptable limits or errors are detected. Each facility shall maintain documentation that

these procedures are followed and that all necessary corrective actions are taken. In addition, each facility shall have systems in place to verify all stages of testing and reporting and to document the verification.

[73 FR 17203 Mar. 31, 2008]

§ 26.129 Assuring specimen security, chain of custody, and preservation.

[Top of File]

(a) Each licensee testing facility must be secure at all times. Each licensee or other entity shall have sufficient security measures in place to control access to the licensee testing facility and to ensure that no unauthorized personnel handle specimens or gain access to the licensee testing facility's processes or areas where records are stored. Access to these secured areas must be limited to specifically authorized individuals whose authorization is documented. All authorized visitors and maintenance and service personnel shall be escorted at all times while in the licensee testing facility.

(b) When specimens are received, licensee testing facility personnel shall inspect each package for evidence of possible tampering and shall compare information on the specimen containers within each package to the information on the accompanying custody-and-control forms. Licensee testing facility personnel shall attempt to resolve any discrepancies identified in the information on specimen bottles or on the accompanying custody-and-control forms. When resolving any discrepancies, licensee testing facility personnel shall obtain a memorandum for the record from the specimen collector involved in the discrepancy to document correction of the discrepancy. This memorandum must accompany the specimen(s) and custody-and-control forms to the HHS-certified laboratory if the specimen(s) must be transferred.

(1) Indications of tampering with specimens in transit from the collection site, or at a licensee testing facility, must be reported to senior licensee or other entity management as soon as practical and no later than 8 hours after the indications are identified. In response to a report, licensee or other entity management personnel shall initiate an investigation to determine whether tampering has occurred.

(i) If the investigation determines that tampering has occurred, licensee or other entity management shall ensure that corrective actions are taken.

(ii) If there is reason to believe that the integrity or identity of a specimen is in question (as a result of tampering or discrepancies between the information on the specimen bottle and on the accompanying custody-and-control forms that cannot be resolved), the specimen may not be tested and the licensee or other entity shall ensure that another collection occurs as soon as reasonably practical, except if a split specimen collection was performed, either the Bottle A or Bottle B seal remains intact, and the intact specimen contains at least 15 mL of urine. In this instance, the licensee testing facility shall forward the intact specimen for testing to the HHS-certified laboratory and may not conduct any testing at the licensee testing facility.

(2) The following are exclusive grounds requiring the MRO to cancel the testing of a donor's urine specimen:

(i) The custody-and-control form does not contain information to identify the specimen collector and the collection site cannot provide conclusive evidence of the collector's identity;

(ii) The identification numbers on the specimen bottle seal(s) do not match the identification numbers on the custody-and-control form;

(iii) A specimen bottle seal is broken or shows evidence of tampering and an intact specimen, as specified in paragraph (b)(1)(ii) of this section, does not exist;

(iv) The specimen appears to have leaked out of its sealed bottle and there is less than 15 mL remaining, and an intact specimen, as specified in paragraph (b)(1)(ii) of this section, does not exist; or

(v) As required under § 26.165(f)(2).

(c) The licensee testing facility shall retain specimen containers within the testing facility's accession area until all analyses have been completed. Testing facility personnel shall use aliquots of the specimen and licensee testing facility chain-of-custody forms, or other appropriate methods of tracking aliquot custody and control, when conducting validity screening and initial validity and drug tests. The original specimen bottles and the original custody-and-control forms must remain in secure storage. Licensee testing facility personnel may discard specimens and aliquots as soon as practical after validity screening or initial validity tests have demonstrated that the specimen appears valid and initial test results for drugs and drug metabolites are negative.

(d) The licensee testing facility's procedure for tracking custody and control of specimens and aliquots must protect the identity of the donor, and provide documentation of the testing process and transfers of custody of the specimen and aliquots. Each time a specimen or aliquot is handled or transferred within the licensee testing facility, testing facility personnel shall document the date and purpose and every individual in the chain of custody must be identified.

(e) Urine specimens identified as positive or of questionable validity at a licensee testing facility must be shipped to an HHS-certified laboratory for testing as soon as reasonably practical.

(f) Licensee testing facility personnel shall take appropriate and prudent actions to minimize false negative results from specimen degradation. If validity screening or initial validity testing indicate that the specimen is of questionable validity, or initial drug test results are positive, or if a specimen has not been tested within 24 hours of receipt at the licensee testing facility, then the facility shall maintain the specimen cooled to not more than 6 °C (42.8 °F) until it is forwarded to the HHS-certified laboratory for further testing, if required.

Split specimens in Bottle B that are associated with positive specimens or specimens of questionable validity in Bottle A must also be maintained cooled (as previously specified) until test results from the HHS-certified laboratory are known to be negative for Bottle A; until the MRO informs the licensee testing facility that Bottle B must be forwarded to an HHS-certified laboratory for testing; or until the specimen is moved to long-term, frozen storage, under § 26.135(c).

(g) Licensee testing facility personnel shall ensure that the original custody-and-control form is packaged with its associated urine specimen bottle. Sealed and labeled specimen bottles, with their associated custody-and-control forms, being transferred from the licensee testing facility to the HHS-certified laboratory must be placed in a second, tamper-evident shipping container designed to minimize the possibility of damage to the specimen during shipment (e.g., specimen boxes, padded mailers, or bulk insulated shipping containers with that capability) so that the contents of the shipping containers are no longer accessible without breaking a tamper-evident seal.

(h) Couriers, express carriers, and postal service personnel do not have direct access to the custody-and-control forms or the specimen bottles. Therefore, such personnel are not required to document chain of custody on the custody-and-control forms during transit. Custody accountability of the shipping containers during shipment must be maintained by a tracking system provided by the courier, express carrier, or postal service.

[73 FR 17203 Mar. 31, 2008]

§ 26.131 Cutoff levels for validity screening and initial validity tests.

[Top of File]

(a) Each validity test result from the licensee testing facility must be based on performing either a validity screening test or an initial validity test, or both, on one or more aliquots of a urine specimen. The licensee testing facility shall forward any specimen that yields a questionable validity screening or initial validity test result to the HHS-certified laboratory for further testing. Licensee testing facilities need not perform validity screening tests before conducting initial validity tests of a specimen.

(b) At a minimum, the licensee testing facility shall test each urine specimen for creatinine, pH, and one or more oxidizing adulterants. Licensees and other entities may not specify more stringent cutoff levels for validity screening and initial validity tests than those specified in this section. If tests or observations indicate one or more of the following from either a validity screening test or an initial validity test, the licensee testing facility shall forward the specimen to the HHS-certified laboratory for additional testing:

(1) Creatinine is less than 20 milligrams (mg) per deciliter (dL);

(2) The pH of the specimen is either less than 4.5 or equal to or greater than 9, using either a colorimetric pH test with a dynamic range of 2 to 12 or pH meter that is capable of measuring pH to one decimal place (for initial validity tests), or colorimetric pH tests, dipsticks, and pH paper (for pH validity screening tests) that have a narrow dynamic range;

(3) Nitrite or other oxidant concentration is equal to or greater than 200 micrograms (mcg) per mL or equal to or greater than 200 mcg/mL nitrite-equivalents using either a nitrite colorimetric test or a general oxidant colorimetric test;

(4) The possible presence of an oxidizing adulterant (e.g., chromium (VI), pyridine (pyridinium chlorochromate)) is determined using either a general oxidant colorimetric test (with a cutoff equal to or greater than 50 mcg/mL chromium (VI)-equivalents) or a chromium (VI) colorimetric test (chromium (VI) concentration equal to or greater than 50 mcg/mL);

(5) The possible presence of halogen (e.g., bleach, iodine, fluoride) is determined using a general oxidant colorimetric test (with a cutoff equal to or greater than 200 mcg/mL nitrite-equivalents or equal to or greater than 50 mcg/mL chromium (VI)-equivalents), a halogen colorimetric test (halogen concentration equal to or greater than the limit of detection (LOD)), or the odor of the specimen;

(6) The possible presence of glutaraldehyde is determined using either an aldehyde test (aldehyde present) or the characteristic immunoassay response is observed on one or more drug immunoassay tests;

(7) The possible presence of a surfactant is determined by using a surfactant colorimetric test with a cutoff equal to or greater than 100 mcg/mL dodecylbenzene sulfonate-equivalent or a foam/shake test; or

(8) The specimen shows evidence of adulterants, including, but not limited to, the following:

(i) Abnormal physical characteristics;

(ii) Reactions or responses characteristic of an adulterant obtained during the validity screening or initial test; or

(iii) A possible unidentified interfering substance or adulterant, demonstrated by interference occurring on the immunoassay drug tests on two separate aliquots (i.e., valid immunoassay drug test results cannot be obtained).

[73 FR 17204 Mar. 31, 2008]

§ 26.133 Cutoff levels for drugs and drug metabolites.

[Top of File]

Subject to the provisions of § 26.31(d)(3)(iii), licensees and other entities may specify more stringent cutoff levels for drugs and drug metabolites than those in the table below and, in such cases, may report initial test results for only the more stringent cutoff levels. Otherwise, the following cutoff levels must be used for initial testing of urine specimens to determine whether they are negative for the indicated drugs and drug metabolites:

INITIAL TEST CUTOFF LEVELS FOR DRUGS AND DRUG METABOLITES

Drug or metabolites	Cutoff level [nanograms (ng) / mL]
Marijuana metabolites	50
Cocaine metabolites	300
Opiate metabolites	2000
Phencyclidine (PCP)	25
Amphetamines	1000

[73 FR 17205 Mar. 31, 2008]

§ 26.135 Split specimens.

[Top of File]

(a) If the FFD program follows split-specimen procedures, as described in § 26.113, the licensee testing facility shall analyze aliquots of the specimen for the licensee's or other entity's purposes as described in this part. Except as provided in paragraph (b) in this section, the licensee testing facility shall store Bottles A and B of the specimen in a secure manner until the facility has finished testing. If the initial validity and drug test results are negative and the specimen in Bottle A will not be forwarded to the HHS-certified laboratory, the licensee testing facility may discard both Bottle A and Bottle B. If any test results are positive or indicate that the specimen is of questionable validity, the licensee testing facility shall forward Bottle A to the HHS-certified laboratory for testing and shall retain Bottle B in secure storage, under the requirements of § 26.159(i), or may forward it to the HHS-certified laboratory for storage.

(b) If the MRO confirms any positive, adulterated, or substituted result for a specimen in Bottle A, based on the results of confirmatory testing at an HHS-certified laboratory, and the licensee testing facility has elected to retain Bottle B of the specimen, and the donor requests testing of the specimen in Bottle B, as permitted under § 26.165(b), the MRO shall ensure that Bottle B is forwarded to an HHS-certified laboratory other than the laboratory that tested the specimen in Bottle A, under the procedures specified in § 26.165(b).

(c) If the MRO confirms that the specimen in Bottle A is positive, adulterated, substituted, or invalid and the donor does not request that Bottle B be tested, the licensee or other entity shall ensure that Bottle B is maintained in long-term, frozen storage (– 20 °C/–68 °F or less) for a minimum of 1 year. If a licensee testing facility elects to retain the specimen in Bottle B, rather than forwarding it to the HHS-certified laboratory with Bottle A, the licensee testing facility shall ensure proper storage conditions in the event of a prolonged power failure. After the end of 1 year, the licensee or other entity may discard Bottle B, with the exception that the licensee testing facility shall retain any specimens under legal challenge, or as requested by the NRC, until the specimen is no longer needed.

[73 FR 17205 Mar. 31, 2008]

§ 26.137 Quality assurance and quality control.

[Top of File]

(a) *Quality assurance program*. Each licensee testing facility shall have a quality assurance program that encompasses all aspects of the testing process including, but not limited to, specimen acquisition, chain of custody, security and reporting of results, validity screening (if validity screening tests are performed), initial validity and drug testing, and validation of analytical procedures. Quality assurance procedures must be designed, implemented, and reviewed to monitor the conduct of each step of the process of validity testing and testing for drugs and drug metabolites.

(b) *Performance testing and quality control requirements for validity screening tests*. (1) Licensee testing facilities may rely on validity screening tests to determine the need for initial tests of specimen validity either at the licensee testing facility or HHS-certified laboratory. Licensees and other entities shall ensure that the HHS-certified laboratory is capable of conducting confirmatory testing for any adulterant for which the licensee testing facility conducts validity screening tests. Licensee testing facilities shall use only validity screening tests that meet the following criteria:

(i) Either the test, by lot number, has been placed on the Substance Abuse and Mental Health Services Administration (SAMHSA) list of point-of-collection tests that are approved for use in the Federal Workplace Drug Testing Program; or

(ii) Before using the test, the licensee or other entity has ensured that the validity screening test, by lot number, effectively identifies specimens of questionable validity by meeting the following performance testing and quality control requirements:

(A) The creatinine validity screening test must use a 20 mg/dL cutoff concentration;

(B) A pH specimen validity screening test must be able to determine if pH is less than 4.5 and if pH is equal to or greater than 9; and

(C) An oxidant validity screening test must be able to determine if an oxidant concentration is equal to or greater than a 200 mcg/mL nitrite-equivalent cutoff, and/or a chromium screening test must be able to determine concentrations equal to or greater than a 50 mcg/mL chromium(VI)-equivalent cutoff, and/or a halogen screening test must be able to determine the halogen concentration is equal to or greater than the LOD. Licensees and other entities who use validity screening tests for additional adulterants shall establish performance testing requirements to challenge the licensee testing facility and the HHS-certified laboratory for the additional validity screening test(s);

(D) The manufacturer has conducted validation studies to document the validity screening test's performance characteristics around each applicable cutoff specified in this section, using performance testing samples that have been formulated to challenge the validity screening test around the applicable cutoffs. These validation studies must demonstrate the validity screening test's ability to differentiate valid samples from those of questionable validity and the performance of the validity screening test(s) around the applicable cutoffs specified in this section; and

(E) The licensee testing facility shall submit three consecutive sets of performance testing samples to the manufacturer, using performance testing samples that have been formulated to challenge the validity screening test around the applicable cutoffs specified in this paragraph and whose formulation levels have been confirmed by an HHS-certified laboratory. For example, one set of performance testing samples used to challenge a creatinine validity screening test must include at least six samples formulated at different concentrations ranging from 0 to 20 mg/dL. A set of performance testing samples used to challenge a pH validity screening test must include at least six samples formulated with different pH levels that are equal to or less than 4.5, and six samples formulated with different pH levels that are equal to or greater than 9. And, a set of performance testing samples used to challenge an oxidizing adulterant validity screening test must include at least six samples to challenge each validity screening test used. The performance testing samples for oxidizing adulterants must contain nitrite and other oxidizing adulterant concentrations in a range of less than or equal to a 200 mcg/mL nitrite-equivalent cutoff to a 500 mcg/mL nitrite-equivalent cutoff; chromium samples formulated in a range less than or equal to a 50 mcg/mL chromium(VI)-equivalent cutoff to 100 mcg/mL chromium(VI)-equivalent cutoff; or halogen samples formulated in a concentration at or near the LOD and 25 percent above the LOD. The results of analyzing the three consecutive sets of performance test samples for each validity screening test (i.e., creatinine, pH, nitrite and general oxidants, chromium, or halogen) must demonstrate that the validity screening test, by lot number, correctly identified at least 90 percent of the total validity performance test challenges on each of three sets of performance testing samples, and, for each individual specimen validity screening test, the test, by lot number, correctly identified at least 90 percent of the validity performance test challenges on each of three sets of performance testing samples; and

(iii) After the licensee testing facility has placed a validity screening test in service, the licensee or other entity shall verify that the test, by lot number, remains on the SAMHSA-approved list. Or, if the SAMHSA-approved list is unavailable, the licensee or other entity shall ensure that the test continues to identify specimens of questionable validity, as demonstrated by documentation from the manufacturer that a set of validity screening tests from each lot in use by the licensee testing facility correctly identified at least 90 percent of the total validity test challenges on a set of performance testing samples, and, for each individual specimen validity screening test, that the test, by lot number, correctly identified at least 90 percent of the validity test challenges. This performance testing must be performed at a nominal annual frequency after the date on which the manufacturer completed the initial validation studies required under paragraph (b)(1)(ii)(D) of this section. The performance testing samples used must be formulated to challenge the validity screening test around the applicable cutoffs of this subpart.

(2) In addition, licensee testing facility personnel who perform the validity screening tests shall conduct quality control testing of validity screening tests as follows:

(i) At the beginning of any 8-hour period during which the licensee testing facility will perform validity screening tests, licensee testing facility personnel shall test a minimum of one quality control sample that is negative for each specific validity test to be performed (e.g., creatinine, pH, nitrites, chromium) during the 8-hour period, and one quality control sample that is formulated to challenge the validity screening test(s) around the cutoffs specified in this subpart for each specific validity test to be performed during the 8-hour period. The results of these quality control tests must be correct before any donor specimens may be tested.

(ii) After screening every ten donor specimens during the 8-hour period, licensee testing facility personnel shall also challenge each validity screening test with at least one quality control sample that is formulated to challenge the validity screening test(s) around the cutoffs specified in this subpart. If fewer than ten donor specimens were screened during the 8-hour period or the number of donor specimens tested exceeds a multiple of ten but is less than the next multiple of ten (e.g., 24 donor specimens, 48 donor specimens), licensee testing facility personnel shall challenge each validity screening test at the end of the 8-hour period during which the validity screening tests were performed.

(3) The licensee testing facility shall also submit at least one specimen out of every ten donor specimens that test negative using each validity screening test that the licensee testing facility uses to an HHS-certified laboratory as part of the licensee testing facility's quality assurance program.

(4) Licensee testing facilities shall store specimen validity tests as specified by the manufacturer's instructions and may not use such tests after the manufacturer's expiration date.

(c) *Validity screening test results*. If the results of a validity screening test indicate that the specimen is of questionable validity, the licensee testing facility may either perform initial validity testing or shall forward the specimen to the HHS-certified laboratory for further testing.

(d) *Quality control requirements for performing initial validity tests*. Licensees and other entities shall ensure that the HHS-certified laboratory is capable of conducting confirmatory testing for any adulterant for which the licensee testing facility conducts initial validity tests.

(1) Creatinine. Creatinine concentration must be measured to 1 decimal place. The initial creatinine test must have a control in the range of 3 to 20 mg/dL and a control in the range of 21 to 25 mg/dL.

(2) Requirements for performing initial pH tests are as follows:

(i) Colorimetric pH tests that have a dynamic range of 2 to 12 and pH meters and must be capable of measuring pH to one decimal place.

(ii) An initial colorimetric pH test must have the following calibrators and controls:

(A) One calibrator at 3;

(B) One calibrator at 11;

(C) One control in the range of 2 to 2.8;

(D) One control in the range of 3.2 to 4;

(E) One control in the range of 4.5 to 9;

(F) One control in the range of 10 to 10.8; and

(G) One control in the range of 11.2 to 12.

(iii) If a pH screening test is not used, an initial pH meter test must have the following calibrators and controls:

(A) One calibrator at 4;

(B) One calibrator at 7;

(C) One calibrator at 10;

(D) One control in the range of 2 to 2.8;

(E) One control in the range of 3.2 to 4;

(F) One control in the range of 10 to 10.8; and

(G) One control in the range of 11.2 to 12.

(iv) If a pH screening test is used, an initial pH meter test must have the following calibrators and controls when the screening result indicates that the pH is below the lower decision point in use:

(A) One calibrator at 4;

(B) One calibrator at 7;

(C) One control in the range of 2 to 2.8; and

(D) One control in the range of 3.2 to 4.

(v) If a pH screening test is used, an initial pH meter test must have the following calibrators and controls when the screening test result indicates that the pH is above the upper decision point in use:

(A) One calibrator at 7;

(B) One calibrator at 10;

(C) One control in the range of 10 to 10.8; and

(D) One control in the range of 11.2 to 12.

(3) Oxidizing adulterants. Initial tests for oxidizing adulterants must include a calibrator at the appropriate cutoff concentration for the compound of interest, a control without the compound of interest (i.e., a certified negative control), and a control with at least one of the compounds of interest at a measurable concentration. For nitrite, the licensee testing facility shall have one control in the range of 200 to 400 mcg/mL, one control in the range of 500 to 625 mcg/mL, and a control without nitrite (i.e., a certified negative control).

(4) Other adulterants. Initial tests for other adulterants must include an appropriate calibrator, a control without the compound of interest (i. e., a certified negative control), and a control with the compound of interest at a measurable concentration.

(5) Each analytical run performed to conduct initial validity testing shall include at least one quality control sample that appears to be a donor specimen to the laboratory analysts.

(6) The licensee testing facility shall also submit at least one specimen out of every 10 donor specimens that test negative on the initial validity tests performed by the licensee testing facility to an HHS-certified laboratory as part of the licensee testing facility's quality assurance program.

(e) *Quality control requirements for initial drug tests*. (1) Any initial drug test performed by a licensee testing facility must use an immunoassay that meets the requirements of the Food and Drug Administration for commercial distribution. Licensee testing facilities may not use non-instrumented immunoassay testing devices that are pending HHS/SAMHSA review and approval for initial drug testing under this part. In addition, licensees and other entities may not take management actions on the basis of any drug test results obtained from non-instrumented devices that may be used for validity screening tests.

(2) Licensee testing facilities shall discard negative specimens or may pool them for use in the licensee testing facility's internal quality control program after certification by an HHS-certified laboratory that the specimens are negative and valid. Licensee testing facilities may not retain any information linking donors to specimens that are pooled for use in the internal quality control program.

(3) Licensee testing facilities may perform multiple initial drug tests for the same drug or drug class, provided that all tests meet the cutoffs and quality control requirements of this part. For example, a licensee testing facility may use immunoassay technique "A" for all drugs using the licensee's or other entity's cutoff levels, but specimens testing positive for amphetamines may also be tested using immunoassay technique "B" to eliminate any possible positives due to structural analogues; or, a valid analytical result cannot be obtained using immunoassay technique "A" and immunoassay technique "B" is used in an attempt to obtain a valid analytical result.

(4) Licensee testing facilities need not assess their false positive testing rates for drugs, because all specimens that test as positive on the initial tests for drugs and drug metabolites must be forwarded to an HHS-certified laboratory for initial and confirmatory testing.

(5) To ensure that the rate of false negative drug tests is kept to the minimum that the immunoassay technology supports, licensee testing facilities shall submit to the HHS-certified laboratory a minimum of 5 percent (or at least one) of the donor specimens screened as negative from every analytical run.

(6) A minimum of 10 percent of all specimens in each analytical run of specimens to be initially tested for drugs by the licensee testing facility must be quality control samples, which the licensee testing facility shall use for internal quality control purposes. (These samples are not forwarded to the HHS-certified laboratory for further testing, other than for performance testing of the samples.) Licensee testing facilities shall ensure that quality control samples that are positive for each drug and metabolite for which the FFD program conducts testing are included in at least one analytical run each calendar quarter. The quality control samples for each analytical run must include—

(i) Sample(s) certified by an HHS-certified laboratory to contain no drugs or drug metabolites (i.e., negative urine samples);

(ii) At least one positive control with drug(s) or drug metabolite(s) targeted at 25 percent above the cutoff;

(iii) At least one positive control with drug(s) or drug metabolite(s) targeted at 25 percent below the cutoff;

(iv) A sufficient number of calibrators to ensure and document the linearity of the assay method over time in the concentration area of the cutoff (after acceptable values are obtained for the known calibrators, those values will be used to calculate sample data); and

(v) At least one positive control, certified to be positive by an HHS-certified laboratory, that appears to be a donor specimen to the laboratory analysts.

(7) Licensee testing facilities shall document the implementation of procedures to ensure that carryover does not contaminate the testing of a donor's specimen.

(f) *Errors in testing*. Each licensee testing facility shall investigate any testing errors or unsatisfactory performance discovered in the testing of quality control samples, in the testing of actual specimens, or through the processing of management reviews and/or MRO reviews, as well as any other errors or matters that could adversely reflect on the licensee testing facility's testing process.

(1) Whenever possible, the investigation must determine relevant facts and identify the root cause(s) of the testing or process error.

(2) The licensee testing facility shall take action to correct the cause(s) of any errors or unsatisfactory performance that are within the licensee testing facility's control.

(3) If false negative results are obtained in any analytical run from testing the quality control samples specified in paragraphs (b), (d), and (e) of this section at the licensee testing facility, the licensee testing facility shall forward all donor specimens from that analytical run to the HHS-certified laboratory for additional testing and implement corrective actions before resuming testing of donor specimens for the drug(s), drug metabolite(s), adulterant(s), or other specimen characteristics (i.e., creatinine, pH) associated with the quality control sample that yielded the false negative result(s).

(4) If a donor specimen that yielded negative validity or drug test results at the licensee testing facility yields positive, substituted, adulterated, or invalid results after confirmatory testing by the HHS-certified laboratory under paragraphs (b)(3), (d)(6), or (e)(5) of this section, the licensee or other entity shall implement corrective actions before resuming testing of donor specimens for the drug(s), drug metabolite(s), adulterant(s), or other specimen characteristics (i.e., creatinine, pH) associated with the donor specimen that yielded the false negative result(s). In addition to resolving any technical, methodological, or administrative errors in the licensee testing facility's testing process, the licensee or other entity may re-collect and test specimens from any donor whose test results from the licensee testing facility may have been inaccurate.

(5) A record of the investigative findings and the corrective actions taken, where applicable, must be dated and signed by the individuals who are responsible for the day-to-day management of the licensee testing facility and reported to appropriate levels of management.

(g) *Accuracy*. Volumetric pipettes and measuring devices must be certified for accuracy or be checked by gravimetric, colorimetric, or other verification procedure. Automatic pipettes and dilutors must be checked for accuracy and reproducibility before being placed in service, and periodically thereafter.

(h) *Calibrators and controls*. Calibrators and controls must be prepared using pure drug reference materials, stock standard solutions obtained from other laboratories, or standard solutions that are obtained from commercial manufacturers and are properly labeled as to content and concentration. Calibrators and controls may not be prepared from the same stock solution. The standards and controls must be labeled with the following dates: when received; when prepared or opened; when placed in service; and when scheduled for expiration.

[73 FR 17205 Mar. 31, 2008]

§ 26.139 Reporting initial validity and drug test results.

[Top of File]

(a) The licensee testing facility shall report as negative all specimens that are valid on the basis of validity screening or initial validity tests, or both, and are negative on the initial tests for drugs and drug metabolites. Except as permitted under § 26.75(h), positive test results from initial drug tests at the licensee testing facility may not be reported to licensee or other entity management. In addition, the licensee testing facility may not report results from validity screening or initial validity testing indicating that a specimen is of questionable validity or positive initial drug test results from specimens that are of questionable validity.

(b) Except as provided in §§ 26.37 and 26.75(h), access to the results of initial tests must be limited to the licensee testing facility's staff, the MRO and MRO staff, the FFD program manager, and, when appropriate, EAP staff and the SAE.

(c) The licensee testing facility shall provide qualified personnel, when required, to testify in an administrative or disciplinary proceeding against an individual when that proceeding is based on urinalysis results reported by the licensee testing facility.

(d) The licensee testing facility shall prepare the information required for the annual report to the NRC, as required in § 26.717.

(e) The data in the annual report to the NRC must be presented for either the cutoff levels specified in this part, or for more stringent cutoff levels, if the FFD program uses more stringent cutoff levels for drugs and drug metabolites. If the FFD program tests for drugs and drug metabolites that are not specified in § 26.31(d)(1), the summary must also include the number of positive test results and the cutoff levels used for those drugs and drug metabolites.

(f) The designated FFD program official shall use the available information from the licensee testing facility's validity and drug test results, the results of quality control testing performed at the licensee testing facility, and the results from testing the quality control samples that the licensee testing facility submits to the HHS-certified laboratory to evaluate continued testing program effectiveness and detect any local trends in drugs of abuse that may require management action or FFD program adjustments. FFD program adjustments may include, but are not limited to, training enhancements, procedure changes, the expansion of the FFD program's drug panel to include additional drugs to be tested, or changes in the types of assays, validity screening tests, or instruments used.

[73 FR 17208 Mar. 31, 2008]

Subpart G—Laboratories Certified by the Department of Health and Human Services

[Top of File]

§ 26.151 Purpose.

This subpart contains requirements for the HHS-certified laboratories that licensees and other entities who are subject to this part use for testing urine specimens for validity and the presence of drugs and drug metabolites.

[73 FR 17208 Mar. 31, 2008]

§ 26.153 Using certified laboratories for testing urine specimens.

[Top of File]

(a) Licensees and other entities who are subject to this part shall use only laboratories certified under the Department of Health and Human Services (HHS) Mandatory Guidelines for Federal Workplace Drug Testing Programs [published in the **Federal Register** on April 11, 1988 (53 FR 11970), and as amended, June 9, 1994 (59 FR 29908), November 13,1998 (63 FR 63483), and April 13, 2004 (69 FR 19643)] for specimen validity and drug testing, except as permitted under § 26.31(d)(3)(ii). Information concerning the current certification status of laboratories is available from the Division of Workplace Programs, Center for Substance Abuse Prevention, Substance Abuse and Mental Health Services Administration, Room 815, 5600 Fishers Lane, Rockwall 2 Bldg., Rockville, Maryland 20857.

(b) HHS-certified laboratories shall have the capability, at the same premises, to perform both initial and confirmatory tests for specimen validity and for each drug and drug metabolite for which the HHS-certified laboratory provides services to the licensee or other entity.

(c) An HHS-certified laboratory may not subcontract and shall perform all work with its own personnel and equipment unless otherwise authorized by the licensee or other entity.

(d) Licensees and other entities shall use only HHS-certified laboratories that agree to follow the same rigorous specimen testing, quality control, and chain-of-custody procedures when testing for more stringent cutoff levels as may be specified by licensees and other entities for the classes of drugs identified in this part, and for any other substances included in the licensees' or other entities' panels.

(e) Before awarding a contract to an HHS-certified laboratory, the licensee or other entity shall ensure that qualified personnel conduct a pre-award inspection and evaluation of the procedural aspects of the laboratory's drug testing operations. However, if an HHS-certified laboratory loses its certification, in whole or in part, a licensee or other entity may immediately begin using another HHS-certified laboratory that is being used by another licensee or entity who is subject to this part, as permitted by § 26.41(g)(5).

(f) All contracts between licensees or other entities who are subject to this part and HHS-certified laboratories must require the laboratory to implement all applicable requirements of this part. At a minimum, licensees' and other entities' contracts with HHS-certified laboratories must include the following requirements:

(1) Laboratory facilities shall comply with the applicable provisions of any State licensor requirements;

(2) The laboratory shall make available qualified personnel to testify in an administrative or disciplinary proceeding against an individual when that proceeding is based on urinalysis results reported by the HHS-certified laboratory;

(3) The laboratory shall maintain test records in confidence, consistent with the requirements of § 26.39, and use them with the highest regard for individual privacy;

(4) Consistent with the principles established in section 503 of Public Law 100–71, any employee of a licensee or other entity who is the subject of a drug test (or his or her representative designated under § 26.37(d)) shall, on written request, have access to the laboratory's records related to his or her validity and drug test and any records related to the results of any relevant certification, review, or revocation-of-certification proceedings;

(5) The laboratory may not enter into any relationship with the licensee's or other entity's MRO(s) that may be construed as a potential conflict of interest, including, but not limited to, the relationships described in § 26.183(b), and may not derive any financial benefit by having a licensee or other entity use a specific MRO; and

(6) The laboratory shall permit representatives of the NRC and any licensee or other entity using the laboratory's services to inspect the laboratory at any time, including unannounced inspections.

(g) If licensees or other entities use a form other than the current Federal custody-and-control form, licensees and other entities shall provide a memorandum to the laboratory explaining why a non-Federal form was used, but must ensure, at a minimum, that the form used contains all the required information on the Federal custody-and-control form.

[73 FR 17208 Mar. 31, 2008]

§ 26.155 Laboratory personnel.

[Top of File]

(a) *Day-to-day management of the HHS-certified laboratory*. HHS-certified laboratories shall have a responsible person to assume professional, organizational, educational, and administrative responsibility for the laboratory's drug testing facilities.

(1) This individual shall have documented scientific qualifications in analytical forensic toxicology. Minimum qualifications are as follows:

(i) Certification by the appropriate State as a laboratory director in forensic or clinical laboratory toxicology; or

(ii) A PhD in one of the natural sciences with an adequate undergraduate and graduate education in biology, chemistry, and pharmacology or toxicology; or

(iii) Training and experience comparable to a Ph.D. in one of the natural sciences, such as a medical or scientific degree with additional training and laboratory/research experience in biology, chemistry, and pharmacology or toxicology; and (iv) In addition to the requirements

in paragraphs (a)(1)(i) through (a)(1)(iii) of this section, the responsible person shall also have the following minimum qualifications:

(A) Appropriate experience in analytical forensic toxicology including experience with the analysis of biological material for drugs of abuse; and

(B) Appropriate training and/or experience in forensic applications of analytical toxicology (e.g., publications, court testimony, research concerning analytical toxicology of drugs of abuse, or other factors that qualify the individual as an expert witness in forensic toxicology).

(2) This individual shall be engaged in and responsible for the day-to-day management of the testing laboratory, even if another individual has overall responsibility for an entire multi-specialty laboratory.

(3) This individual shall be responsible for ensuring that there are enough personnel with adequate training and experience to supervise and conduct the work of the drug testing laboratory. He or she shall ensure the continued competency of laboratory personnel by documenting their in-service training, reviewing their work performance, and verifying their skills.

(4) This individual shall be responsible for ensuring that the laboratory has a manual of standard operating procedures that are complete, up-to-date, available for personnel performing tests, and followed by those personnel. The procedures must be reviewed, signed, and dated by this responsible person whenever the procedures are first placed into use or changed or when a new individual assumes responsibility for management of the laboratory. This individual shall ensure that copies of all procedures and records of the dates on which they are in effect are maintained. (Specific contents of the procedures are described in § 26.157.)

(5) This individual shall be responsible for maintaining a quality assurance program to assure the proper performance and reporting of all test results; maintaining acceptable analytical performance for all controls and standards; maintaining quality control testing; and assuring and documenting the validity, reliability, accuracy, precision, and performance characteristics of each test and test system.

(6) This individual shall be responsible for taking all remedial actions that may be necessary to maintain satisfactory operation and performance of the laboratory in response to quality control systems not being within performance specifications, including errors in result reporting or in the analysis of performance testing results. This individual shall ensure that test results are not reported until all corrective actions have been taken and he or she can assure that the test results provided are accurate and reliable.

(b) *Certifying scientist*. (1) HHS-certified laboratories shall have one or more certifying scientists who review all pertinent data and quality control results to certify the laboratory's test results.

(2) A certifying scientist shall be an individual with at least a bachelor's degree in the chemical or biological sciences, medical technology, or an equivalent field who reviews all pertinent data and quality control results. The individual shall have training and experience in the theory and practice of all methods and procedures used in the laboratory, including a thorough understanding of chain-of-custody procedures, quality control practices, and analytical procedures relevant to the results that the individual certifies. Relevant training and experience must also include the review, interpretation, and reporting of test results; maintenance of chain of custody; and proper remedial action to be taken in response to aberrant test or quality control results, or a determination that test systems are out of control limits.

(3) A laboratory may designate certifying scientists who only certify results that are reported negative and certifying scientists who certify results that are reported both negative and adulterated, substituted, dilute, or invalid.

(c) *Day-to-day operations and supervision of analysts*. HHS-certified laboratories shall assign one or more individuals who are responsible for day-to-day operations and supervision of the technical analysts. The designated individual(s) shall have at least a bachelor's degree in the chemical or biological sciences, medical technology, or an equivalent field. The individual(s) shall also have training and experience in the theory and practice of the procedures used in the laboratory, resulting in his or her thorough understanding of quality control practices and procedures; review, interpretation, and reporting of test results; maintenance of the chain of custody; and proper remedial actions to be taken in response to aberrant test or quality control results, or the finding that test systems are out of control limits.

(d) *Other personnel*. Other technicians or nontechnical staff shall have the necessary training and skills for their assigned tasks.

(e) *Training*. HHS-certified laboratories shall make available continuing education programs to meet the needs of laboratory personnel.

(f) *Files*. At a minimum, each laboratory personnel file must include a résumé, any professional certification(s) or license(s), a job description, and documentation to show that the individual has been properly trained to perform his or her job.

[73 FR 17209 Mar. 31, 2008]

§ 26.157 Procedures.

[Top of File]

(a) HHS-certified laboratories shall develop, implement, and maintain clear and well-documented procedures for accession, receipt, shipment, and testing of urine specimens.

(b) Written chain-of-custody procedures must describe the methods to be used to maintain control and accountability of specimens from receipt through completion of testing and reporting of results, during storage and shipping to another HHS-certified laboratory, if required, and continuing until final disposition of specimens.

(c) HHS-certified laboratories shall develop, implement, and maintain a written manual of standard operating procedures for each assay performed for licensees and other entities for drug and specimen validity testing. The procedures must include, but are not limited to, detailed descriptions of—

(1) The principles of each test;

(2) Preparation of reagents, standards, and controls;

(3) Calibration procedures;

(4) Derivation of results;

(5) Linearity of methods;

(6) Sensitivity of the methods;

(7) Cutoff values;

(8) Mechanisms for reporting results;

(9) Controls;

(10) Criteria for unacceptable specimens and results;

(11) Reagents and expiration dates; and

(12) References.

(d) HHS-certified laboratories shall develop, implement, and maintain written procedures for instrument setup and normal operation, including the following:

(1) A schedule for checking critical operating characteristics for all instruments;

(2) Tolerance limits for acceptable function checks; and

(3) Instructions for major troubleshooting and repair.

(e) HHS-certified laboratories shall develop, implement, and maintain written procedures for remedial actions to be taken when errors are detected or systems are out of acceptable limits. The laboratory shall maintain documentation that its personnel follow these procedures and take all necessary corrective actions. In addition, the laboratory shall have systems in place to verify all stages of testing and reporting and to document the verification.

[73 FR 17210 Mar. 31, 2008]

§ 26.159 Assuring specimen security, chain of custody, and preservation.

[Top of File]

(a) The HHS-certified laboratories performing services for licensees and other entities under this part shall be secure at all times. Each laboratory shall have in place sufficient security measures to control access to the premises and to ensure that no unauthorized personnel handle specimens or gain access to the laboratory processes or areas where records are stored. Access to these secured areas must be limited to specially authorized individuals whose authorization is documented. All authorized visitors, and maintenance and service personnel, shall be escorted at all times in the laboratory, except personnel who are authorized to conduct inspections and audits on behalf of licensees, other entities, the NRC, or the HHS Secretary, and emergency personnel (including but not limited to firefighters and medical rescue teams).

(b) When a shipment of specimens is received, laboratory personnel shall inspect each package for evidence of possible tampering and shall compare information on specimen bottles within each package to the information on the accompanying custody-and-control forms.

(1) Any direct evidence of tampering or discrepancies in the information on the specimen bottles and the custody-and-control forms attached to the shipment must be reported to the licensee or other entity within 24 hours of the discovery and must be noted on the custody-and-control forms for each specimen contained in the package. When notified, the licensee or other entity shall ensure that an investigation is initiated to determine whether tampering has occurred.

(i) If the investigation determines that tampering has occurred, the licensee or other entity shall ensure that corrective actions are taken.

(ii) If the licensee or other entity has reason to question the integrity and identity of the specimens, the specimens may not be tested and

the licensee or other entity shall ensure that another collection occurs as soon as reasonably practical, except if a split specimen collection was performed, either the Bottle A or Bottle B seal remains intact, and the intact specimen contains at least 15 mL of urine. In this instance, if the licensee testing facility has retained the specimen in Bottle B, the licensee testing facility shall forward the intact specimen for testing to the HHS-certified laboratory and may not conduct any testing at the licensee testing facility.

(2) The following are exclusive grounds requiring the MRO to cancel the testing of a donor's urine specimen:

(i) The custody-and-control form does not contain information to identify the specimen collector and the collection site cannot provide conclusive evidence of the collector's identity;

(ii) The identification numbers on the specimen bottle seal(s) do not match the identification numbers on the custody-and-control form;

(iii) A specimen bottle seal is broken or shows evidence of tampering and an intact specimen, as specified in paragraph (b)(1)(ii) of this section, does not exist;

(iv) The specimen appears to have leaked out of its sealed bottle and there is less than 15 mL remaining, and an intact specimen, as specified in paragraph (b)(1)(ii) of this section, does not exist; or

(v) As required under § 26.165(f)(2).

(c) The HHS-certified laboratory shall retain specimen bottles within the laboratory's accession area until all analyses have been completed. Laboratory personnel shall use aliquots and laboratory internal custody-and-control forms when conducting initial and confirmatory tests. The original specimen and the original custody-and-control form must remain in secure storage.

(d) The laboratory's internal custody-and-control form must allow for identification of the donor, and documentation of the testing process and transfers of custody of the specimen.

(e) Each time a specimen is handled or transferred within the laboratory, laboratory personnel shall document the date and purpose on the custody-and-control form and every individual in the chain shall be identified. Authorized technicians are responsible for each urine specimen or aliquot in their possession and shall sign and complete custody-and-control forms for those specimens or aliquots as they are received.

(f) If a specimen is to be transferred to a second HHS-certified laboratory, laboratory personnel shall ensure that a copy of the custody-and-control form is packaged with the aliquot of a single specimen or Bottle B of a split specimen, as appropriate. Sealed and labeled specimen bottles and aliquots, with their associated custody-and-control forms, being transferred from one laboratory to another must be placed in a second, tamper-evident shipping container designed to minimize the possibility of damage to the specimen during shipment (e.g., specimen boxes, padded mailers, or bulk insulated shipping containers with that capability) so that the contents of the shipping containers are inaccessible without breaking a tamper-evident seal.

(g) Couriers, express carriers, and postal service personnel do not have direct access to the custody-and-control forms or the specimen bottles. Therefore, such personnel are not required to document chain of custody on the custody-and-control forms during transit. Custody accountability of the shipping containers during shipment must be maintained by a tracking system provided by the courier, express carrier, or postal service.

(h) Specimens that do not receive an initial test within 7 days of arrival at the laboratory must be placed in secure refrigeration units for short-term storage. Temperatures may not exceed 6 °C (42.8 °F). The laboratory shall ensure proper storage conditions in the event of a prolonged power failure.

(i) Long-term frozen storage at a temperature of –20 °C (–68 °F) or less ensures that positive, adulterated, substituted, and invalid urine specimens and Bottle B of a split specimen will be available for any necessary retests. Unless otherwise authorized in writing by the licensee or other entity, laboratories shall retain and place in properly secured long-term frozen storage all specimens reported as positive, adulterated, substituted, or invalid. At a minimum, such specimens must be stored for 1 year. Within this 1-year period, a licensee, other entity, or the NRC may ask the laboratory to retain the specimen for an additional period of time. If no retention request is received, the laboratory may discard the specimen after the end of 1 year. However, the laboratory shall retain any specimens under review or legal challenge until they are no longer needed.

(j) The laboratory shall discard a valid specimen that tests negative on initial or confirmatory drug tests or may pool such specimens for use in the laboratory's internal quality control program after certifying that the specimens are negative and valid. The laboratory may not retain any information linking donors to specimens that are pooled for use in the internal quality control program.

[73 FR 17210 Mar. 31, 2008]

§ 26.161 Cutoff levels for validity testing.

[Top of File]

(a) *Validity test results*. Each validity test result for a specimen that the HHS-certified laboratory reports to the MRO as adulterated, substituted, dilute, or invalid must be based on performing an initial validity test on one aliquot and a confirmatory validity test on a second aliquot. Licensees and other entities shall ensure that the HHS-certified laboratory is capable of conducting, and conducts, confirmatory testing for at least one oxidizing adulterant and any other adulterants specified by the licensee's or other entity's testing program. If initial

validity test results indicate that the specimen is valid under the criteria in paragraphs (c) through (f) of this section, the HHS-certified laboratory need not perform confirmatory validity testing of the specimen.

(b) *Initial validity testing*. The HHS-certified laboratory shall perform initial validity testing of each specimen as follows:

(1) Determine the creatinine concentration;

(2) Determine the specific gravity of every specimen for which the creatinine concentration is less than 20 mg/dL;

(3) Determine the pH;

(4) Perform one or more initial validity tests for oxidizing adulterants; and

(5) Perform additional validity tests, the choice of which depends on the observed indicators or characteristics below, when the following conditions are observed:

(i) Abnormal physical characteristics;

(ii) Reactions or responses characteristic of an adulterant obtained during initial or confirmatory drug tests (e.g., non-recovery of internal standards, unusual response); or

(iii) Possible unidentified interfering substance or adulterant.

(c) *Results indicating an adulterated specimen*. The laboratory shall report a specimen as adulterated when the specimen yields any one or more of the following validity testing results:

(1) The pH is less than 3, or equal to or greater than 11, using either a pH meter or a colorimetric pH test for the initial test on the first aliquot and a pH meter for the confirmatory test on the second aliquot;

(2) The nitrite concentration is equal to or greater than 500 mcg/mL using either a nitrite colorimetric test or a general oxidant colorimetric test for the initial test on the first aliquot and a different confirmatory test (e.g., multi-wavelength spectrophotometry, ion chromatography, capillary electrophoresis) on the second aliquot;

(3) The presence of chromium (VI) is verified using either a general oxidant colorimetric test (with a cutoff equal to or greater than 50 mcg/mL chromium (VI)-equivalents) or a chromium (VI) colorimetric test (chromium (VI) concentration equal to or greater than 50 mcg/mL) for the initial test on the first aliquot and a different confirmatory test (e.g., multi-wavelength spectrophotometry, ion chromatography, atomic absorption spectrophotometry, capillary electrophoresis, inductively coupled plasma-mass spectrometry) with the chromium (VI) concentration equal to or greater than the LOD of the confirmatory test on the second aliquot;

(4) The presence of halogen (e.g., bleach, iodine, fluoride) is verified using either a general oxidant colorimetric test (with a cutoff equal to or greater than 200 mcg/mL nitrite-equivalents or a cutoff equal to or greater than 50 mcg/mL chromium (VI)-equivalents) or a halogen colorimetric test (halogen concentration equal to or greater than the LOD) for the initial test on the first aliquot and a different confirmatory test (e.g., multi-wavelength spectrophotometry, ion chromatography, inductively coupled plasma-mass spectrometry) with a specific halogen concentration equal to or greater than the LOD of the confirmatory test on the second aliquot;

(5) The presence of glutaraldehyde is verified using either an aldehyde test (aldehyde present) or the specimen yields the characteristic immunoassay response on one or more drug immunoassay tests for the initial test on the first aliquot and gas chromatography/mass spectrometry (GC/MS) for the confirmatory test with the glutaraldehyde concentration equal to or greater than the LOD of the analysis on the second aliquot;

(6) The presence of pyridine (pyridinium chlorochromate) is verified using either a general oxidant colorimetric test (with a cutoff equal to or greater than 200 mcg/mL nitrite-equivalents or a cutoff equal to or greater than 50 mcg/mL chromium (VI)-equivalents) or a chromium (VI) colorimetric test (chromium (VI) concentration equal to or greater than 50 mcg/mL) for the initial test on the first aliquot and GC/MS for the confirmatory test with the pyridine concentration equal to or greater than the LOD of the analysis on the second aliquot;

(7) The presence of a surfactant is verified by using a surfactant colorimetric test with a cutoff equal to or greater than 100 mcg/mL dodecylbenzene sulfonate-equivalent for the initial test on the first aliquot and a different confirmatory test (e.g., multi-wavelength spectrophotometry) with a cutoff equal to or greater than 100 mcg/mL dodecylbenzene sulfonate equivalent on the second aliquot; or

(8) The presence of any other adulterant not specified in paragraphs (c)(3) through (c)(7) of this section is verified using an initial test on the first aliquot and a different confirmatory test on the second aliquot.

(d) *Results indicating a substituted specimen*. The laboratory shall report a specimen as substituted when the specimen's creatinine concentration is less than 2 mg/dL and its specific gravity is less than or equal to 1.0010, or equal to or greater than 1.0200, on both the initial and confirmatory creatinine tests (i.e., the same colorimetric test may be used to test both aliquots) and on both the initial and confirmatory specific gravity tests (i.e., a refractometer is used to test both aliquots) on two separate aliquots.

(e) *Results indicating a dilute specimen*. The laboratory shall report a specimen as dilute when the specimen's creatinine concentration is equal to or greater than 2 mg/dL but less than 20 mg/dL and its specific gravity is greater than 1.0010 but less than 1.0030 on a single

aliquot.

(f) *Results indicating an invalid specimen*. The laboratory shall report a specimen as invalid when the laboratory obtains any one or more of the following validity testing results:

(1) Inconsistent creatinine concentration and specific gravity results are obtained (i.e., the creatinine concentration is less than 2 mg/dL on both the initial and confirmatory creatinine tests and the specific gravity is greater than 1.0010 but less than 1.0200 on the initial and/or confirmatory specific gravity test, the specific gravity is less than or equal to 1.0010 on both the initial and confirmatory specific gravity tests and the creatinine concentration is equal to or greater than 2 mg/dL on either or both the initial or confirmatory creatinine tests);

(2) The pH is equal to or greater than 3 and less than 4.5, or equal to or greater than 9 and less than 11, using either a colorimetric pH test or pH meter for the initial test and a pH meter for the confirmatory test on two separate aliquots;

(3) The nitrite concentration is equal to or greater than 200 mcg/mL using a nitrite colorimetric test, or equal to or greater than the equivalent of 200 mcg/mL nitrite using a general oxidant colorimetric test for both the initial test and the confirmatory test, or, using either initial test, the nitrite concentration is equal to or greater than 200 mcg/mL but less than 500 mcg/mL using a different confirmatory test (e. g., multi-wavelength spectrophotometry, ion chromatography, capillary electrophoresis) on two separate aliquots;

(4) The possible presence of chromium (VI) is determined using the same chromium (VI) colorimetric test with a cutoff equal to or greater than 50 mcg/mL chromium (VI) for both the initial test and the confirmatory test on two separate aliquots;

(5) The possible presence of a halogen (e.g., bleach, iodine, fluoride) is determined using the same halogen colorimetric test with a cutoff equal to or greater than the LOD for both the initial test and the confirmatory test on two separate aliquots or relying on the odor of the specimen as the initial test;

(6) The possible presence of glutaraldehyde is determined using the same aldehyde test (aldehyde present) or the characteristic immunoassay response is observed on one or more drug immunoassay tests for both the initial test and the confirmatory test on two separate aliquots;

(7) The possible presence of an oxidizing adulterant is determined by using the same general oxidant colorimetric test (with cutoffs equal to or greater than 200 mcg/mL nitrite-equivalents, equal to or greater than 50 mcg/mL chromium (VI)-equivalents, or a halogen concentration equal to or greater than the LOD) for both the initial test and the confirmatory test on two separate aliquots;

(8) The possible presence of a surfactant is determined using the same surfactant colorimetric test with a cutoff equal to or greater than 100 mcg/mL dodecylbenzene sulfonate-equivalent for both the initial test and the confirmatory test on two separate aliquots or a foam/ shake test for the initial test;

(9) Interference occurs on the immunoassay drug tests on two separate aliquots (i.e., valid immunoassay drug test results cannot be obtained);

(10) Interference with the drug confirmation assay occurs on at least two separate aliquots of the specimen, and the laboratory is unable to identify the interfering substance;

(11) The physical appearance of the specimen indicates that testing may damage the laboratory's equipment; or

(12) The physical appearances of Bottles A and B (when a split specimen collection is used) are clearly different, and either the test result for Bottle A indicated it is an invalid specimen or the specimen in Bottle A was screened negative for drugs, or both.

(g) *Additional testing by a second laboratory*. If the presence of an interfering substance/adulterant is suspected that could make a test result invalid, but it cannot be identified (e.g., a new adulterant), laboratory personnel shall consult with the licensee's or other entity's MRO and, with the MRO's agreement, shall send the specimen to another HHS-certified laboratory that has the capability to identify the suspected substance.

(h) *More stringent validity test cutoff levels are prohibited*. Licensees and other entities may not specify more stringent cutoff levels for validity tests than those specified in this section.

[73 FR 17211 Mar. 31, 2008]

§ 26.163 Cutoff levels for drugs and drug metabolites.

[Top of File]

(a) *Initial drug testing*. (1) HHS-certified laboratories shall apply the following cutoff levels for initial testing of specimens to determine whether they are negative for the indicated drugs and drug metabolites, except if validity testing indicates that the specimen is dilute or the licensee or other entity has established more stringent cutoff levels:

INITIAL TEST CUTOFF LEVELS FOR DRUGS AND DRUG METABOLITES

Drug or metabolites	Cutoff level [nanograms (ng)/mL]
Marijuana metabolites	50
Cocaine metabolites	300
Opiate metabolites	2000
Phencyclidine (PCP)	25
Amphetamines	1000

(2) At the licensee's or other entity's discretion, as documented in the FFD program policies and procedures, the licensee or other entity may require the HHS-certified laboratory to conduct special analyses of dilute specimens as follows:

(i) If initial validity testing indicates that a specimen is dilute, the HHS-certified laboratory shall compare the responses of the dilute specimen to the cutoff calibrator in each of the drug classes;

(ii) If any response is equal to or greater than 50 percent of the cutoff, the HHS-certified laboratory shall conduct confirmatory testing of the specimen down to the LOD for those drugs and/or drug metabolites; and

(iii) The laboratory shall report the numerical values obtained from this special analysis to the MRO.

(b) *Confirmatory drug testing*. (1) A specimen that is identified as positive on an initial drug test must be subject to confirmatory testing for the class(es) of drugs for which the specimen initially tested positive. The HHS-certified laboratory shall apply the confirmatory cutoff levels specified in this paragraph, except if the licensee or other entity requires the special analysis of dilute specimens permitted in paragraph (a)(2) of this section or the licensee or other entity has established more stringent cutoff levels.

CONFIRMATORY TEST CUTOFF LEVELS FOR DRUGS AND DRUG METABOLITES

Drug or metabolites	Cutoff level (ng/mL)
Marijuana metabolite[1]	15
Cocaine metabolite[2]	150
Opiates: Morphine Codeine 6-acetylmorphine[3]	 2000 2000 10
Phencyclidine (PCP)	25
Amphetamines: Amphetamine Methamphetamine[4]	 500 500

[1] As delta-9-tetrahydrocannabinol-9-carboxylic acid.

[2] As benzoylecgonine.

[3] Test for 6–AM when the confirmatory test shows a morphine concentration exceeding 2,000 ng/mL.

[4] Specimen must also contain amphetamine at a concentration equal to or greater than 200 ng/mL.

(2) Each confirmatory drug test must provide a quantitative result. When the concentration of a drug or metabolite exceeds the linear range of the standard curve, the laboratory may record the result as "exceeds the linear range of the test" or as "equal to or greater than <insert the value for the upper limit of the linear range>," or may dilute an aliquot of the specimen to obtain an accurate quantitative result when the concentration is above the upper limit of the linear range.

[73 FR 17212 Mar. 31, 2008]

§ 26.165 Testing split specimens and retesting single specimens.

[Top of File]

(a) *Testing split specimens*. (1) If a specimen has been split into Bottle A and Bottle B at the collection site, and the specimen was not initially tested at a licensee testing facility, then the HHS-certified laboratory shall perform initial and confirmatory validity and drug testing, if required, of the specimen in Bottle A.

(2) If a specimen was initially tested at a licensee testing facility and positive or questionable validity test results were obtained, then the HHS-certified laboratory shall perform initial and confirmatory testing, if required, of the specimen in Bottle A.

(3) At the licensee's or other entity's discretion, Bottle B must either be forwarded to the HHS-certified laboratory or maintained in secure storage at the licensee testing facility, as required by § 26.135(a) and (c), as applicable. If the specimen in Bottle A is free of any evidence of drugs or drug metabolites, and is a valid specimen, then the licensee testing facility or HHS-certified laboratory may discard the specimens in Bottles A and B.

(b) *Donor request to MRO for a retest of a single specimen or testing Bottle B of a split specimen*. (1) For a confirmed positive, adulterated, or substituted result reported on a single specimen of 30 mL or more, or a specimen in Bottle A of a split specimen which the donor submitted to the licensee or other entity, a donor may request (through the MRO) that an aliquot from the single specimen or the split (Bottle B) specimen be tested by a second HHS-certified laboratory to verify the result reported by the first laboratory. For an invalid test result, a donor may not request that an aliquot from the single specimen or the split specimen in Bottle B be tested by a second HHS-certified laboratory.

(2) The MRO shall inform the donor that he or she may, within 3 business days of notification by the MRO of the confirmed positive, adulterated, or substituted test result, request the retesting of an aliquot of the single specimen or the testing of the Bottle B split specimen. The MRO shall provide the donor with specific instructions for making this request (i.e., providing telephone numbers or other contact information). The MRO shall have the ability to receive the donor's calls at all times during the 3-day period (e.g., by use of an answering machine with a "time stamp" feature when there is no one in the MRO's office to answer the phone). The donor's request may be oral or in writing.

(3) The donor shall provide his or her permission for retesting an aliquot of the single specimen or the testing of Bottle B. Neither the licensee, MRO, NRC, nor any other entity may order retesting of the single specimen or testing of the specimen in Bottle B without the donor's written permission, except as permitted in § 26.185(l).

(4) If the donor has not requested a retest of an aliquot of a single specimen or a test of the split specimen (Bottle B) within 3 business days, the donor may present to the MRO information documenting that serious injury, illness, lack of actual notice of the confirmed test result, inability to contact the MRO (e.g., there was no one in the MRO's office and the answering machine was not working), or other circumstances unavoidably prevented the donor from making a timely request. If the MRO concludes from the donor's information that there was a legitimate reason for the donor's failure to contact the MRO within the 3 business days permitted, the MRO shall direct the retesting of an aliquot of the single specimen or the test of the split specimen (Bottle B) take place, as if the donor had made a timely request.

(5) As soon as reasonably practical and not more than 1 business day following the day of the donor's request, as permitted in paragraph (b)(3) or (b)(4) of this section, the MRO shall ensure that the HHS-certified laboratory forwards an aliquot of a single specimen, or that the HHS-certified laboratory (or licensee testing facility, as appropriate) orwards Bottle B of a split specimen, to a second HHS-certified laboratory that did not test the specimen in Bottle A.

(6) The HHS-certified laboratory that retests an aliquot of a single specimen or tests the specimen in Bottle B shall provide quantitative test results to the MRO and the MRO shall provide them to the donor.

(c) *Retesting a specimen for drugs*. (1) The second laboratory shall use its confirmatory drug test when retesting an aliquot of a single specimen or testing Bottle B of a split specimen for the drug(s) or drug metabolite(s) for which the first laboratory reported a positive result (s), including retesting specimens that have been subject to the special analysis permitted in § 26.163(a)(2).

(2) Because some drugs or drug metabolites may deteriorate during storage, the retest by the second laboratory is not subject to a specific drug cutoff level, but must provide data sufficient to reconfirm the presence of the drug(s) or drug metabolite(s) down to the assay's LOD.

(3) If the second laboratory fails to reconfirm the presence of the drug(s) or drug metabolite(s) for which the first laboratory reported a positive result(s), the second laboratory shall attempt to determine the reason for not reconfirming the first laboratory's findings by conducting specimen validity tests. The second laboratory shall conduct the same specimen validity tests it would conduct on a single specimen or the specimen in Bottle A of a split specimen.

(4) The second laboratory shall report all results to the licensee's or other entity's MRO.

(d) *Retesting a specimen for adulterants*. A second laboratory shall use the required confirmatory validity test and criteria in § 26.161(c) to reconfirm an adulterant result when retesting an aliquot from a single specimen or when testing Bottle B of a split specimen. The second laboratory may only conduct the confirmatory validity test needed to reconfirm the adulterant result reported by the first laboratory.

(e) *Retesting a specimen for substitution*. A second laboratory shall use its confirmatory creatinine and confirmatory specific gravity tests, when retesting an aliquot of a single specimen or testing Bottle B of a split specimen, to reconfirm that the creatinine concentration was less than 2 mg/dL and the specific gravity was less than or equal to 1.0010 or equal to or greater than 1.0200. The second laboratory may only conduct the confirmatory creatinine and specific gravity tests to reconfirm the substitution result reported by the first laboratory.

(f) *Management actions and sanctions*. (1) If the MRO confirms a positive, adulterated, or substituted test result(s) from the first HHS-certified laboratory and the donor requests testing of Bottle B of a split specimen or retesting of an aliquot from a single specimen, the licensee or other entity shall administratively withdraw the individual's authorization on the basis of the first confirmed positive, adulterated, or substituted test result until the results of testing Bottle B or retesting an aliquot of the single specimen are available and have been reviewed by the MRO. If the MRO reports that the results of testing Bottle B or retesting the aliquot of a single specimen reconfirm any of the original positive, adulterated, or substituted test result(s), the licensee or other entity shall impose the appropriate sanctions specified in subpart D. If the results of testing Bottle B or retesting the aliquot of a single specimen are negative, the licensee or other entity—

(i) May not impose any sanctions on the individual;

(ii) Shall eliminate from the donor's personnel file and other records any matter that could link the individual to the temporary administrative action;

(iii) May not disclose the temporary administrative action in response to a suitable inquiry conducted under the provisions of § 26.63 or to any other inquiry or investigation required in this chapter. To ensure that no records have been retained, access to the system of files and records must be provided to personnel conducting reviews, inquiries into allegations, or audits under the provisions of § 26.41, or to NRC inspectors; and

(iv) Shall provide the tested individual with a written statement that the records specified in §§ 26.713 and 26.715 have not been retained and shall inform the individual in writing that the temporary administrative action that was taken will not be disclosed and need not be disclosed by the individual in response to requests for self-disclosure of potentially disqualifying FFD information.

(2) If a donor requests that Bottle B be tested or that an aliquot of a single specimen be retested, and either Bottle B or the single specimen are not available due to circumstances outside of the donor's control (including, but not limited to, circumstances in which there is an insufficient quantity of the single specimen or the specimen in Bottle B to permit retesting, either Bottle B or the original single specimen is lost in transit to the second HHS-certified laboratory, or Bottle B has been lost at the HHS-certified laboratory or licensee testing facility), the MRO shall cancel the test and inform the licensee or other entity that another collection is required under direct observation as soon as reasonably practical. The licensee or other entity shall eliminate from the donor's personnel and other records any matter that could link the donor to the original positive, adulterated, or substituted test result(s) and any temporary administrative action, and may not impose any sanctions on the donor for a cancelled test. If test results from the second specimen collected are positive, adulterated, or substituted and the MRO determines that the donor has violated the FFD policy, the licensee or other entity shall impose the appropriate sanctions specified in subpart D of this part, but may not consider the original confirmed positive, adulterated, or substituted test result in determining the appropriate sanctions.

[73 FR 17213 Mar. 31, 2008]

§ 26.167 Quality assurance and quality control.

[Top of File]

(a) *Quality assurance program*. Each HHS-certified laboratory shall have a quality assurance program that encompasses all aspects of the testing process, including, but not limited to, specimen accessioning, chain of custody, security and reporting of results, initial and confirmatory testing, certification of calibrators and controls, and validation of analytical procedures. The performance characteristics (e.g., accuracy, precision, LOD, limit of quantitation (LOQ), specificity) of each test must be validated and documented for each test. Validation of procedures must document that carryover does not affect the donor's specimen results. Periodic re-verification of analytical procedures is required. Quality assurance procedures must be designed, implemented, and reviewed to monitor the conduct of each step of the testing process.

(b) *Calibrators and controls required*. Each analytical run of specimens for which an initial or confirmatory validity test, or an initial or confirmatory drug test, is being performed must include the appropriate calibrators and controls.

(c) *Quality control requirements for performing initial and confirmatory validity tests*. (1) Requirements for performing creatinine tests:

(i) The creatinine concentration must be measured to one decimal place on both the initial and the confirmatory creatinine tests;

(ii) The initial creatinine test must have a calibrator at 2 mg/dL;

(iii) The initial creatinine test must have a control in the range of 1 to 1.5 mg/dL, a control in the range of 3 to 20 mg/dL, and a control in the range of 21 to 25 mg/dL; and

(iv) The confirmatory creatinine test (performed on those specimens with a creatinine concentration less than 2 mg/dL on the initial test) must have a calibrator at 2 mg/dL, a control in the range of 1.0 to 1.5 mg/dL, and a control in the range of 3 to 4 mg/dL.

(2) Requirements for performing specific gravity tests:

(i) The refractometer must report and display the specific gravity to four decimal places, and must be interfaced with a laboratory information management system, or computer, and/or generate a hard copy or digital electronic display to document the numerical result;

(ii) The initial and confirmatory specific gravity tests must have a calibrator or control at 1.0000; and

(iii) The initial and confirmatory specific gravity tests must have the following controls:

(A) One control targeted at 1.0020;

(B) One control in the range of 1.0040 to 1.0180; and

(C) One control equal to or greater than 1.0200 but not greater than 1.0250.

(3) Requirements for performing pH tests:

(i) Colorimetric pH tests that have the dynamic range of 2 to 12 to support the 3 and 11 pH cutoffs and pH meters must be capable of measuring pH to one decimal place. Dipsticks, colorimetric pH tests, and pH paper that have a narrow dynamic range and do not support the 2 to 12 pH cutoffs may be used only to determine whether initial validity tests must be performed;

(ii) At a minimum, pH screening tests must have the following controls: (A) One control below the lower decision point in use;

(B) One control between the decision points in use; and

(C) One control above the upper decision point in use;

(iii) If a pH screening test is not used, an initial pH meter test must have the following calibrators and controls:

(A) One calibrator at 4;

(B) One calibrator at 7;

(C) One calibrator at 10;

(D) One control in the range of 2 to 2.8;

(E) One control in the range of 3.2 to 4;

(F) One control in the range of 10 to 10.8; and

(G) One control in the range of 11.2 to 12;

(iv) If a pH screening test is used, an initial or confirmatory pH meter test must have the following calibrators and controls when the screening result indicates that the pH is below the lower decision point in use:

(A) One calibrator at 4;

(B) One calibrator at 7;

(C) One control in the range of 2 to 2.8; and

(D) One control in the range of 3.2 to 4;

(v) If a pH screening test is used, an initial or confirmatory pH meter test must have the following calibrators and controls when the screening result indicates that the pH is above the upper decision point in use:

(A) One calibrator at 7;

(B) One calibrator at 10;

(C) One control in the range of 10 to 10.8; and

(D) One control in the range of 11.2 to 12; and

(vi) An initial colorimetric pH test must have the following calibrators and controls:

(A) One calibrator at 3;

(B) One calibrator at 11;

(C) One control in the range of 2 to 2.8;

(D) One control in the range of 3.2 to 4;

(E) One control in the range of 4.5 to 9;

(F) One control in the range of 10 to 10.8;

(G) One control in the range of 11.2 to 12.

(4) Requirements for performing oxidizing adulterant tests:

(i) Initial tests for oxidizing adulterants must include a calibrator at the appropriate cutoff concentration for the compound of interest as specified in § 26.161(c) and (f), a control without the compound of interest (i.e., a certified negative control), and at least one control with one of the compounds of interest at a measurable concentration; and

(ii) A confirmatory test for a specific oxidizing adulterant must use a different analytical method than that used for the initial test. Each confirmatory analytical run must include a calibrator at the appropriate cutoff concentration for the compound of interest as specified in § 26.161(c) and (f), a control without the compound of interest (i.e., a certified negative control), and a control with the compound of interest at a measurable concentration.

(5) Requirements for performing nitrite tests: The initial and confirmatory nitrite tests must have a calibrator at the cutoff concentration, a control without nitrite (i.e., certified negative urine specimen), one control in the range of 200 to 400 mcg/mL, and one control in the range of 500 to 625 mcg/mL.

(6) Requirements for performing "other" adulterant tests:

(i) The initial and confirmatory tests for any "other" adulterant that may be identified in the future must satisfy the requirements in § 26.161 (a);

(ii) The confirmatory test for "other" adulterants must use a different analytical principle or chemical reaction than that used for the initial test; and

(iii) The initial and confirmatory tests for "other" adulterants must include an appropriate calibrator, a control without the compound of interest (i.e., a certified negative control), and a control with the compound of interest at a measurable concentration.

(d) *Quality control requirements for performing initial drug tests*. (1) Any initial drug test performed by an HHS-certified laboratory must use an immunoassay that meets the requirements of the Food and Drug Administration for commercial distribution. Non-instrumented immunoassay testing devices that are pending HHS/SAMHSA review and approval may not be used for initial drug testing under this part.

(2) HHS-certified laboratories may perform multiple initial drug tests for the same drug or drug class, provided that all tests meet the cutoffs and quality control requirements of this part. For example, an HHS-certified laboratory may use immunoassay technique "A" for all drugs using the licensee's or other entity's cutoff levels, but specimens testing positive for amphetamines may also be tested using immunoassay technique "B" to eliminate any possible positives due to structural analogues; or, a valid analytical result cannot be obtained using immunoassay technique "A" and immunoassay technique "B" is used in an attempt to obtain a valid analytical result.

(3) Quality control samples for each analytical run of specimens for initial testing must include—

(i) Sample(s) certified to contain no drugs or drug metabolites (i.e., negative urine samples);

(ii) At least one positive control with a drug(s) or drug metabolite(s) targeted at 25 percent above the cutoff;

(iii) At least one positive control with a drug(s) or drug metabolite(s) targeted at 25 percent below the cutoff;

(iv) A sufficient number of calibrators to ensure and document the linearity of the assay method over time in the concentration area of the cutoff (after acceptable values are obtained for the known calibrators, those values will be used to calculate sample data); and

(v) At least one control that appears to be a donor specimen to the laboratory analysts.

(4) A minimum of 10 percent of the total specimens in each analytical run must be quality control samples, as defined by paragraphs (d)(3) (i) through (iv) of this section.

(e) *Quality control requirements for performing confirmatory drug tests*. (1) Confirmatory tests for drugs and drug metabolites must be performed using gas chromatography/mass spectrometry (GC/MS) or other confirmatory test methodologies that HHS-certified laboratories are permitted to use in Federal workplace drug testing programs for this purpose.

(2) At least 10 percent of the samples in each analytical run of specimens must be calibrators and controls.

(3) Each analytical run of specimens that are subjected to confirmatory testing must include—

(i) Sample(s) certified to contain no drug (i.e., negative urine samples);

(ii) Positive calibrator(s) and control(s) with a drug(s) or drug metabolite(s);

(iii) At least one positive control with a drug(s) or drug metabolite(s) targeted at 25 percent above the cutoff; and

(iv) At least one calibrator or control that is targeted at or below 40 percent of the cutoff.

(f) *Errors in testing*. The licensee or other entity shall ensure that the HHS-certified laboratory investigates any testing errors or unsatisfactory performance discovered in blind performance testing, as required under § 26.168, in the testing of actual specimens, or through the processing of reviews, as well as any other errors or matters that could adversely reflect on the testing process.

(1) Whenever possible, the investigation must determine relevant facts and identify the root cause(s) of the testing or process error. The licensee or other entity, and the HHS-certified laboratory, shall take action to correct the causes of any errors or unsatisfactory performance that are within each entity's control. Sufficient records shall be maintained to furnish evidence of activities affecting quality. The licensee or other entity shall assure that the cause of the condition is determined and that corrective action is taken to preclude repetition. The identification of the significant condition, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

(2) If a false positive error occurs on a blind performance test sample or on a regular specimen, the licensee or other entity shall require the laboratory to take corrective action to minimize the occurrence of the particular error in the future. If there is reason to believe that the error could have been systematic, the licensee or other entity may also require review and re-analysis of previously run specimens.

(3) If a false positive error occurs on a blind performance test sample and the error is determined to be technical or methodological, the licensee or other entity shall instruct the laboratory to provide all quality control data from the batch or analytical run of specimens that included a false positive sample. In addition, the licensee or other entity shall require the laboratory to retest all specimens that analyzed as positive for that drug or metabolite, or as adulterated, substituted, dilute, or invalid in validity testing, from the time of final resolution of the error back to the time of the last satisfactory performance test cycle. This retesting must be documented by a statement signed by the laboratory's responsible person. The licensee or other entity and the NRC also may require an onsite review of the laboratory, which may be conducted unannounced during any hours of operation of the laboratory.

(g) *Accuracy*. Volumetric pipettes and measuring devices must be certified for accuracy or be checked by gravimetric, colorimetric, or other verification procedures. Automatic pipetttes and dilutors must be checked for accuracy and reproducibility both before being placed in service and periodically thereafter.

(h) *Calibrators and controls*. Laboratory calibrators and controls must be prepared using pure drug reference materials, stock standard solutions obtained from other laboratories, or standard solutions that are obtained from commercial manufacturers and are properly labeled as to content and concentration. Calibrators and controls may not be prepared from the same stock solution. The standards and controls must be labeled with the following dates: when received; when prepared or opened; when placed in service; and when scheduled for expiration.

[73 FR 17214 Mar. 31, 2008]

§ 26.168 Blind performance testing.

[Top of File]

(a) Each licensee and other entity shall submit blind performance test samples to the HHS-certified laboratory.

(1) During the initial 90-day period of any contract with an HHS-certified laboratory (not including rewritten or renewed contracts), each licensee or other entity shall submit blind performance test samples to each HHS-certified laboratory with whom it contracts in the amount of at least 20 percent of the total number of specimens submitted (up to a maximum of 100 blind performance specimens) or 30 blind performance test samples, whichever is greater.

(2) Following the initial 90-day period, the number of blind performance test samples submitted per quarter must be a minimum of one percent of all specimens (up to a maximum of 100) or ten blind performance test samples, whichever is greater.

(3) Both during the initial 90-day period and quarterly thereafter, licensees and other entities should attempt to submit blind performance test samples at a frequency that corresponds to the submission frequency for other specimens.

(b) Approximately 60 percent of the blind performance test samples submitted to the laboratory must be positive for one or more drugs or drug metabolites per sample and submitted so that all of the drugs for which the FFD program is testing are included at least once each calendar quarter, except as follows:

(1) Licensees and other entities shall submit blind performance test samples that are positive for marijuana metabolite at least two times each quarter; and

(2) In at least two quarters each year, licensees and other entities shall submit an additional blind performance test sample that is positive for cocaine instead of the required sample that is positive for PCP.

(c) The positive blind performance test samples must be positive for only those drugs for which the FFD program is testing and formulated at concentrations established in paragraph (g)(2) of this section.

(d) To challenge the HHS-certified laboratory's ability to limit false negatives, approximately 10 percent of the blind performance test samples submitted to the laboratory each quarter must be formulated at the concentrations established in paragraph (g)(3) of this section.

(e) To challenge the HHS-certified laboratory's ability to determine specimen validity, the licensee or other entity shall submit blind samples

each quarter that are appropriately adulterated, diluted, or substituted, in the amount of 20 percent of the specimens submitted that quarter or at least three samples per quarter (one each that is adulterated, diluted, or substituted), whichever is greater. These samples must be formulated at the concentrations established in paragraphs (g)(4) through (g)(6) of this section.

(f) Approximately 10 percent of the blind performance test samples submitted to the laboratory each quarter must be negative, as specified in paragraph (g)(1) of this section.

(g) Licensees and other entities shall use only blind performance test samples that have been certified by the supplier to be—

(1) Negative. A negative blind performance test sample may not contain a measurable amount of a target drug analyte and must be certified by immunoassay and confirmatory testing;

(2) Drug positive. These samples must contain a measurable amount of the target drug or analyte in concentrations ranging between 150 and 200 percent of the initial cutoff values and be certified by immunoassay and confirmatory testing to contain one or more drug(s) or drug metabolite(s);

(3) A false negative challenge. This blind performance test sample must contain a measurable amount of the target drug or analyte in concentrations ranging between 130 and 155 percent of the initial cutoff values;

(4) Adulterated. The adulterated blind performance test sample must have a pH of less than or equal to 2, or greater than or equal to 12, or a nitrite or other oxidant concentration equal to or greater than 500 mcg/mL, equal to or greater than 50 mcg/mL chromium (VI)-equivalents, or a halogen concentration equal to or greater than the LOD. Blind performance test samples for other adulterants must have adulterant concentrations equal to or greater than (or equal to or less than, as appropriate) the initial cutoff levels used by the licensee's or other entity's HHS-certified laboratory;

(5) Dilute. The dilute blind performance test sample must contain a creatinine concentration that is equal to or greater than 5 mg/dL but less than 20 mg/dL, and the specific gravity must be greater than 1.0010 but less than 1.0030; or

(6) Substituted. The substituted blind performance test sample must contain less than 2 mg/dL of creatinine, and the specific gravity must be less than or equal to 1.0010, or equal to or greater than 1.0200.

(h) In order to ensure that blind performance test samples continue to meet the criteria set forth in paragraph (g) of this section, licensees and other entities shall—

(1) Ensure that all blind performance test sample lots are placed in service by the supplier only after confirmation by an HHS-certified laboratory, and for no more than 6 months;

(2) Ensure that the supplier provides the expiration date for each blind performance test sample to ensure that each sample will have the expected value when it is submitted to and tested by a laboratory; and

(3) At a minimum, require the supplier to check each open lot bi-monthly (i.e., every two months) to ensure that samples remaining in the lot do not fall below 130 percent of the initial cutoff test concentration established by the assay manufacturer. Thus, for example, a lot that was certified by an HHS-certified laboratory at 155 percent of the manufacturer's assay cutoff level, and was reported by the licensee's or other entity's HHS-certified laboratory to be at or above 130 percent of that standard is acceptable. A test that indicated a result below 130 percent of that standard would be unacceptable. Licensees and other entities shall discard blind performance test samples from any lot that is outside of these parameters and may not use any further samples from that lot.

(i) Licensees and other entities shall ensure that each blind performance test sample is indistinguishable to laboratory personnel from a donor's specimen, as follows:

(1) The licensee or other entity shall submit blind performance test samples to the laboratory using the same channels (i.e., from the licensee's or other entity's collection site or licensee testing facility, as appropriate) through which donors' specimens are sent to the laboratory;

(2) The collector and licensee testing facility personnel, as appropriate, shall use a custody-and-control form, place fictional initials on the specimen bottles' labels/seals, and indicate for the MRO on the MRO's copy that the specimen is a blind performance test sample; and

(3) The licensee or other entity shall ensure that all blind performance test samples include split samples, when the FFD program includes split specimen procedures.

[73 FR 17216 Mar. 31, 2008]

§ 26.169 Reporting Results.

[Top of File]

(a) The HHS-certified laboratory shall report test results to the licensee's or other entity's MRO within 5 business days after receiving the specimen from the licensee or other entity. Before reporting any test result to the MRO, the laboratory's certifying scientist shall certify the result as correct. The report must identify the substances for which testing was performed; the results of the validity and drug tests; the

cutoff levels for each; any indications of tampering, adulteration, or substitution that may be present; the specimen identification number assigned by the licensee or other entity; and the specimen identification number assigned by the laboratory.

(b) If licensees or other entities specify cutoff levels for drugs or drug metabolites that are more stringent than those specified in this part, the laboratory need only conduct the more stringent tests and shall report the results of the initial and confirmatory tests only for the more stringent cutoff levels.

(c) The HHS-certified laboratory shall report as negative all specimens that are negative on the initial or confirmatory drug and validity tests. Specimens that test as positive, adulterated, substituted, dilute, or invalid on the confirmatory analysis must be reported to the MRO as positive for a specific drug(s) or drug metabolite(s), or as meeting the criteria for an adulterated, substituted, dilute, or invalid specimen.

(1) The laboratory shall report all positive, adulterated, substituted, dilute, and invalid test results for each specimen to the MRO. For example, a specimen may be both adulterated and positive for one or more specific drugs.

(2) For a specimen that has a positive test result, the laboratory shall provide numerical values if the MRO requests such information. The MRO's request for positive confirmatory test results may be either a general request covering all such results or a specific case-by-case request. The laboratory shall routinely provide quantitative values for confirmatory opiate test results for morphine or codeine that are greater than or equal to 15,000 ng/mL, even if the MRO has not requested quantitative values for the test result.

(3) For a specimen that has an adulterated or substituted test result, the laboratory shall provide the MRO with the numerical values that support the reported result. The MRO may not disclose the numerical values to the licensee or other entity, except as permitted in § 26.37 (b). If the numerical values for creatinine are below the LOD, the laboratory shall report to the MRO "creatinine: none detected" (i.e., substituted) along with the numerical values of the specific gravity test.

(4) For a specimen that has an invalid result, the laboratory shall contact the MRO and both will decide whether testing by another certified laboratory would be useful in being able to report a positive or adulterated result. This contact may occur through any secure electronic means (e.g., telephone, fax, e-mail). If no further testing is necessary, the laboratory shall report the invalid result to the MRO.

(5) When the concentration of a drug, metabolite, or adulterant exceeds the linear range of the standard curve, the laboratory may report to the MRO that the quantitative value "exceeds the linear range of the test," that the quantitative value is "equal to or greater than <insert the value for the upper limit of the linear range>," or may report an accurate quantitative value above the upper limit of the linear range that was obtained by diluting an aliquot of the specimen.

(d) The MRO and MRO staff may not disclose quantitative test results to a licensee or other entity, but shall report only whether the specimen was positive (and for which analyte), adulterated, substituted, dilute, invalid, or negative, except as permitted under § 26.37(b). This paragraph does not preclude either the HHS-certified laboratory or the MRO from providing program performance data, as required under § 26.717.

(e) The laboratory may transmit results to the MRO by various electronic means (e.g., teleprinters, facsimile, or computer) in a manner designed to ensure the confidentiality of the information. The laboratory may not provide results orally by telephone. The licensee or other entity, directly or through the HHS-certified laboratory, shall ensure the security of the data transmission and ensure only authorized access to any data transmission, storage, and retrieval system.

(f) For negative test results, the HHS-certified laboratory may fax, courier, mail, or electronically transmit a computer-generated electronic report and/or a legible image or copy of the completed custody-and-control form to the MRO. However, for positive, adulterated, substituted, dilute, and invalid results, the laboratory shall fax, courier, mail, or electronically transmit a legible image or copy of the completed custody-and-control form to the MRO.

(g) For a specimen that has a positive, adulterated, substituted, dilute, or invalid result, the laboratory shall retain the original custody-and-control form and transmit to the MRO a copy of the original custody-and-control form signed by a certifying scientist.

(h) The HHS-certified laboratory shall provide to the licensee's or other entity's official responsible for coordination of the FFD program an annual statistical summary of urinalysis testing, which may not include any personal identifying information. To avoid sending data from which it is likely that information about a donor's test result can be readily inferred, the laboratory may not send a summary report if the licensee or other entity has fewer than 10 specimen test results in a 1-year period. The summary report must include test results that were reported within the year period. The laboratory shall send the summary report to the licensee or other entity within 14 calendar days after the end of the 1-year period covered by the report. The statistics must be presented either for the cutoff levels specified in this part or for any more stringent cutoff levels that the licensee or other entity may specify. The HHS-certified laboratory shall make available quantitative results for all specimens tested when requested by the NRC, licensee, or other entity for whom the laboratory is performing drug-testing services. If the FFD program tests for additional drugs beyond those listed in § 26.31(d), the summary must include drug test results for the additional drugs. The summary report must contain the following information:

(1) Total number of specimens received;

(2) Number of specimens reported as—

(i) Negative, and

(ii) Negative and dilute;

(3) Number of specimens reported as positive on confirmatory tests by drug or drug metabolite for which testing is conducted, including,

but not limited to—

(i) Marijuana metabolite;

(ii) Cocaine metabolite;

(iii) Opiates (total);

(A) Codeine;

(B) Morphine; and

(C) 6-AM;

(iv) Phencyclidine;

(v) Amphetamines (total);

(A) Amphetamine; and

(B) Methamphetamine;

(4) Total number of specimens reported as adulterated;

(5) Total number of specimens reported as substituted;

(6) Total number of specimens reported as positive and dilute [including an indication as to whether the specimen was subject to the special analysis permitted in § 26.163(a)(2)];

(7) Total number of specimens reported as invalid; and

(8) Number of specimens reported as rejected for testing and the reason for the rejection.

[73 FR 17217 Mar. 31, 2008]

Subpart H—Determining Fitness-for-Duty Policy Violations and Determining Fitness

[Top of File]

§ 26.181 Purpose.

This subpart contains requirements for determining whether a donor has violated the FFD policy and for making a determination of fitness.

[73 FR 17218 Mar. 31, 2008]

§ 26.183 Medical review officer.

[Top of File]

(a) *Qualifications*. The MRO shall be knowledgeable of this part and of the FFD policies of the licensees and other entities for whom the MRO provides services. The MRO shall be a physician holding either a Doctor of Medicine or Doctor of Osteopathy degree who is licensed to practice medicine by any State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico. By March 31, 2010, the MRO shall have passed an examination administered by a nationally-recognized MRO certification board or subspecialty board for medical practitioners in the field of medical review of Federally mandated drug tests.

(b) *Relationships*. The MRO may be an employee of the licensee or other entity or a contractor. However, the MRO may not be an employee or agent of, or have any financial interest in, an HHS-certified laboratory or a contracted operator of a licensee testing facility for whom the MRO reviews drug test results. Additionally, the MRO may not derive any financial benefit by having the licensee or other entity use a specific drug testing laboratory or licensee testing facility operating contractor and may not have any agreement with such parties that may be construed as a potential conflict of interest. Examples of relationships between laboratories and MROs that create conflicts of interest, or the appearance of such conflicts, include, but are not limited to—

(1) The laboratory employs an MRO who reviews test results produced by the laboratory;

(2) The laboratory has a contract or retainer with the MRO for the review of test results produced by the laboratory;

(3) The laboratory designates which MRO the licensee or other entity is to use, gives the licensee or other entity a slate of MROs from which to choose, or recommends certain MROs;

(4) The laboratory gives the licensee or other entity a discount or other incentive to use a particular MRO;

(5) The laboratory has its place of business co-located with that of an MRO or MRO staff who review test results produced by the laboratory; or

(6) The laboratory permits an MRO, or an MRO's organization, to have a financial interest in the laboratory.

(c) *Responsibilities*. The primary role of the MRO is to review and interpret positive, adulterated, substituted, invalid, and at the licensee's or other entity's discretion, dilute test results obtained through the licensee's or other entity's testing program and to identify any evidence of subversion of the testing process. The MRO is also responsible for identifying any issues associated with collecting and testing specimens, and for advising and assisting FFD program management in planning and overseeing the overall FFD program.

(1) In carrying out these responsibilities, the MRO shall examine alternate medical explanations for any positive, adulterated, substituted, invalid, or, at the licensee's or other entity's discretion, dilute test result. This action may include, but is not limited to, conducting a medical interview with the donor, reviewing the donor's medical history, or reviewing any other relevant biomedical factors. The MRO shall review all medical records that the donor may make available when a positive, adulterated, substituted, invalid, or dilute test result could have resulted from responsible use of legally prescribed medication, a documented condition or disease state, or the demonstrated physiology of the donor.

(2) The MRO may only consider the results of tests of specimens that are collected and processed under this part, including the results of testing split specimens, in making his or her determination, as long as those split specimens have been stored and tested under the procedures described in this part.

(d) *MRO staff*. Individuals who provide administrative support to the MRO may be employees of a licensee or other entity, employees of the MRO, or employees of an organization with whom a licensee or other entity contracts for MRO services. Employees of a licensee or other entity who serve MRO staff functions may also perform other duties for the licensee or other entity and need not be under the direction of the MRO while performing those other duties.

(1) Direction of MRO staff activities. MROs shall be directly responsible for all administrative, technical, and professional activities of individuals who are serving MRO staff functions while they are performing those functions, and those functions must be under the MRO's direction.

(i) The duties of MRO staff must be maintained independent from any other activity or interest of a licensee or other entity, in order to protect the integrity of the MRO function and donors' privacy.

(ii) An MRO's responsibilities for directing MRO staff must include, but are not limited to, ensuring that—

(A) The procedures being performed by MRO staff meet NRC regulations and HHS' and professional standards of practice;

(B) Records and other donor personal information are maintained confidential by MRO staff and are not released to other individuals or entities, except as permitted under this part;

(C) Data transmission is secure; and

(D) Drug test results are reported to the licensee's or other entity's designated reviewing official only as required by this part.

(iii) The MRO may not delegate any of his or her responsibilities for directing MRO staff to any other individual or entity, except another MRO.

(2) MRO staff responsibilities. MRO staff may perform routine administrative support functions, including receiving test results, reviewing negative test results, and scheduling interviews for the MRO.

(i) The staff under the direction of the MRO may receive, review, and report negative test results to the licensee's or other entity's designated representative.

(ii) The staff reviews of positive, adulterated, substituted, invalid, and, at the licensee's or other entity's discretion, dilute test results must be limited to reviewing the custody-and-control form to determine whether it contains any errors that may require corrective action and to ensure that it is consistent with the information on the MRO's copy. The staff may resolve errors in custody-and-control forms that require corrective action(s), but shall forward the custody-and-control forms to the MRO for review and approval of the resolution.

(iii) The staff may not conduct interviews with donors to discuss positive, adulterated, substituted, invalid, or dilute test results nor request medical information from a donor. Only the MRO may request and review medical information related to a positive, adulterated, substituted, or invalid test result or other matter from a donor.

(iv) Staff may not report nor discuss with any individuals other than the MRO and other MRO staff any positive, adulterated, substituted, invalid, or dilute test results received from the HHS-certified laboratory before those results have been reviewed and confirmed by the MRO.

Any MRO staff discussions of confirmed positive, adulterated, substituted, invalid, or dilute test results must be limited to discussions only with the licensee's or other entity's FFD program personnel and may not reveal quantitative test results or any personal medical information about the donor that the MRO may have obtained in the course of reviewing confirmatory test results from the HHS-certified laboratory.

[73 FR 17218 Mar. 31, 2008]

§ 26.185 Determining a fitness-for-duty policy violation.

[Top of File]

(a) *MRO review required*. A positive, adulterated, substituted, dilute, or invalid drug test result does not automatically identify an individual as having used drugs in violation of the NRC's regulations, or the licensee's or other entity's FFD policy, or as having attempted to subvert the testing process. An individual who has a detailed knowledge of possible alternate medical explanations is essential to the review of the results. The MRO shall review all positive, adulterated, substituted, and invalid test results from the HHS-certified laboratory to determine whether the donor has violated the FFD policy before reporting the results to the licensee's or other entity's designated representative.

(b) *Reporting of initial test results prohibited*. Neither the MRO nor MRO staff may report positive, adulterated, substituted, dilute, or invalid initial test results that are received from the HHS-certified laboratory to the licensee or other entity.

(c) *Discussion with the donor*. Before determining that a positive, adulterated, substituted, dilute, or invalid test result or other occurrence is an FFD policy violation and reporting it to the licensee or other entity, the MRO shall give the donor an opportunity to discuss the test result or other occurrence with the MRO, except as described in paragraph (d) of this section. After this discussion, if the MRO determines that a positive, adulterated, substituted, dilute, or invalid test result or other occurrence is an FFD policy violation, the MRO shall immediately notify the licensee's or other entity's designated representative.

(d) *Donor unavailability*. The MRO may determine that a positive, adulterated, substituted, dilute, or invalid test result or other occurrence is an FFD policy violation without having discussed the test result or other occurrence directly with the donor in the following three circumstances:

(1) The MRO has made and documented contact with the donor and the donor expressly declined the opportunity to discuss the test result or other occurrence that may constitute an FFD policy violation;

(2) A representative of the licensee or other entity, or an MRO staff member, has successfully made and documented contact with the donor and has instructed him or her to contact the MRO, and more than 1 business day has elapsed since the date on which the licensee's representative or MRO's staff member successfully contacted the donor; or

(3) The MRO, after making all reasonable efforts and documenting the dates and time of those efforts, has been unable to contact the donor. Reasonable efforts include, at a minimum, three attempts, spaced reasonably over a 24-hour period, to reach the donor at the day and evening telephone numbers listed on the custody-and-control form.

(e) *Additional opportunity for discussion*. If the MRO determines that the donor has violated the FFD policy without having discussed the positive, adulterated, substituted, dilute, or invalid test result or other occurrence directly with the donor, the donor may, on subsequent notification of the MRO determination and within 30 days of that notification, present to the MRO information documenting the circumstances, including, but not limited to, serious illness or injury, which unavoidably prevented the donor from being contacted by the MRO or a representative of the licensee or other entity, or from contacting the MRO in a timely manner. On the basis of this information, the MRO may reopen the procedure for determining whether the donor's test result or other occurrence is an FFD policy violation and permit the individual to present information related to the issue. The MRO may modify the initial determination based on an evaluation of the information provided.

(f) *Review of invalid specimens*. (1) If the HHS-certified laboratory reports an invalid result, the MRO shall consult with the laboratory to determine whether additional testing by another HHS-certified laboratory may be useful in determining and reporting a positive or adulterated test result. If the MRO and the laboratory agree that further testing would be useful, the HHS-certified laboratory shall forward the specimen to a second laboratory for additional testing.

(2) If the MRO and the laboratory agree that further testing would not be useful and there is no technical explanation for the result, the MRO shall contact the donor and determine whether there is an acceptable medical explanation for the invalid result. If there is an acceptable medical explanation, the MRO shall report to the licensee or other entity that the test result is not an FFD policy violation, but that a negative test result was not obtained. If the medical reason for the invalid result is, in the opinion of the MRO, a temporary condition, the licensee or other entity shall collect a second urine specimen from the donor as soon as reasonably practical and rely on the MRO's review of the test results from the second collection. The second specimen collected for the purposes of this paragraph may not be collected under direct observation. If the medical reason for the invalid result would similarly affect the testing of another urine specimen, the MRO may authorize an alternative method for drug testing. Licensees and other entities may not impose sanctions for an invalid test result due to a medical condition.

(3) If the MRO and the laboratory agree that further testing would not be useful and there is no legitimate technical or medical explanation for the invalid test result, the MRO shall require that a second collection take place as soon as practical under direct observation. The licensee or other entity shall rely on the MRO's review of the test results from the directly observed collection.

(g) *Review of dilute specimens*. (1) If the HHS-certified laboratory reports that a specimen is dilute and that drugs or drug metabolites were detected in the specimen at or above the cutoff levels specified in this part or the licensee's or other entity's more stringent cutoff levels, and the MRO determines that there is no legitimate medical explanation for the presence of the drugs or drug metabolites in the specimen,

and a clinical examination, if required under paragraph (g)(4) of this section, has been conducted, the MRO shall determine that the drug test results are positive and that the donor has violated the FFD policy.

(2) If the licensee or other entity requires the HHS-certified laboratory to conduct the special analysis of dilute specimens permitted in § 26.163(a)(2), the results of the special analysis are positive, the MRO determines that there is no legitimate medical explanation for the presence of the drug(s) or drug metabolite(s) in the specimen, and a clinical examination, if required under paragraph (g)(4) of this section, has been conducted under paragraph (j) of this section, the MRO shall determine whether the positive and dilute specimen is a refusal to test. If the MRO does not have sufficient reason to believe that the positive and dilute specimen is a subversion attempt, he or she shall determine that the drug test results are positive and that the donor has violated the FFD policy. When determining whether the donor has diluted the specimen in a subversion attempt, the MRO shall also consider the following circumstances, if applicable:

(i) The donor has presented, at this or a previous collection, a urine specimen that the HHS-certified laboratory reported as being substituted, adulterated, or invalid to the MRO and the MRO determined that there is no adequate technical or medical explanation for the result;

(ii) The donor has presented a urine specimen of 30 mL or more that falls outside the required temperature range, even if a subsequent directly observed collection was performed; or

(iii) The collector observed conduct clearly and unequivocally indicating an attempt to dilute the specimen.

(3) If a dilute specimen was collected under direct observation, the MRO may require the laboratory to conduct confirmatory testing at the LOD for any drugs or drug metabolites, as long as each drug class is evaluated as required by § 26.31(d)(1)(ii).

(4) If the drugs detected in a dilute specimen are any opium, opiate, or opium derivative (e.g., morphine/codeine), or if the drugs or metabolites detected indicate the use of prescription or over-the-counter medications, before determining that the donor has violated the FFD policy under paragraph (a) of this section, the MRO or his/her designee, who shall also be a licensed physician with knowledge of the clinical signs of drug abuse, shall conduct the clinical examination for abuse of these substances that is required in paragraph (j) of this section. An evaluation for clinical evidence of abuse is not required if the laboratory confirms the presence of 6–AM (i.e., the presence of this metabolite is proof of heroin use) in the dilute specimen.

(5) An MRO review is not required for specimens that the HHS-certified laboratory reports as negative and dilute. The licensee or other entity may not take any administrative actions or impose any sanctions on a donor who submits a negative and dilute specimen.

(h) *Review of substituted specimens*. (1) If the HHS-certified laboratory reports a specimen as substituted (i.e., the creatinine concentration is less than 2 mg/dL and the specific gravity is less than or equal to 1.0010 or equal to or greater than 1.0200), the MRO shall contact the donor and offer the donor an opportunity to provide a legitimate medical explanation for the substituted result. The burden of proof resides solely with the donor, who must provide legitimate medical evidence within 5 business days that he or she produced the specimen for which the HHS-certified laboratory reported a substituted result. Any medical evidence must be submitted through a physician who is experienced and qualified in the medical issues involved, as verified by the MRO. Claims of excessive hydration, or claims based on unsubstantiated personal characteristics, including, but not limited to, race, gender, diet, and body weight, are not acceptable evidence without medical studies which demonstrate that the donor did produce the laboratory result.

(2) If the MRO determines that there is no legitimate medical explanation for the substituted test result, the MRO shall report to the licensee or other entity that the specimen was substituted.

(3) If the MRO determines that there is a legitimate medical explanation for the substituted test result and no drugs or drug metabolites were detected in the specimen, the MRO shall report to the licensee or other entity that no FFD policy violation has occurred.

(i) *Review of adulterated specimens*. (1) If the HHS-certified laboratory reports a specimen as adulterated with a specific substance, the MRO shall contact the donor and offer the donor an opportunity to provide a legitimate medical explanation for the adulterated result. The burden of proof resides solely with the donor, who must provide legitimate medical evidence within 5 business days that he or she produced the adulterated result. Any medical evidence must be submitted through a physician experienced and qualified in the medical issues involved, as verified by the MRO.

(2) If the MRO determines there is no legitimate medical explanation for the adulterated test result, the MRO shall report to the licensee or other entity that the specimen is adulterated.

(3) If the MRO determines that there is a legitimate medical explanation for the adulterated test result and no drugs or drug metabolites were detected in the specimen, the MRO shall report to the licensee or other entity that no FFD policy violation has occurred.

(j) *Review for opiates, prescription and over-the-counter medications*. (1) If the MRO determines that there is no legitimate medical explanation for a positive confirmatory test result for opiates and before the MRO determines that the test result is a violation of the FFD policy, the MRO or his/her designee, who shall also be a licensed physician with knowledge of the clinical signs of drug abuse, shall determine that there is clinical evidence, in addition to the positive confirmatory test result, that the donor has illegally used opium, an opiate, or an opium derivative (e.g., morphine/codeine). This requirement does not apply if the laboratory confirms the presence of 6-AM (i. e., the presence of this metabolite is proof of heroin use), or the morphine or codeine concentration is equal to or greater than 15,000 ng/ mL and the donor does not present a legitimate medical explanation for the presence of morphine or codeine at or above this concentration. The MRO may not determine that the consumption of food products is a legitimate medical explanation for the presence of morphine or codeine at or above this concentration.

(2) If the MRO determines that there is no legitimate medical explanation for a positive confirmatory test result for drugs other than opiates that are commonly prescribed or included in over-the-counter preparations (e.g., benzodiazepines in the first case, barbiturates in the

second) and are listed in the licensee's or other entity's panel of substances to be tested, the MRO shall determine whether there is clinical evidence, in addition to the positive confirmatory test result, of abuse of any of these substances or their derivatives.

(3) If the MRO determines that the donor has used another individual's prescription medication, including a medication containing opiates, and no clinical evidence of drug abuse is found, the MRO shall report to the licensee or other entity that the donor has misused a prescription medication. If the MRO determines that the donor has used another individual's prescription medication and clinical evidence of drug abuse is found, the MRO shall report to the licensee that the donor has violated the FFD policy.

(4) In determining whether a legitimate medical explanation exists for a positive confirmatory test result for opiates or prescription or over-the-counter medications, the MRO may consider the use of a medication from a foreign country. The MRO shall exercise professional judgment consistently with the following principles:

(i) There can be a legitimate medical explanation only with respect to a drug that is obtained legally in a foreign country;

(ii) There can be a legitimate medical explanation only with respect to a drug that has a legitimate medical use. Use of a drug of abuse (e. g., heroin, PCP) or any other substance that cannot be viewed as having a legitimate medical use can never be the basis for a legitimate medical explanation, even if the drug is obtained legally in a foreign country; and

(iii) Use of the drug can form the basis of a legitimate medical explanation only if it is used consistently with its proper and intended medical purpose.

(5) The MRO may not consider consumption of food products, supplements, or other preparations containing substances that may result in a positive confirmatory drug test result, including, but not limited to supplements containing hemp products or coca leaf tea, as a legitimate medical explanation for the presence of drugs or drug metabolites in the urine specimen above the cutoff levels specified in § 26.163 or a licensee's or other entity's more stringent cutoff levels.

(6) The MRO may not consider the use of any drug contained in Schedule I of section 202 of the Controlled Substances Act [21 U.S.C. 812] as a legitimate medical explanation for a positive confirmatory drug test result, even if the drug may be legally prescribed and used under State law.

(k) *Results consistent with legitimate drug use*. If the MRO determines that there is a legitimate medical explanation for a positive confirmatory drug test result, and that the use of a drug identified through testing was in the manner and at the dosage prescribed, and the results do not reflect a lack of reliability or trustworthiness, then the donor has not violated the licensee's or other entity's FFD policy. The MRO shall report to the licensee or other entity that no FFD policy violation has occurred. The MRO shall further evaluate the positive confirmatory test result and medical explanation to determine whether use of the drug and/or the medical condition poses a potential risk to public health and safety as a result of the individual being impaired while on duty. If the MRO determines that such a risk exists, he or she shall ensure that a determination of fitness is performed.

(l) *Retesting authorized*. Should the MRO question the accuracy or scientific validity of a positive, adulterated, substituted, or invalid test result, only the MRO is authorized to order retesting of an aliquot of the original specimen or the analysis of any split specimen (Bottle B) in order to determine whether the FFD policy has been violated. Retesting must be performed by a second HHS-certified laboratory. The MRO is also the only individual who may authorize a reanalysis of an aliquot of the original specimen or an analysis of any split specimen (Bottle B) in response to a request from the donor tested.

(m) *Result scientifically insufficient*. Based on the review of inspection and audit reports, quality control data, multiple specimens, and other pertinent results, the MRO may determine that a positive, adulterated, substituted or invalid test result is scientifically insufficient for further action and may declare that a drug or validity test result is not an FFD policy violation, but that a negative test result was not obtained. In this situation, the MRO may request retesting of the original specimen before making this decision. The MRO is neither expected nor required to request such retesting, unless in the sole opinion of the MRO, such retesting is warranted. The MRO may request that the reanalysis be performed by the same laboratory, or that an aliquot of the original specimen be sent for reanalysis to another HHS-certified laboratory. The licensee testing facility and the HHS-certified laboratory shall assist in this review process, as requested by the MRO, by making available the individual(s) responsible for day-to-day management of the licensee testing facility or the HHS-certified laboratory, or other individuals who are forensic toxicologists or who have equivalent forensic experience in urine drug testing, to provide specific consultation as required by the MRO.

(n) *Evaluating results from a second laboratory*. After a second laboratory tests an aliquot of a single specimen or the split (Bottle B) specimen, the MRO shall take the following actions if the second laboratory reports the following results:

(1) If the second laboratory reconfirms any positive test results, the MRO may report an FFD policy violation to the licensee or other entity;

(2) If the second laboratory reconfirms any adulterated, substituted, or invalid validity test results, the MRO may report an FFD policy violation to the licensee or other entity;

(3) If the second laboratory does not reconfirm the positive test results, the MRO shall report that no FFD policy violation has occurred; or

(4) If the second laboratory does not reconfirm the adulterated, substituted, or invalid validity test results, the MRO shall report that no FFD policy violation has occurred.

(o) *Re-authorization after a first violation for a positive test result*. The MRO is responsible for reviewing drug test results from an individual whose authorization was terminated or denied for a first violation of the FFD policy involving a confirmed positive drug test result and who is being considered for re-authorization. In order to determine whether subsequent positive confirmatory drug test results represent new

drug use or remaining metabolites from the drug use that initially resulted in the FFD policy violation, the MRO shall request from the HHS-certified laboratory, and the laboratory shall provide, quantitation of the test results and other information necessary to make the determination. If the drug for which the individual first tested positive was marijuana and the confirmatory assay for delta-9-tetrahydrocannabinol-9-carboxylic acid yields a positive result, the MRO shall determine whether the confirmatory test result indicates further marijuana use since the first positive test result, or whether the test result is consistent with the level of delta-9-tetrahydrocannabinol-9-carboxylic acid that would be expected if no further marijuana use had occurred. If the test result indicates that no further marijuana use has occurred since the first positive test result, then the MRO shall declare the drug test result as negative.

(p) *Time to complete MRO review*. The MRO shall complete his or her review of positive, adulterated, substituted, and invalid test results and, in instances when the MRO determines that there is no legitimate medical explanation for the test result(s), notify the licensee's or other entity's designated representative within 10 business days of an initial positive, adulterated, substituted, or invalid test result. The MRO shall notify the licensee or other entity of the results of his or her review in writing and in a manner designed to ensure the confidentiality of the information.

[73 FR 17219 Mar. 31, 2008]

§ 26.187 Substance abuse expert.

[Top of File]

(a) *Implementation*. By March 31, 2010, any SAEs on whom licensees and other entities rely to make determinations of fitness under this part shall meet the requirements of this section. An MRO who meets the requirements of this section may serve as both an MRO and as an SAE.

(b) *Credentials*. An SAE shall have at least one of the following credentials:

(1) A licensed physician;

(2) A licensed or certified social worker;

(3) A licensed or certified psychologist;

(4) A licensed or certified employee assistance professional; or

(5) An alcohol and drug abuse counselor certified by the National Association of Alcoholism and Drug Abuse Counselors Certification Commission or by the International Certification Reciprocity Consortium/Alcohol and Other Drug Abuse.

(c) *Basic knowledge*. An SAE shall be knowledgeable in the following areas:

(1) Demonstrated knowledge of and clinical experience in the diagnosis and treatment of alcohol and controlled-substance abuse disorders;

(2) Knowledge of the SAE function as it relates to the public's interests in the duties performed by the individuals who are subject to this subpart; and

(3) Knowledge of this part and any changes thereto.

(d) *Qualification training*. SAEs shall receive qualification training on the following subjects:

(1) Background, rationale, and scope of this part;

(2) Key drug testing requirements of this part, including specimen collection, laboratory testing, MRO review, and problems in drug testing;

(3) Key alcohol testing requirements of this part, including specimen collection, the testing process, and problems in alcohol tests;

(4) SAE qualifications and prohibitions;

(5) The role of the SAE in making determinations of fitness and the return-to-duty process, including the initial evaluation, referrals for education and/or treatment, the followup evaluation, continuing treatment recommendations, and the followup testing plan;

(6) Procedures for SAE consultation and communication with licensees or other entities, MROs, and treatment providers;

(7) Reporting and recordkeeping requirements of this part; and

(8) Issues that SAEs confront in carrying out their duties under this part.

(e) *Continuing education*. During each 3-year period following completion of initial qualification training, the SAE shall complete continuing education consisting of at least 12 continuing professional education hours relevant to performing SAE functions.

(1) This continuing education must include material concerning new technologies, interpretations, recent guidance, rule changes, and other information about developments in SAE practice pertaining to this part, since the time the SAE met the qualification training requirements of this section.

(2) Continuing education activities must include documented assessment tools to assist in determining that the SAE has learned the material.

(f) *Documentation*. The SAE shall maintain documentation showing that he or she currently meets all requirements of this section. The SAE shall provide this documentation on request to NRC representatives, licensees, or other entities who are relying on or contemplating relying on the SAE's services, and to other individuals and entities, as required by § 26.37.

(g) *Responsibilities and prohibitions*. The SAE shall evaluate individuals who have violated the substance abuse provisions of an FFD policy and make recommendations concerning education, treatment, return to duty, followup drug and alcohol testing, and aftercare. The SAE is not an advocate for the licensee or other entity, or the individual. The SAE's function is to protect public health and safety and the common defense and security by professionally evaluating the individual and recommending appropriate education/treatment, follow-up tests, and aftercare.

(1) The SAE is authorized to make determinations of fitness in at least the following three circumstances:

(i) When potentially disqualifying FFD information has been identified regarding an individual who has applied for authorization under this part;

(ii) When an individual has violated the substance abuse provisions of a licensee's or other entity's FFD policy; and

(iii) When an individual may be impaired by alcohol, prescription or over-the-counter medications, or illegal drugs.

(2) After determining the best recommendation for assisting the individual, the SAE shall serve as a referral source to assist the individual's entry into an education and/or treatment program.

(i) To prevent the appearance of a conflict of interest, the SAE may not refer an individual requiring assistance to his or her private practice or to a person or organization from whom the SAE receives payment or in which the SAE has a financial interest. The SAE is precluded from making referrals to entities with whom the SAE is financially associated.

(ii) There are four exceptions to the prohibitions contained in the preceding paragraph. The SAE may refer an individual to any of the following providers of assistance, regardless of his or her relationship with them:

(A) A public agency e.g., treatment facility) operated by a state, county, or municipality;

(B) A person or organization under contract to the licensee or other entity to provide alcohol or drug treatment and/or education services (e. g., the licensee's or other entity's contracted treatment provider);

(C) The sole source of therapeutically appropriate treatment under the individual's health insurance program (e.g., the single substance abuse in-patient treatment program made available by the individual's insurance coverage plan); or

(D) The sole source of therapeutically appropriate treatment reasonably available to the individual (e.g., the only treatment facility or education program reasonably located within the general commuting area).

[73 FR 17222 Mar. 31, 2008]

§ 26.189 Determination of fitness.

[Top of File]

(a) A determination of fitness is the process entered when there are indications that an individual specified in § 26.4(a) through (e), and at the licensee's or other entity's discretion as specified in § 26.4(f) and (g), may be in violation of the licensee's or other entity's FFD policy or is otherwise unable to safely and competently perform his or her duties. A determination of fitness must be made by a licensed or certified professional who is appropriately qualified and has the necessary clinical expertise, as verified by the licensee or other entity, to evaluate the specific fitness issues presented by the individual. A professional called on by the licensee or other entity may not perform a determination of fitness regarding fitness issues that are outside of his or her specific areas of expertise. The types of professionals and the fitness issues for which they are qualified to make determinations of fitness include, but are not limited to, the following:

(1) An SAE who meets the requirements of § 26.187 may determine the fitness of an individual who may have engaged in substance abuse and shall determine an individual's fitness to be granted authorization following an unfavorable termination or denial of authorization under this part, but may not be qualified to assess the fitness of an individual who may have experienced mental illness, significant emotional stress, or other mental or physical conditions that may cause impairment but are unrelated to substance abuse, unless the SAE has additional qualifications for addressing those fitness issues;

(2) A clinical psychologist may determine the fitness of an individual who may have experienced mental illness, significant emotional stress,

or cognitive or psychological impairment from causes unrelated to substance abuse, but may not be qualified to assess the fitness of an individual who may have a substance abuse disorder, unless the psychologist is also an SAE;

(3) A psychiatrist may determine the fitness of an individual who is taking psychoactive medications consistently with one or more valid prescription(s), but may not be qualified to assess potential impairment attributable to substance abuse, unless the psychiatrist has had specific training to diagnose and treat substance abuse disorders;

(4) A physician may determine the fitness of an individual who may be ill, injured, fatigued, taking medications in accordance with one or more valid prescriptions, or using over-the-counter medications, but may not be qualified to assess the fitness of an individual who may have a substance abuse disorder, unless the physician is also an SAE; and

(5) As a physician with specialized training, the MRO may determine the fitness of an individual who may have engaged in substance abuse or may be ill, injured, fatigued, taking medications under one or more valid prescriptions, and/or using over-the-counter medications, but may not be qualified to assess an individual's fitness to be granted authorization following an unfavorable termination or denial of authorization under this part, unless the MRO is also an SAE.

(b) A determination of fitness must be made in at least the following circumstances:

(1) When there is an acceptable medical explanation for a positive, adulterated, substituted, or invalid test result, but there is a basis for believing that the individual could be impaired while on duty;

(2) Before making return-to-duty recommendations after an individual's authorization has been terminated unfavorably or denied under a licensee's or other entity's FFD policy;

(3) Before an individual is granted authorization when potentially disqualifying FFD information is identified that has not previously been evaluated by another licensee or entity who is subject to this subpart; and

(4) When potentially disqualifying FFD information is otherwise identified and the licensee's or other entity's reviewing official concludes that a determination of fitness is warranted under § 26.69.

(c) A determination of fitness that is conducted for cause (i.e., because of observed behavior or a physical condition) must be conducted through face-to-face interaction between the subject individual and the professional making the determination. Electronic means of communication may not be used.

(1) If there is neither conclusive evidence of an FFD policy violation nor a significant basis for concern that the individual may be impaired while on duty, then the individual must be determined to be fit for duty.

(2) If there is no conclusive evidence of an FFD policy violation but there is a significant basis for concern that the individual may be impaired while on duty, then the subject individual must be determined to be unfit for duty. This result does not constitute a violation of this part nor of the licensee's or other entity's FFD policy, and no sanctions may be imposed. However, the professional who made the determination of fitness shall consult with the licensee's or other entity's management personnel to identify the actions required to ensure that any possible limiting condition does not represent a threat to workplace or public health and safety. Licensee or other entity management personnel shall implement the required actions. When appropriate, the subject individual may also be referred to the EAP.

(d) Neither the individual nor licensees and other entities may seek a second determination of fitness if a determination of fitness under this part has already been performed by a qualified professional employed by or under contract to the licensee or other entity. After the initial determination of fitness has been made, the professional may modify his or her evaluation and recommendations based on new or additional information from other sources including, but not limited to, the subject individual, another licensee or entity, or staff of an education or treatment program. Unless the professional who made the initial determination of fitness is no longer employed by or under contract to the licensee or other entity, only that professional is authorized to modify the evaluation and recommendations. When reasonably practicable, licensees and other entities shall assist in arranging for consultation between the new professional and the professional who is no longer employed by or under contract to the licensee or other entity, to ensure continuity and consistency in the recommendations and their implementation.

[73 FR 17223 Mar. 31, 2008]

Subpart I—Managing Fatigue

[Top of File]

§ 26.201 Applicability.

The requirements in this subpart apply to the licensees and other entities identified in § 26.3(a), and, if applicable, (c) and (d). The requirements in §§ 26.203 and 26.211 apply to the individuals identified in § 26.4 (a) through (c). In addition, the requirements in § 26.205 through § 26.209 apply to the individuals identified in § 26.4(a).

[73 FR 17224 Mar. 31, 2008]

§ 26.203 General provisions.

(a) *Policy*. Licensees shall establish a policy for the management of fatigue for all individuals who are subject to the licensee's FFD program and incorporate it into the written policy required in § 26.27(b).

(b) *Procedures*. In addition to the procedures required in § 26.27(c), licensees shall develop, implement, and maintain procedures that—

(1) Describe the process to be followed when any individual identified in § 26.4(a) through (c) makes a self-declaration that he or she is not fit to safely and competently perform his or her duties for any part of a working tour as a result of fatigue. The procedure must—

(i) Describe the individual's and licensee's rights and responsibilities related to self-declaration;

(ii) Describe requirements for establishing controls and conditions under which an individual may be permitted or required to perform work after that individual declares that he or she is not fit due to fatigue; and

(iii) Describe the process to be followed if the individual disagrees with the results of a fatigue assessment that is required under § 26.211 (a)(2);

(2) Describe the process for implementing the controls required under § 26.205 for the individuals who are performing the duties listed in § 26.4(a);

(3) Describe the process to be followed in conducting fatigue assessments under § 26.211; and

(4) Describe the disciplinary actions that the licensee may impose on an individual following a fatigue assessment, and the conditions and considerations for taking those disciplinary actions.

(c) *Training and examinations*. Licensees shall add the following KAs to the content of the training that is required in § 26.29(a) and the comprehensive examination required in § 26.29(b):

(1) Knowledge of the contributors to worker fatigue, circadian variations in alertness and performance, indications and risk factors for common sleep disorders, shiftwork strategies for obtaining adequate rest, and the effective use of fatigue countermeasures; and

(2) Ability to identify symptoms of worker fatigue and contributors to decreased alertness in the workplace.

(d) *Recordkeeping*. Licensees shall retain the following records for at least 3 years or until the completion of all related legal proceedings, whichever is later:

(1) Records of work hours for individuals who are subject to the work hour controls in § 26.205;

(2) Records of shift schedules and shift cycles of individuals who are subject to the work hour controls in § 26.205;

(3) The documentation of waivers that is required in § 26.207(a)(4), including the bases for granting the waivers;

(4) The documentation of work hour reviews that is required in § 26.205(e)(3) and (e)(4); and

(5) The documentation of fatigue assessments that is required in § 26.211(g).

(e) *Reporting*. Licensees shall include the following information in a standard format in the annual FFD program performance report required under § 26.717:

(1) A summary for each nuclear power plant site of all instances during the previous calendar year when the licensee waived the work hour controls specified in § 26.205(d)(1) through (d)(5)(i) for individuals described in § 26.4(a). The summary must include only those waivers under which work was performed. If it was necessary to waive more than one work hour control during any single extended work period, the summary of instances must include each of the work hour controls that were waived during the period. For each category of individuals specified in § 26.4(a), the licensee shall report—

(i) The number of instances when each applicable work hour control specified in § 26.205(d)(1)(i) through (d)(1)(iii), (d)(2)(i) and (d)(2)(ii), and (d)(3)(i) through (d)(3)(v) was waived for individuals not working on outage activities;

(ii) The number of instances when each applicable work hour control specified in § 26.205(d)(1)(i) through (d)(1)(iii), (d)(2)(i) and (d)(2)(ii), (d)(3)(i) through (d)(3)(v), and (d)(4) and (d)(5)(i) was waived for individuals working on outage activities; and

(iii) A summary that shows the distribution of waiver use among the individuals within each category of individuals identified in § 26.4(a) (e.g., a table that shows the number of individuals who received only one waiver during the reporting period, the number of individuals who received a total of two waivers during the reporting period).

(2) A summary of corrective actions, if any, resulting from the analyses of these data, including fatigue assessments.

(f) *Audits*. Licensees shall audit the management of worker fatigue as required by § 26.41.

[73 FR 17224 Mar. 31, 2008]

§ 26.205 Work hours.

[Top of File]

(a) *Individuals subject to work hour controls*. Any individual who performs duties identified in § 26.4(a)(1) through (a)(5) shall be subject to the requirements of this section.

(b) *Calculating work hours*. For the purposes of this section, a licensee shall calculate the work hours of individuals who are subject to this section as the amount of time the individuals perform duties for the licensee. Except as permitted by paragraphs (b)(1) through (b)(5) of this section, the calculated work hours must include all time performing duties for the licensee, including all within-shift break times and rest periods during which there are no reasonable opportunities or accommodations appropriate for restorative sleep.

(1) Shift turnover. Licensees may exclude shift turnover from the calculation of an individual's work hours. Shift turnover includes only those activities that are necessary to safely transfer information and responsibilities between two or more individuals between shifts. Shift turnover activities may include, but are not limited to, discussions of the status of plant equipment, and the status of ongoing activities, such as extended tests of safety systems and components. Licensees may not exclude work hours worked during turnovers between individuals within a shift period due to rotations or relief within a shift. Activities that licensees may not exclude from work hours calculations also include, but are not limited to, shift holdovers to cover for late arrivals of incoming shift members; early arrivals of individuals for meetings, training, or pre-shift briefings for special evolutions; and holdovers for interviews needed for event investigations.

(2) Within-shift break and rest periods. Licensees may exclude from the calculation of an individual's work hours only that portion of a break or rest period during which there is a reasonable opportunity and accommodations for restorative sleep (e.g., a nap).

(3) Beginning or resuming duties subject to work hour controls. If an individual begins or resumes performing for the licensee any of the duties listed in § 26.4(a) during the calculation period, the licensee shall include in the calculation of the individual's work hours all work hours worked for the licensee, including hours worked performing duties that are not listed in § 26.4(a), and control the individual's work hours under the requirements of paragraph (d) of this section.

(4) Unannounced emergency preparedness exercises and drills. Licensees may exclude from the calculation of an individual's work hours the time the individual works unscheduled work hours for the purpose of participating in the actual conduct of an unannounced emergency preparedness exercise or drill.

(5) Incidental duties performed off site. Licensees may exclude from the calculation of an individual's work hours unscheduled work performed off site (e.g., technical assistance provided by telephone from an individual's home) provided the total duration of the work does not exceed a nominal 30 minutes during any single break period. For the purposes of compliance with the minimum break requirements of paragraph (d)(2) of this section and the minimum day off requirements of paragraph (d)(3) through (d)(5) of this section, such duties do not constitute work periods or work shifts.

(c) *Work hours scheduling*. Licensees shall schedule the work hours of individuals who are subject to this section consistent with the objective of preventing impairment from fatigue due to the duration, frequency, or sequencing of successive shifts.

(d) *Work hour controls*. Licensees shall control the work hours of individuals who are subject to this section.

(1) Except as permitted in § 26.207, licensees shall ensure that any individual's work hours do not exceed the following limits:

(i) 16 work hours in any 24-hour period;

(ii) 26 work hours in any 48-hour period; and

(iii) 72 work hours in any 7-day period.

(2) Licensees shall ensure that individuals have, at a minimum, the rest breaks specified in this paragraph. For the purposes of this subpart, a break is defined as an interval of time that falls between successive work periods, during which the individual does not perform any duties for the licensee other than one period of shift turnover at either the beginning or end of a shift but not both. Except as permitted in § 26.207, licensees shall ensure that individuals have, at a minimum—

(i) A 10-hour break between successive work periods or an 8-hour break between successive work periods when a break of less than 10 hours is necessary to accommodate a crew's scheduled transition between work schedules or shifts; and

(ii) A 34-hour break in any 9-day period.

(3) Licensees shall ensure that individuals have, at a minimum, the number of days off specified in this paragraph. For the purposes of this subpart, a day off is defined as a calendar day during which an individual does not start a work shift. For the purposes of calculating the average number of days off required in this paragraph, the duration of the shift cycle may not exceed 6 weeks.

(i) Individuals who are working 8-hour shift schedules shall have at least 1 day off per week, averaged over the shift cycle;

(ii) Individuals who are working 10-hour shift schedules shall have at least 2 days off per week, averaged over the shift cycle;

(iii) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(1) through (a)(3) shall have at least 2.5 days off per week, averaged over the shift cycle;

(iv) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(4) shall have at least 2 days off per week, averaged over the shift cycle; and

(v) Individuals who are working 12-hour shift schedules while performing the duties described in § 26.4(a)(5) shall have at least 3 days off per week, averaged over the shift cycle.

(4) During the first 60 days of a unit outage, licensees need not meet the requirements of paragraph (d)(3) of this section for individuals specified in § 26.4(a)(1) through (a)(4), while those individuals are working on outage activities. However, the licensee shall ensure that the individuals specified in § 26.4(a)(1) through (a)(3) have at least 3 days off in each successive (i.e., non-rolling) 15-day period and that the individuals specified in § 26.4(a)(4) have at least 1 day off in any 7-day period;

(5) During the first 60 days of a unit outage, security system outage, or increased threat condition, licensees shall control the hours worked by individuals specified in § 26.4(a)(5) as follows:

(i) During the first 60 days of a unit outage or a planned security system outage, licensees need not meet the requirements of paragraph (d)(3) of this section. However, licensees shall ensure that these individuals have at least 4 days off in each successive (i.e., non-rolling) 15-day period; and

(ii) During the first 60 days of an unplanned security system outage or increased threat condition, licensees need not meet the requirements of either paragraph (d)(3) or (d)(5)(i) of this section.

(6) The 60-day periods in paragraphs (d)(4) and (d)(5) of this section may be extended for each individual in 7-day increments for each non-overlapping 7-day period the individual has worked not more than 48 hours during the unit or security system outage or increased threat condition, as applicable.

(e) *Reviews*. Licensees shall evaluate the effectiveness of their control of work hours of individuals who are subject to this section. Licensees shall conduct the reviews once per calendar year. If any plant or security system outages or increased threat conditions occurred since the licensee completed the most recent review, the licensee shall include in the review an evaluation of the control of work hours during the outages or increased threat conditions. Licensees shall complete the review within 30 days of the end of the review period. Licensees shall—

(1) Review the actual work hours and performance of individuals who are subject to this section for consistency with the requirements of § 26.205(c). At a minimum, this review must address—

(i) Individuals whose actual hours worked during the review period exceeded an average of 54 hours per week in any shift cycle while the individuals' work hours are subject to the requirements of § 26.205(d)(3);

(ii) Individuals who were granted more than one waiver during the review period; and

(iii) Individuals who were assessed for fatigue under § 26.211 during the review period.

(2) Review individuals' hours worked and the waivers under which work was performed to evaluate staffing adequacy for all jobs subject to the work hour controls of this section;

(3) Document the methods used to conduct the review and the results of the review; and

(4) Record, trend, and correct, under the licensee's corrective action program, any problems identified in maintaining control of work hours consistent with the specific requirements and performance objectives of this part.

[73 FR 17224 Mar. 31, 2008]

§ 26.207 Waivers and exceptions.

[Top of File]

(a) *Waivers*. Licensees may grant a waiver of the work hour controls in § 26.205(d)(1) through (d)(5)(i), as follows:

(1) To grant a waiver, the licensee shall meet both of the following requirements:

(i) An operations shift manager determines that the waiver is necessary to mitigate or prevent a condition adverse to safety, or a security

shift manager determines that the waiver is necessary to maintain site security, or a site senior-level manager with requisite signature authority makes either determination; and

(ii) A supervisor assesses the individual face to face and determines that there is reasonable assurance that the individual will be able to safely and competently perform his or her duties during the additional work period for which the waiver will be granted. The supervisor performing the assessment shall be trained as required by §§ 26.29 and 26.203(c) and shall be qualified to direct the work to be performed by the individual. If there is no supervisor on site who is qualified to direct the work, the assessment may be performed by a supervisor who is qualified to provide oversight of the work to be performed by the individual. At a minimum, the assessment must address the potential for acute and cumulative fatigue considering the individual's work history for at least the past 14 days, the potential for circadian degradations in alertness and performance considering the time of day for which the waiver will be granted, the potential for fatigue-related degradations in alertness and performance to affect risk-significant functions, and whether any controls and conditions must be established under which the individual will be permitted to perform work.

(2) To the extent practicable, licensees shall rely on the granting of waivers only to address circumstances that could not have been reasonably controlled;

(3) Licensees shall ensure that the timing of the face-to-face supervisory assessment that is required by paragraph (a)(1)(ii) of this section supports a valid assessment of the potential for worker fatigue during the time the individual will be performing work under the waiver. Licensees may not perform the face-to-face assessment more than 4 hours before the individual begins performing any work under the waiver; and

(4) Licensees shall document the bases for individual waivers. The documented basis for a waiver must include a description of the circumstances that necessitate the waiver, a statement of the scope of work and time period for which the waiver is approved, and the bases for the determinations required in paragraphs (a)(1)(i) and (ii) of this section.

(b) *Force-on-force tactical exercises*. For the purposes of compliance with the minimum days off requirements of § 26.205(d)(3), licensees may exclude shifts worked by security personnel during the actual conduct of NRC-evaluated force-on-force tactical exercises when calculating the individual's number of days off.

(c) *Common defense and security*. When informed in writing by the NRC that the requirements of § 26.205, or any subset thereof, are waived for security personnel to ensure the common defense and security, licensees need not meet the specified requirements of § 26.205 for the duration of the period defined by the NRC.

(d) *Plant emergencies*. Licensees need not meet the requirements of § 26.205(c) and (d) during declared emergencies, as defined in the licensee's emergency plan.

[73 FR 17226 Mar. 31, 2008]

§ 26.209 Self-declarations.

[Top of File]

(a) If an individual is performing, or being assessed for, work under a waiver of the requirements contained in § 26.205(d)(1) through (d)(5)(i) and declares that, due to fatigue, he or she is unable to safely and competently perform his or her duties, the licensee shall immediately stop the individual from performing any duties listed in § 26.4(a), except if the individual is required to continue performing those duties under other requirements of this chapter. If the subject individual must continue performing the duties listed in § 26.4(a) until relieved, the licensee shall immediately take action to relieve the individual.

(b) Following a self-declaration, as described in paragraph (a) of this section, the licensee—

(1) May reassign the individual to duties other than those listed in § 26.4(a), but only if the results of a fatigue assessment, conducted under the requirements of § 26.211, indicate that the individual is fit to safely and competently perform those other duties; and

(2) Shall permit or require the individual to take a break of at least 10 hours before the individual returns to performing any duties listed in § 26.4(a).

[73 FR 17226 Mar. 31, 2008]

§ 26.211 Fatigue assessments.

[Top of File]

(a) Licensees shall ensure that fatigue assessments are conducted under the following conditions:

(1) For cause. In addition to any other test or determination of fitness that may be required under §§ 26.31(c) and 26.77, a fatigue assessment must be conducted in response to an observed condition of impaired individual alertness creating a reasonable suspicion that an individual is not fit to safely and competently perform his or her duties, except if the condition is observed during an individual's break period. If the observed condition is impaired alertness with no other behaviors or physical conditions creating a reasonable suspicion of possible substance abuse, then the licensee need only conduct a fatigue assessment. If the licensee has reason to believe that the observed

condition is not due to fatigue, the licensee need not conduct a fatigue assessment;

(2) Self-declaration. A fatigue assessment must be conducted in response to an individual's self-declaration to his or her supervisor that he or she is not fit to safely and competently perform his or her duties for any part of a working tour because of fatigue, except if, following the self-declaration, the licensee permits or requires the individual to take a rest break of at least 10 hours before the individual returns to duty;

(3) Post-event. A fatigue assessment must be conducted in response to events requiring post-event drug and alcohol testing as specified in § 26.31(c). Licensees may not delay necessary medical treatment in order to conduct a fatigue assessment; and

(4) Followup. If a fatigue assessment was conducted for cause or in response to a self-declaration, and the licensee returns the individual to duty following a break of less than 10 hours in duration, the licensee shall reassess the individual for fatigue as well as the need to implement controls and conditions before permitting the individual to resume performing any duties.

(b) Only supervisors and FFD program personnel who are trained under §§ 26.29 and 26.203(c) may conduct a fatigue assessment. The fatigue assessment must be conducted face to face with the individual whose alertness may be impaired.

(1) In the case of a fatigue assessment conducted for cause, the individual who observed the condition of impaired alertness may not conduct the fatigue assessment.

(2) In the case of a post-event fatigue assessment, the individual who conducts the fatigue assessment may not have—

(i) Performed or directed (on site) the work activities during which the event occurred;

(ii) Performed, within 24 hours before the event occurred, a fatigue assessment of the individuals who were performing or directing (on site) the work activities during which the event occurred; and

(iii) Evaluated or approved a waiver of the limits specified in § 26.205(d)(1) through (d)(5)(i) for any of the individuals who were performing or directing (on site) the work activities during which the event occurred, if the event occurred while such individuals were performing work under that waiver.

(c) A fatigue assessment must provide the information necessary for management decisions and actions in response to the circumstance that initiated the assessment.

(1) At a minimum, the fatigue assessment must address the following factors:

(i) Acute fatigue;

(ii) Cumulative fatigue; and

(iii) Circadian variations in alertness and performance.

(2) Individuals shall provide complete and accurate information that may be required by the licensee to address the factors listed in paragraph (c)(1) of this section. Licensees shall limit any inquiries to obtaining from the subject individual only the personal information that may be necessary to assess the factors listed in paragraph (c)(1) of this section.

(d) The licensee may not conclude that fatigue has not or will not degrade the individual's ability to safely and competently perform his or her duties solely on the basis that the individual's work hours have not exceeded any of the limits specified in § 26.205(d)(1) or that the individual has had the minimum breaks required in § 26.205(d)(2) or minimum days off required in § 26.205(d)(3) through (d)(5), as applicable.

(e) Following a fatigue assessment, the licensee shall determine and implement the controls and conditions, if any, that are necessary to permit the individual to resume performing duties for the licensee, including the need for a break.

(f) Licensees shall document the results of any fatigue assessments conducted, the circumstances that necessitated the fatigue assessment, and any controls and conditions that were implemented.

(g) Licensees shall also prepare an annual summary for each nuclear power plant site of instances of fatigue assessments that were conducted during the previous calendar year for any individual identified in § 26.4(a) through (c). Each summary must include—

(1) The conditions under which each fatigue assessment was conducted (i.e., self-declaration, for cause, post-event, followup);

(2) A statement of whether or not the individual was working on outage activities at the time of the self-declaration or condition resulting in the fatigue assessment;

(3) The category of duties the individual was performing, if the individual was performing the duties described in § 26.4(a)(1) through (a)(5) at the time of the self-declaration or condition resulting in the fatigue assessment; and

(4) The management actions, if any, resulting from each fatigue assessment.

[73 FR 17226 Mar. 31, 2008]

Subpart K—FFD Programs for Construction

[Top of File]

§ 26.401 General.

(a) At the licensee's or other entity's discretion, a licensee or other entity in § 26.3(c) may establish, implement, and maintain an FFD program that meets the requirements of this subpart to apply to the individuals specified in § 26.4(f). If a licensee or other entity in § 26.3 (c) does not elect to implement an FFD program that meets the requirements of this subpart, the individuals specified in § 26.4(f) shall be subject to an FFD program that meets the requirements of subparts A through H, N, and O of this part.

(b) Entities who intend to implement an FFD program under this subpart shall submit a description of the FFD program and its implementation as part of the license, permit, or limited work authorization application.

(c) Nothing in this subpart prohibits the licensees and other entities in § 26.3(c) from subjecting the individuals in § 26.4(f) to an FFD program that meets all of the requirements of this part or FFD program elements that meet all of the applicable requirements of this part.

[73 FR 17227 Mar. 31, 2008]

§ 26.403 Written policy and procedures.

[Top of File]

(a) Licensees and other entities who implement an FFD program under this subpart shall ensure that a clear, concise, written FFD policy statement is provided to individuals who are subject to the program. The policy statement must be written in sufficient detail to provide affected individuals with information on what is expected of them and what consequences may result from a lack of adherence to the policy.

(b) Licensees and other entities shall develop, implement, and maintain written procedures that address the following topics:

(1) The methods and techniques to be used in testing for drugs and alcohol, including procedures for protecting the privacy of an individual who provides a specimen, procedures for protecting the integrity of the specimen, and procedures used to ensure that the test results are valid and attributable to the correct individual;

(2) The immediate and followup actions that will be taken, and the procedures to be used, in those cases in which individuals who are subject to the FFD program are determined to have—

(i) Been involved in the use, sale, or possession of illegal drugs;

(ii) Consumed alcohol to excess before or while constructing safety-or security-related SSCs, as determined by a test that accurately measures BAC;

(iii) Attempted to subvert the testing process by adulterating or diluting specimens (in vivo or in vitro), substituting specimens, or by any other means;

(iv) Refused to provide a specimen for analysis; or

(v) Had legal action taken relating to drug or alcohol use.

(3) The process to be followed if an individual's behavior or condition raises a concern regarding the possible use, sale, or possession of illegal drugs on or off site; the possible use or possession of alcohol while constructing safety-or security-related SSCs; or impairment from any cause which in any way could adversely affect the individual's ability to safely and competently perform his or her duties.

[73 FR 17227 Mar. 31, 2008]

§ 26.405 Drug and alcohol testing.

[Top of File]

(a) To provide means to deter and detect substance abuse, licensees and other entities who implement an FFD program under this subpart shall perform drug and alcohol testing that complies with the requirements of this section.

(b) If the licensee or other entity elects to impose random testing for drugs and alcohol on the individuals identified in § 26.4(f), random

testing must—

(1) Be administered in a manner that provides reasonable assurance that individuals are unable to predict the time periods during which specimens will be collected;

(2) Require individuals who are selected for random testing to report to the collection site as soon as reasonably practicable after notification, within the time period specified in the FFD program policy;

(3) Ensure that all individuals in the population that is subject to random testing on a given day have an equal probability of being selected and tested; and

(4) Provide that an individual completing a test is immediately eligible for another random test.

(c) Individuals identified in § 26.4(f) shall be subject to drug and alcohol testing under the following conditions:

(1) Pre-assignment. Before assignment to construct safety-or security-related SSCs;

(2) For-cause. In response to an individual's observed behavior or physical condition indicating possible substance abuse or after receiving credible information that an individual is engaging in substance abuse, as defined in § 26.5;

(3) Post-accident. As soon as practical after an event involving a human error that was committed by an individual specified in § 26.4(f), where the human error may have caused or contributed to the accident. The licensee or other entity shall test the individual(s) who committed the error(s), and need not test individuals who were affected by the event but whose actions likely did not cause or contribute to the event. The individual(s) who committed the human error(s) shall be tested if the event resulted in—

(i) A significant illness or personal injury to the individual to be tested or another individual, which within 4 hours after the event is recordable under the Department of Labor standards contained in 29 CFR 1904.7, and subsequent amendments thereto, and results in death, days away from work, restricted work, transfer to another job, medical treatment beyond first aid, loss of consciousness, or other significant illness or injury as diagnosed by a physician or other licensed health care professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness; or

(ii) Significant damage, during construction, to any safety-or security-related SSC; and

(4) Followup. As part of a followup plan to verify an individual's continued abstinence from substance abuse.

(d) At a minimum, licensees and other entities shall test specimens for marijuana metabolite, cocaine metabolite, opiates (codeine, morphine, 6-acetylmorphine), amphetamines (amphetamine, methamphetamine), phencyclidine, adulterants, and alcohol at the cutoff levels specified in this part, or comparable cutoff levels if specimens other than urine are collected for drug testing. Urine specimens collected for drug testing must be subject to validity testing.

(e) The specimen collection and drug and alcohol testing procedures of FFD programs under this subpart must protect the donor's privacy and the integrity of the specimen, and implement stringent quality controls to ensure that test results are valid and attributable to the correct individual. At the licensee's or other entity's discretion, specimen collections and alcohol testing may be conducted at a local hospital or other facility under the specimen collection and alcohol testing requirements of 49 CFR Part 40 and subsequent amendments thereto.

(f) Testing of urine specimens for drugs and validity, except validity screening and initial drug and validity tests that may be performed by licensee testing facilities, must be performed in a laboratory that is certified by HHS for that purpose, consistent with its standards and procedures for certification. Any initial drug test performed by a licensee or other entity subject to this subpart must use an immunoassay that meets the requirements of the Food and Drug Administration for commercial distribution. Urine specimens that yield positive, adulterated, substituted, or invalid initial validity or drug test results must be subject to confirmatory testing by the HHS-certified laboratory, except for invalid specimens that cannot be tested. Other specimens that yield positive initial drug test results must be subject to confirmatory testing by a laboratory that meets stringent quality control requirements that are comparable to those required for certification by the HHS.

(g) Licensees and other entities shall provide for an MRO review of positive, adulterated, substituted, and invalid confirmatory drug and validity test results to determine whether the donor has violated the FFD policy, before reporting the results to the individual designated by the licensee or other entity to perform the suitability and fitness evaluations required under § 26.419.

[73 FR 17227 Mar. 31, 2008]

§ 26.406 Fitness monitoring.

[Top of File]

(a) The requirements in this section apply only if a licensee or other entity does not elect to subject the individuals specified in § 26.4(f) to random testing for drugs and alcohol under § 26.405(b).

(b) Licensees and other entities shall implement a fitness monitoring program to deter substance abuse and detect indications of possible use, sale, or possession of illegal drugs; use or possession of alcohol while constructing safety-or security-related SSCs; or impairment from

any cause that if left unattended may result in a risk to public health and safety or the common defense and security.

(c) Licensees and other entities shall establish procedures that monitors shall follow in response to the indications and actions specified in paragraph (b) of this section and train the monitors to implement the program.

(d) Licensees and other entities shall ensure that the fitness of individuals specified in § 26.4(f) is monitored effectively while the individuals are constructing safety- and security-related SSCs, commensurate with the potential risk to public health and safety and the common defense and security imposed by the construction activity. To achieve this objective, licensees and other entities shall consider the number and placement of monitors required, the necessary ratio of monitors to individuals specified in § 26.4(f), and the frequency with which the individuals specified in § 26.4(f) shall be monitored while constructing each safety- or security-related SSC.

[73 FR 17228 Mar. 31, 2008]

§ 26.407 Behavioral observation.

[Top of File]

While the individuals specified in § 26.4(f) are constructing safety- or security-related SSCs, licensees and other entities shall ensure that these individuals are subject to behavioral observation, except if the licensee or other entity has implemented a fitness monitoring program under § 26.406.

[73 FR 17228 Mar. 31, 2008]

§ 26.409 Sanctions.

[Top of File]

Licensees and other entities who implement an FFD program under this subpart shall establish sanctions for FFD policy violations that, at a minimum, prohibit the individuals specified in § 26.4(f) from being assigned to construct safety- or security-related SSCs unless or until the licensee or other entity determines that the individual's condition or behavior does not pose a potential risk to public health and safety or the common defense and security.

[73 FR 17228 Mar. 31, 2008]

§ 26.411 Protection of information.

[Top of File]

(a) Licensees and other entities who collect personal information about an individual for the purpose of complying with this subpart shall establish and maintain a system of files and procedures to protect the personal information. FFD programs must maintain and use such records with the highest regard for individual privacy.

(b) Licensees and other entities shall obtain a signed consent that authorizes the disclosure of the personal information collected and maintained under this subpart before disclosing the personal information, except for disclosures to the individuals and entities specified in § 26.37(b)(1) through (b)(6), (b)(8), and persons deciding matters under review in § 26.413.

[73 FR 17228 Mar. 31, 2008]

§ 26.413 Review process.

[Top of File]

Licensees and other entities who implement an FFD program under this subpart shall establish and implement procedures for the review of a determination that an individual in § 26.4(f) has violated the FFD policy. The procedure must provide for an objective and impartial review of the facts related to the determination that the individual has violated the FFD policy.

[73 FR 17229 Mar. 31, 2008]

§ 26.415 Audits.

[Top of File]

(a) Licensees and other entities who implement an FFD program under this subpart shall ensure that audits are performed to assure the continuing effectiveness of the FFD program, including FFD program elements that are provided by C/Vs, and the FFD programs of C/Vs that are accepted by the licensee or other entity.

(b) Each licensee and other entity shall ensure that these programs are audited at a frequency that assures their continuing effectiveness and that corrective actions are taken to resolve any problems identified. Licensees and entities may conduct joint audits, or accept audits of C/Vs conducted by others, so long as the audit addresses the relevant C/Vs' services.

(c) Licensees and other entities need not audit HHS-certified laboratories or the specimen collection and alcohol testing services that meet the requirements of 49 CFR Part 40, "Procedures for Department of Transportation Workplace Drug and Alcohol Testing Programs" (65 FR 41944; August 9, 2001), on which licensees and other entities may rely to meet the drug and alcohol testing requirements of this subpart.

[73 FR 17229 Mar. 31, 2008]

§ 26.417 Recordkeeping and reporting.

[Top of File]

(a) Licensees and other entities who implement FFD programs under this subpart shall ensure that records pertaining to the administration of the program, which may be stored and archived electronically, are maintained so that they are available for NRC inspection purposes and for any legal proceedings resulting from the administration of the program.

(b) Licensees and other entities shall make the following reports:

(1) Reports to the NRC Operations Center by telephone within 24 hours after the licensee or other entity discovers any intentional act that casts doubt on the integrity of the FFD program and any programmatic failure, degradation, or discovered vulnerability of the FFD program that may permit undetected drug or alcohol use or abuse by individuals who are subject to this subpart. These events must be reported under this subpart, rather than under the provisions of 10 CFR 73.71; and

(2) Annual program performance reports for the FFD program.

[73 FR 17229 Mar. 31, 2008]

§ 26.419 Suitability and fitness evaluations.

[Top of File]

Licensees and other entities who implement FFD programs under this subpart shall develop, implement, and maintain procedures for evaluating whether to assign individuals to construct safety- and security-related SSCs. These procedures must provide reasonable assurance that the individuals are fit to safely and competently perform their duties, and are trustworthy and reliable, as demonstrated by the avoidance of substance abuse.

[73 FR 17229 Mar. 31, 2008]

Subpart N—Recordkeeping and Reporting Requirements

[Top of File]

§ 26.709 Applicability.

The requirements of this subpart apply to the FFD programs of licensees and other entities specified in § 26.3, except for FFD programs that are implemented under subpart K of this part.

[73 FR 17229 Mar. 31, 2008]

§ 26.711 General provisions.

[Top of File]

(a) Each licensee and other entity shall maintain records and submit certain reports to the NRC. Records that are required by the regulations in this part must be retained for the period specified by the appropriate regulation. If a retention period is not otherwise specified, these records must be retained until the Commission terminates the facility's license, certificate, or other regulatory approval.

(b) All records may be stored and archived electronically, provided that the method used to create the electronic records meets the following criteria:

(1) Provides an accurate representation of the original records;

(2) Prevents the alteration of any archived information and/or data once it has been committed to storage; and

(3) Permits easy retrieval and re-creation of the original records.

(c) The licensees and other entities specified in § 26.3(a) and, as applicable, (c) and (d), shall inform each individual of his or her right to review information about the individual that is collected and maintained under this part to assure its accuracy. Licensees and other entities shall provide the individual with an opportunity to correct any inaccurate or incomplete information that is documented by licensees and other entities about the individual.

(d) Licensees and other entities shall ensure that only correct and complete information about individuals is retained and shared with other licensees and entities. If, for any reason, the shared information used for determining an individual's eligibility for authorization under this part changes or new information is developed about the individual, licensees and other entities shall correct or augment the shared information contained in the records. If the changed or developed information has implications for adversely affecting an individual's eligibility for authorization, a licensee and other entity specified in § 26.3(a) and, as applicable, (c) and (d), who has discovered the incorrect information, or develops new information, shall inform the reviewing official of any FFD program under which the individual is maintaining authorization of the updated information on the day of discovery. The reviewing official shall evaluate the information and take appropriate actions, which may include denial or unfavorable termination of the individual's authorization.

[73 FR 17229 Mar. 31, 2008]

§ 26.713 Recordkeeping requirements for licensees and other entities.

[Top of File]

(a) Each licensee and other entity who is subject to this subpart shall retain the following records for at least 5 years after the licensee or other entity terminates or denies an individual's authorization or until the completion of all related legal proceedings, whichever is later:

(1) Records of self-disclosures, employment histories, and suitable inquiries that are required under §§ 26.55, 26.57, 26.59, and 26.69 that result in the granting of authorization;

(2) Records pertaining to the determination of a violation of the FFD policy and related management actions;

(3) Documentation of the granting and termination of authorization; and

(4) Records of any determinations of fitness conducted under § 26.189, including any recommendations for treatment and followup testing plans.

(b) Each licensee and other entity who is subject to this subpart shall retain the following records for at least 3 years or until the completion of all related legal proceedings, whichever is later:

(1) Records of FFD training and examinations conducted under § 26.29; and

(2) Records of audits, audit findings, and corrective actions taken under § 26.41.

(c) Licensees and other entities shall ensure the retention and availability of records pertaining to any 5-year denial of authorization under § 26.75(c), (d), or (e)(2) and any permanent denial of authorization under § 26.75(b) and (g) for at least 40 years or until, on application, the NRC determines that the records are no longer needed.

(d) Licensees and other entities shall retain any superseded versions of the written FFD policy and procedures required under §§ 26.27, 26.39, and 26.203(b) for at least 5 years or until completion of all legal proceedings related to an FFD violation that may have occurred under the policy and procedures, whichever is later.

(e) Licensees and other entities shall retain written agreements for the provision of services under this part for the life of the agreement or until completion of all legal proceedings related to an FFD policy violation that involved those services, whichever is later.

(f) Licensees and other entities shall retain records of the background investigations, credit and criminal history checks, and psychological assessments of FFD program personnel, conducted under § 26.31(b)(1)(i), for the length of the individual's employment by or contractual relationship with the licensee or other entity, or until the completion of all related legal proceedings, whichever is later.

(g) If a licensee's or other entity's FFD program includes tests for drugs in addition to those specified in this part, as permitted under § 26.31(d)(1), or uses more stringent cutoff levels than those specified in this part, as permitted under § 26.31(d)(3), the licensee or other entity shall retain documentation certifying the scientific and technical suitability of the assays and cutoff levels used, as required under § 26.31(d)(1)(i) and (d)(3)(iii)(C), respectively, for the time the FFD program follows these practices or until the completion of all related legal proceedings, whichever is later.

[73 FR 17229 Mar. 31, 2008]

§ 26.715 Recordkeeping requirements for collection sites, licensee testing facilities, and laboratories certified by the Department of Health and Human Services.

[Top of File]

(a) Collection sites providing services to licensees and other entities who are subject to this subpart, licensee testing facilities, and HHS-certified laboratories shall maintain and make available documentation of all aspects of the testing process for at least 2 years or until the completion of all legal proceedings related to a determination of an FFD violation, whichever is later. This 2-year period may be extended on written notification by the NRC or by any licensee or other entity for whom services are being provided.

(b) Documentation that must be retained includes, but is not limited to, the following:

(1) Personnel files, including training records, for all individuals who have been authorized to have access to specimens, but are no longer under contract to or employed by the collection site, licensee testing facility, or HHS-certified laboratory;

(2) Chain-of-custody documents (other than forms recording specimens with negative test results and no FFD violations or anomalies, which may be destroyed after appropriate summary information has been recorded for program administration purposes);

(3) Quality assurance and quality control records;

(4) Superseded procedures;

(5) All test data (including calibration curves and any calculations used in determining test results);

(6) Test reports;

(7) Records pertaining to performance testing;

(8) Records pertaining to the investigation of testing errors or unsatisfactory performance discovered in quality control or blind performance testing, in the testing of actual specimens, or through the processing of appeals and MRO reviews, as well as any other errors or matters that could adversely reflect on the integrity of the testing process, nvestigation findings, and corrective actions taken, where applicable;

(9) Performance records on certification inspections;

(10) Records of preventative maintenance on licensee testing facility instruments;

(11) Records that summarize any test results that the MRO determined to be scientifically insufficient for further action;

(12) Either printed or electronic copies of computer-generated data;

(13) Records that document the dates, times of entry and exit, escorts, and purposes of entry of authorized visitors, maintenance personnel, and service personnel who have accessed secured areas of licensee testing facilities and HHS-certified laboratories; and

(14) Records of the inspection, maintenance, and calibration of EBTs.

[73 FR 17230 Mar. 31, 2008]

§ 26.717 Fitness-for-duty program performance data.

[Top of File]

(a) Licensees and other entities shall collect and compile FFD program performance data for each FFD program that is subject to this subpart.

(b) The FFD program performance data must include the following information:

(1) The random testing rate;

(2) Drugs for which testing is conducted and cutoff levels, including results of tests using lower cutoff levels, tests for drugs not included in the HHS panel, and any special analyses of dilute specimens permitted under § 26.163(a)(2);

(3) Populations tested (i.e., individuals in applicant status, permanent licensee employees, C/Vs);

(4) Number of tests administered and results of those tests sorted by population tested (i.e., individuals in applicant status, permanent licensee employees, C/Vs);

(5) Conditions under which the tests were performed, as defined in § 26.31(c);

(6) Substances identified;

(7) Number of subversion attempts by type;

(8) Summary of management actions; and

(9) The information required under § 26.203(e)(1) and (e)(2).

(c) Licensees and other entities who have a licensee-approved FFD program shall analyze the data at least annually and take appropriate actions to correct any identified program weaknesses. Records of the data, analyses, and corrective actions taken must be retained for at least 3 years or until the completion of any related legal proceedings, whichever is later.

(d) Any licensee or other entity who terminates an individual's authorization or takes administrative action on the basis of the results of a positive initial drug test for marijuana or cocaine shall also report these test results in the annual summary by processing stage (i.e., initial testing at the licensee testing facility, testing at the HHS-certified laboratory, and MRO determinations). The report must also include the number of terminations and administrative actions taken against individuals for the reporting period.

(e) Licensees and other entities shall submit the FFD program performance data (for January through December) to the NRC annually, before March 1 of the following year.

(f) Licensees and other entities may submit the FFD program performance data in a consolidated report, as long as the report presents the data separately for each site.

(g) Each C/V who maintains a licensee-approved drug and alcohol testing program is subject to the reporting requirements of this section and shall submit the required information either directly to the NRC or through the licensee's) or other entities to whom the C/V provided services during the year. Licensees, other entities, and C/Vs shall share information to ensure that the information is reported completely and is not duplicated in reports submitted to the NRC.

[73 FR 17230 Mar. 31, 2008]

§ 26.719 Reporting requirements.

[Top of File]

(a) *Required reports*. Each licensee and entity who is subject to this subpart shall inform the NRC of significant violations of the FFD policy, significant FFD program failures, and errors in drug and alcohol testing. These events must be reported under this section, rather than under the provisions of 10 CFR 73.71.

(b) *Significant FFD policy violations or programmatic failures*. The following significant FFD policy violations and programmatic failures must be reported to the NRC Operations Center by telephone within 24 hours after the licensee or other entity discovers the violation:

(1) The use, sale, distribution, possession, or presence of illegal drugs, or the consumption or presence of alcohol within a protected area;

(2) Any acts by any person licensed under 10 CFR parts 52 and/or 55 to operate a power reactor, as well as any acts by SSNM transporters, FFD program personnel, or any supervisory personnel who are authorized under this part, if such acts—

(i) Involve the use, sale, or possession of a controlled substance;

(ii) Result in a determination that the individual has violated the licensee's or other entity's FFD policy (including subversion as defined in § 26.5); or

(iii) Involve the consumption of alcohol within a protected area or while performing the duties that require the individual to be subject to the FFD program;

(3) Any intentional act that casts doubt on the integrity of the FFD program; and

(4) Any programmatic failure, degradation, or discovered vulnerability of the FFD program that may permit undetected drug or alcohol use or abuse by individuals within a protected area, or by individuals who are assigned to perform duties that require them to be subject to the FFD program.

(c) *Drug and alcohol testing errors*. (1) Within 30 days of completing an investigation of any testing errors or unsatisfactory performance discovered in performance testing at either a licensee testing facility or an HHS-certified laboratory, in the testing of quality control or actual specimens, or through the processing of reviews under § 26.39 and MRO reviews under § 26.185, as well as any other errors or matters that could adversely reflect on the integrity of the random selection or testing process, the licensee or other entity shall submit to the NRC a report of the incident and corrective actions taken or planned. If the error involves an HHS-certified laboratory, the NRC shall ensure that HHS is notified of the finding.

(2) If a false positive error occurs on a blind performance test sample submitted to an HHS-certified laboratory, the licensee or other entity shall notify the NRC within 24 hours after discovery of the error.

(3) If a false negative error occurs on a quality assurance check of validity screening tests, as required in § 26.137(b), the licensee or other entity shall notify the NRC within 24 hours after discovery of the error.

(d) *Indicators of programmatic weaknesses*. Licensees and other entities shall document, trend, and correct non-reportable indicators of FFD programmatic weaknesses under the licensee's or other entity's corrective action program, but may not track or trend drug and alcohol test results in a manner that would permit the identification of any individuals.

[73 FR 17231 Mar. 31, 2008]

Subpart O—Inspections, Violations, and Penalties

[Top of File]

§ 26.821 Inspections.

(a) Each licensee and other entity who is subject to this part shall permit duly authorized NRC representatives to inspect, copy, or take away copies of its records and to inspect its premises, activities, and personnel as may be necessary to accomplish the purposes of this part.

(b) Written agreements between licensees or other entities and their C/Vs must clearly show that—

(1) The licensee or other entity is responsible to the NRC for maintaining an effective FFD program under this part; and

(2) Duly authorized NRC representatives may inspect, copy, or take away copies of any licensee's, other entity's, or C/V's documents, records, and reports related to implementation of the licensee's or other entity's FFD program under the scope of the contracted activities.

[73 FR 17231 Mar. 31, 2008]

§ 26.823 Violations.

[Top of File]

(a) An injunction or other court order may be obtained to prohibit a violation of any provision of—

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974; or

(3) Any regulation or order issued under these Acts.

(b) A court order may be obtained for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act of 1954, for violations of—

(1) Section 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Act;

(2) Section 206 of the Energy Reorganization Act of 1974;

(3) Any rule, regulation, or order issued under these sections;

(4) Any term, condition, or limitation of any license issued under these sections; or

(5) Any provisions for which a license may be revoked under section 186 of the Atomic Energy Act of 1954.

[73 FR 17231 Mar. 31, 2008]

§ 26.825 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For the purposes of section 223, all of the regulations in Part 26 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in Part 26 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 26.1, 26.3, 26.5, 26.7, 26.8, 26.9, 26.11, 26.51, 26.81, 26.121, 26.151, 26.181, 26.201, 26.823, and 26.825.

[73 FR 17231 Mar. 31, 2008]

PART 30--RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL

[Top of File]

General Provisions

[Top of File]

§ 30.1 Scope.

This part prescribes rules applicable to all persons in the United States governing domestic licensing of byproduct material under the Atomic Energy Act of 1954, as amended (68 Stat. 919), and under title II of the Energy Reorganization Act of 1974 (88 Stat. 1242), and exemptions from the domestic licensing requirements permitted by Section 81 of the Act. This part also gives notice to all persons who knowingly provide to any licensee, applicant, certificate of registration holder, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's, applicant's or certificate of registration holder's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 30.10.

[63 FR 1895, Jan. 13, 1998]

§ 30.2 Resolution of conflict.

[Top of File]

The requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In any conflict between the requirements in this part and a specific requirement in another part of the regulations in this chapter, the specific requirement governs.

[30 FR 8185, June 26, 1965]

§ 30.3 Activities requiring license.

[Top of File]

(a) Except as provided in paragraphs (b)(2), (b)(3), (c)(2), and (c)(3) of this section and for persons exempt as provided in this part and part 150 of this chapter, no person shall manufacture, produce, transfer, receive, acquire, own, possess, or use byproduct material except as authorized in a specific or general license issued in accordance with the regulations in this chapter.

(b)(1) The requirements, including provisions that are specific to licensees, in this part and parts 19, 20, 21, and 71 of this chapter, as well as the additional requirements for specific broad scope, industrial radiography, irradiator, or well logging uses in 10 CFR parts 33, 34, 36, or 39, respectively, shall apply to Government agencies or Federally recognized Indian Tribes on November 30, 2007, when conducting activities under the authority provided by paragraphs (b)(2) and (b)(3) of this section.

(2) A specifically licensed Government agency or Federally recognized Indian Tribe that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a license amendment is required to authorize the activities in paragraph (a) of this section, may continue to use these materials for uses permitted under this part until the date of the NRC's final licensing determination, provided that the licensee submits an amendment application on or before June 2, 2008.

(3) A Government agency or Federally recognized Indian Tribe that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a specific license is required in paragraph (a) of this section, may continue to use such material for uses permitted under this part until the date of the NRC's final licensing determination provided that the agency or Indian Tribe submits an application for a license authorizing activities involving these materials on or before December 1, 2008.

(c)(1) The requirements, including provisions that are specific to licensees in this part and parts 19, 20, 21, and 71 of this chapter, as well as the additional requirements for specific broad scope, industrial radiography, irradiator, or well logging uses in 10 CFR parts 33, 34, 36, or 39, respectively, shall apply to all persons, other than those included in paragraph (b)(1) of this section, on August 8, 2009, or earlier as noticed by the NRC, when conducting activities under the authority provided by paragraphs (c)(2) and (c)(3) of this section.

(2) Except as provided in paragraph (b)(2) of this section, all other licensees, who possess and use accelerator-produced radioactive material or discrete sources of radium-226 for which a license amendment is required to authorize the activities in paragraph (a) of this section, may continue to use these materials for uses permitted under this part until the date of the NRC's final licensing determination, provided that the person submits an amendment application within 6 months from the waiver expiration date of August 7, 2009 or within 6 months from the date of an earlier termination of the waiver as noticed by the NRC, whichever date is earlier.

(3) Except as provided in paragraph (b)(3) of this section, all other persons, who possess and use accelerator-produced radioactive material or discrete sources of radium-226 for which a specific license is required in paragraph (a) of this section, may continue to use such material for uses permitted under this part until the date of the NRC's final licensing determination, provided that the person submits a license application within 12 months from the waiver expiration date of August 7, 2009 or within 12 months from the date of an earlier termination of the waiver as noticed by the NRC, whichever date is earlier.

(d) If a person or licensee is required to file an application for a license or amendment in accordance with paragraphs (b)(2), (b)(3), (c)(2), and (c)(3) of this section, but does not file for the license or amendment within the required time, the authority provided by paragraphs (b)(2), (b)(3), (c)(2), and (c)(3) of this section to receive or use the accelerator-produced radioactive material or discrete sources of radium-226 shall expire with respect to the person's or licensee's authority to receive and use such byproduct material. This authority shall not expire with respect to the responsibility of the person or licensee regarding the possession of such byproduct material, the decommissioning (including financial assurance) of facilities, or the disposal of such byproduct material.

[30 FR 8185, June 26, 1965, as amended at 43 FR 6921, Feb. 17, 1978; 72 FR 55924, Oct. 1, 2007]

§ 30.4 Definitions.

[Top of File]

Accelerator-produced radioactive material means any material made radioactive by a particle accelerator.

Act means the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto;

Agreement State means any state with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an effective agreement under subsection 274b. of the Act. *Non-agreement State* means any other State;

Alert means events may occur, are in progress, or have occurred that could lead to a release of radioactive material but that the release is not expected to require a response by offsite response organizations to protect persons offsite.

Byproduct material means— (1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(2)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that—

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(3) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

Commencement of construction means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site but does not include changes desirable for the temporary use of the land for public recreational uses, necessary borings to determine site characteristics or other preconstruction monitoring to establish background information related to the suitability of a site or to the protection of environmental values.

Commission means the Nuclear Regulatory Commission and its duly authorized representatives;

Consortium means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution or a Federal facility or a medical facility.

Curie means that amount of radioactive material which disintegrates at the rate of 37 billion atoms per second;

Cyclotron means a particle accelerator in which the charged particles travel in an outward spiral or circular path. A cyclotron accelerates charged particles at energies usually in excess of 10 megaelectron volts and is commonly used for production of short half-life radionuclides for medical use.

Decommission means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits--

(1) Release of the property for unrestricted use and termination of the license; or

(2) Release of the property under restricted conditions and termination of the license.

Dentist means an individual licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to practice dentistry.

Department and Department of Energy means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 et seq.) to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104 (b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

Discrete source means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

Effective dose equivalent means the sum of the products of the dose equivalent to the organ or tissue and the weighting factors applicable to each of the body organs or tissues that are irradiated. Weighting factors are: 0.25 for gonads, 0.15 for breast, 0.12 for red bone marrow, 0.12 for lungs, 0.03 for thyroid, 0.03 for bone surface, and 0.06 for each of the other five organs receiving the highest dose equivalent.

Government agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government;

License, except where otherwise specified means a license for by-product material issued pursuant to the regulations in this part and parts 31 through 36 and 39 of this chapter;

Medical use means the intentional internal or external administration of byproduct material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user as defined in 10 CFR Part 35.

Microcurie means that amount of radioactive material which disintegrates at the rate of 37 thousand atoms per second;

Millicurie means that amount of radioactive material which disintegrates at the rate of 37 million atoms per second;

Particle accelerator means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 megaelectron volt. For purposes of this definition, accelerator is an equivalent term.

Person means: (1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department, except that the Department shall be considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing;

Physician means a medical doctor or doctor of osteopathy licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to prescribe drugs in the practice of medicine;

Podiatrist means an individual licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to practice podiatry.

Principal activities, as used in this part, means activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

Production facility means production facility as defined in the regulations contained in part 50 of this chapter;

Quantities of Concern means the quantities of the radionuclides meeting or exceeding the threshold limits set forth in Table I–1 of Appendix I of part 73 of this chapter.

Research and development means: (1) Theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials and processes. "Research and development" as used in this part and parts 31 through 35 does not include the internal or external administration of byproduct material, or the radiation therefrom, to human beings;

Sealed source means any by product material that is encased in a capsule designed to prevent leakage or escape of the byproduct material;

Site area emergency means events may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by offsite response organizations to protect persons offsite.

Source material means source material as defined in the regulations contained in part 40 of this chapter;

Special nuclear material means special nuclear material as defined in the regulations contained in part 70 of this chapter;

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States;

Utilization facility means a utilization facility as defined in the regulations contained in part 50 of this chapter;

[30 FR 8185, June 26, 1965, as amended at 36 FR 1466, Jan. 30, 1971; 37 FR 5746, Mar. 21, 1972; 38 FR 29314, Oct. 24, 1973; 40 FR 8784, Mar. 3, 1975; 43 FR 6921, Feb. 17, 1978; 45 FR 14200, Mar. 5, 1980; 45 FR 18905, Mar. 24, 1980; 48 FR 39037, Aug. 29, 1983; 51 FR 36967, Oct. 16, 1986; 52 FR 8241, Mar. 17, 1987; 53 FR 24044, June 27, 1988; 54 FR 14059, Apr. 7, 1989; 58 FR 7736, Feb. 9, 1993; 59 FR 36034, July 15, 1994; 59 FR 61780, Dec. 2, 1994; 62 FR 28963, May 28, 1997; 62 FR 39089, July 21, 1997; 65 FR 54950, Sept. 12, 2000; 72 FR 55924, Oct. 1, 2007; 73 FR 63570, Oct. 24, 2008]

§ 30.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part and parts 31 through 36 and 39 by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

[30 FR 8185, June 26, 1965, as amended at 43 FR 6921, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993]

§ 30.6 Communications.

[Top of File]

(a) Unless otherwise specified or covered under the regional licensing program as provided in paragraph (b) of this section, any communication or report concerning the regulations in parts 30 through 36 and 39 of this chapter and any application filed under these regulations may be submitted to the Commission as follows:

(1) By mail addressed: ATTN: Document Control Desk, Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

(2) By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland.

(3) Where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(b) The Commission has delegated to the four Regional Administrators licensing authority for selected parts of its decentralized licensing program for nuclear materials as described in paragraph (b)(1) of this section. Any communication, report, or application covered under this licensing program must be submitted to the appropriate Regional Administrator. The Administrators' jurisdictions and mailing addresses are listed in paragraph (b)(2) of this section.

(1) The delegated licensing program includes authority to issue, renew, amend, cancel, modify, suspend, or revoke licenses for nuclear materials issued pursuant to 10 CFR parts 30 through 36, 39, 40, and 70 to all persons for academic, medical, and industrial uses, with the following exceptions:

(i) Activities in the fuel cycle and special nuclear material in quantities sufficient to constitute a critical mass in any room or area. This exception does not apply to license modifications relating to termination of special nuclear material licenses that authorize possession of larger quantities when the case is referred for action from NRC's Headquarters to the Regional Administrators.

(ii) Health and safety design review of sealed sources and devices and approval, for licensing purposes, of sealed sources and devices.

(iii) Processing of source material for extracting of metallic compounds (including Zirconium, Hafnium, Tantalum, Titanium, Niobium, etc.).

(iv) Distribution of products containing radioactive material to persons exempt pursuant 10 CFR 32.11 through 32.26.

(v) New uses or techniques for use of byproducts, source, or special nuclear material.

(2) *Submissions*--(i) *Region I*. The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region I non-Agreement States and the District of Columbia: Connecticut, Delaware, Maine, Massachusetts, New Jersey, Pennsylvania, and Vermont. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, Nuclear Material Section B, 475 Allendale Road, King of Prussia, Pennsylvania 19406-1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter@nrc.gov*.

(ii) *Region II*. The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region II non-Agreement States and territories: Virginia, West Virginia, Puerto Rico, and the Virgin Islands. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region II, Material Licensing/ Inspection Branch, Sam Nunn Atlanta Federal Center, Suite 23T85, 61 Forsyth Street, SW, Atlanta, GA 30303-8931; where e-mail is appropriate it should be addressed to *RidsRgn2MailCenter@nrc.gov*.

(iii) *Region III*. The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region III non-Agreement States: Indiana, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination, request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532- 4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter@nrc.gov*.

(iv) *Region IV*. The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region IV non-Agreement States and a territory: Alaska, Hawaii, Montana, Oklahoma, South Dakota, Wyoming, and Guam. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, renewal, or termination request of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Material Radiation Protection Section, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter@nrc.gov*.

[48 FR 16031, Apr. 14, 1983, as amended at 49 FR 19630, May 9, 1984; 49 FR 47824, Dec. 7, 1984; 50 FR 14693, Apr. 11, 1985; 51 FR 36000, Oct. 8, 1986; 52 FR 8241, Mar. 17, 1987; 52 FR 38392, Oct. 16, 1987; 52 FR 48093, Dec. 18, 1987; 53 FR 3862, Feb. 10, 1988; 53 FR 43420, Oct. 27, 1988; 58 FR 7736, Feb. 9, 1993; 58 FR 64111, Dec. 6, 1993; 59 FR 17465, Apr. 13, 1994; 60 FR 24551, May 9, 1995; 62 FR 22880, Apr. 28, 1997; 68 FR 58803, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 71 FR 15007, Mar. 27, 2006; 72 FR 33386, Jun. 18, 2007; 73 FR 5717, Jan. 31, 2008]

§ 30.7 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in paragraph (a) introductory text of this section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) introductory text or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) introductory text.

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged

violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraphs (a), (e), or (f) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant may be grounds for--

(1) Denial, revocation, or suspension of the license.

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant.

(3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) Each specific licensee, each applicant for a specific license, and each general licensee subject to part 19 shall prominently post the revision of NRC Form 3, "Notice to Employees," referenced in 10 CFR 19.11(c).

(2) The posting of NRC Form 3 must be at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(3) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[58 FR 52408, Oct. 8, 1993, as amended at 60 FR 24551, May 9, 1995; 61 FR 6764, Feb. 22, 1996; 68 FR 58803, Oct. 10, 2003; 72 FR 63969, Nov. 14, 2007]

§ 30.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0017.

(b) The approved information collection requirements contained in this part appear in §§ 30.9, 30.11, 30.15, 30.19, 30.20, 30.32, 30.34, 30.35, 30.36, 30.37, 30.38, 30.41, 30.50, 30.51, 30.55, and appendices A, C, D, and E to this part.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In §§ 30.32, 30.37, and 30.38, NRC Form 313 is approved under control number 3150-0120.

(2) In § 30.36, NRC Form 314 is approved under control number 3150-0028.

(3) In § 30.34, DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control number 0694–0135.

[49 FR 19625, May 9, 1984, as amended at 59 FR 61780, Dec. 2, 1994; 62 FR 52186, Oct. 6, 1997; 62 FR 63639, Dec. 2, 1997; 63 FR 29541, June 1, 1998; 67 FR 67099, Nov. 4, 2002; 73 FR 78604, Dec. 23, 2008]

§ 30.9 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in

all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[52 FR 49371, Dec. 31, 1987]

§ 30.10 Deliberate misconduct.

[Top of File]

(a) Any licensee, certificate of registration holder, applicant for a license or certificate of registration, employee of a licensee, certificate of registration holder or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or certificate of registration holder or applicant for a license or certificate of registration, who knowingly provides to any licensee, applicant, certificate holder, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's, certificate holder's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, certificate of registration holder, or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, certificate of registration holder, an applicant, or a licensee's, certificate holder's or applicant's, contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee, certificate of registration holder or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, certificate of registration holder, applicant, contractor, or subcontractor.

[63 FR 1896, Jan. 13, 1998]

Exemptions

[Top of File]

§ 30.11 Specific exemptions.

(a) The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part and parts 31 through 36 and 39 of this chapter as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

(b) Any licensee's activities are exempt from the requirements of this part to the extent that its activities are licensed under the requirements of part 72 of this chapter.

(c) The Department of Energy is exempt from the requirements of this part to the extent that its activities are subject to the requirements of part 60 or 63 of this chapter.

(d) Except as specifically provided in part 61 of this chapter, any licensee is exempt from the requirements of this part to the extent that its activities are subject to the requirements of part 61 of this chapter.

[37 FR 5746, Mar. 21, 1972, as amended at 39 FR 26279, July 18, 1974; 40 FR 8784, Mar. 3, 1975; 43 FR 6921, Feb. 21, 1978; 45 FR 65530, Oct. 3, 1980; 46 FR 13979, Feb. 25, 1981; 47 FR 57480, Dec. 27, 1982; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993; 66 FR 51838, Oct. 11, 2001; 66 FR 55790, Nov. 2, 2001]

§ 30.12 Persons using byproduct material under certain Department of Energy and Nuclear Regulatory Commission contracts.

[Top of File]

Except to the extent that Department facilities or activities of the types subject to licensing pursuant to section 202 of the Energy Reorganization Act of 1974 are involved, any prime contractor of the Department is exempt from the requirements for a license set forth in sections 81 and 82 of the Act and from the regulations in this part to the extent that such contractor, under his prime contract with the Department manufactures, produces, transfers, receives, acquires, owns, possesses, or uses byproduct material for:

(a) The performance of work for the Department at a United States Government-owned or controlled site, including the transportation of byproduct material to or from such site and the performance of contract services during temporary interruptions of such transportation;

(b) Research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof; or

(c) The use or operation of nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel.

In addition to the foregoing exemptions and subject to the requirement for licensing of Department facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974, any prime contractor or subcontractor of the Department or the Commission is exempt from the requirements for a license set forth in sections 81 and 82 of the Act and from the regulations in this part to the extent that such prime contractor or subcontractor manufacturers, produces, transfers, receives, acquires, owns, possesses, or uses byproduct material under his prime contract or subcontract when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

[40 FR 8784, Mar. 3, 1975, as amended at 43 FR 6921, Feb. 17, 1978]

§ 30.13 Carriers.

[Top of File]

Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in this part and parts 31 through 36 and 39 of this chapter and the requirements for a license set forth in section 81 of the Act to the extent that they transport or store byproduct material in the regular course of carriage for another or storage incident thereto.

[37 FR 3985, Feb. 25, 1972, as amended at 43 FR 6921, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993]

§ 30.14 Exempt concentrations.

[Top of File]

(a) Except as provided in paragraphs (c) and (d) of this section, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in this part and parts 31 through 36 and 39 of this chapter to the extent that such person receives, possesses, uses, transfers, owns or acquires products or materials containing byproduct material in concentrations not in excess of those listed in § 30.70.

(b) This section shall not be deemed to authorize the import of byproduct material or products containing byproduct material.

(c) A manufacturer, processor, or producer of a product or material is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in this part and parts 31 through 36 and 39 of this chapter to the extent that this person transfers byproduct material contained in a product or material in concentrations not in excess of those specified in § 30.70 and introduced into the product or material by a licensee holding a specific license issued by the Commission expressly authorizing such introduction. This exemption does not apply to the transfer of byproduct material contained in any food, beverage, cosmetic, drug, or other commodity or product designed for
ingestion or inhalation by, or application to, a human being.

(d) No person may introduce byproduct material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under this section or equivalent regulations of an Agreement State, except in accordance with a license issued under § 32.11 of this chapter.

[30 FR 8185, June 26, 1965, as amended at 40 FR 8785, Mar. 3, 1975; 43 FR 6921, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993; 72 FR 58486, Oct. 16, 2007]

§ 30.15 Certain items containing byproduct material.

[Top of File]

(a) Except for persons who apply byproduct material to, or persons who incorporate byproduct material into, the following products, or persons who initially transfer for sale or distribution the following products containing byproduct material, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in parts 20 and 30 through 36 and 39 of this chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires the following products:

(1) Timepieces or hands or dials containing not more than the following specified quantities of byproduct material and not exceeding the following specified levels of radiation:

(i) 25 millicuries of tritium per timepiece,

(ii) 5 millicuries of tritium per hand,

(iii) 15 millicuries of tritium per dial (bezels when used shall be considered as part of the dial),

(iv) 100 microcuries of promethium 147 per watch or 200 microcuries of promethium 147 per any other timepiece,

(v) 20 microcuries of promethium 147 per watch hand or 40 microcuries of promethium 147 per other timepiece hand,

(vi) 60 microcuries of promethium 147 per watch dial or 120 microcuries of promethium 147 per other timepiece dial (bezels when used shall be considered as part of the dial),

(vii) The levels of radiation from hands and dials containing promethium 147 will not exceed, when measured through 50 milligrams per square centimeter of absorber:

(A) For wrist watches, 0.1 millirad per hour at 10 centimeters from any surface,

(B) For pocket watches, 0.1 millirad per hour at 1 centimeter from any surface,

(C) For any other timepiece, 0.2 millirad per hour at 10 centimeters from any surface.

(viii) 0.037 megabecquerel (1 microcurie) of radium-226 per timepiece in intact timepieces manufactured prior to November 30, 2007.

(2) [Reserved]

(3) Balances of precision containing not more than 1 millicurie of tritium per balance or not more than 0.5 millicurie of tritium per balance part manufactured before December 17, 2007.

(4) [Reserved]

(5) Marine compasses containing not more than 750 millicuries of tritium gas and other marine navigational instruments containing not more than 250 millicuries of tritium gas manufactured before December 17, 2007.

(6) [Reserved]

(7) Ionization chamber smoke detectors containing not more than 1 microcurie (•Ci) of americium-241 per detector in the form of a foil and designed to protect life and property from fires.

(8) Electron tubes: *Provided*, That each tube does not contain more than one of the following specified quantities of byproduct material:

(i) 150 millicuries of tritium per microwave receiver protector tube or 10 millicuries of tritium per any other electron tube;

(ii) 1 microcurie of cobalt-60;

(iii) 5 microcuries of nickel-63;

(iv) 30 microcuries of krypton-85;

(v) 5 microcuries of cesium-137;

(vi) 30 microcuries of promethium-147;

And provided further, That the levels of radiation from each electron tube containing byproduct material do not exceed 1 millirad per hour at 1 centimeter from any surface when measured through 7 milligrams per square centimeter of absorber.[1]

(9) Ionizing radiation measuring instruments containing, for purposes of internal calibration or standardization, one or more sources of byproduct material: *Provided*, That;

(i) Each source contains no more than one exempt quantity set forth in § 30.71, Schedule B, and

(ii) Each instrument contains no more than 10 exempt quantities. For purposes of this paragraph (a)(9), an instrument's source(s) may contain either one type or different types of radionuclides and an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities in § 30.71, Schedule B, provided that the sum of such fractions shall not exceed unity.

(iii) For purposes of this paragraph (a)(9), 0.05 microcurie of americium-241 is considered an exempt quantity under § 30.71, Schedule B.

(10) [Reserved]

(b) Any person who desires to apply byproduct material to, or to incorporate byproduct material into, the products exempted in paragraph (a) of this section, or who desires to initially transfer for sale or distribution such products containing byproduct material, should apply for a specific license pursuant to § 32.14 of this chapter, which license states that the product may be distributed by the licensee to persons exempt from the regulations pursuant to paragraph (a) of this section.

[31 FR 5316, Apr. 2, 1966, as amended at 31 FR 14349, Nov. 8, 1966; 32 FR 785, Jan. 24, 1967; 32 FR 6434, Apr. 26, 1967; 32 FR 13921, Oct. 6, 1967; 34 FR 6651, Apr. 18, 1969; 34 FR 19546, Dec. 11, 1969; 35 FR 6427, Apr. 22, 1970; 35 FR 8820, June 6, 1970; 43 FR 2387, Jan. 17, 1978; 43 FR 6921, Feb. 17, 1978; 46 FR 26471, May 13, 1981; 46 FR 46876, Sept. 23, 1981; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993; 72 FR 55925, Oct. 1, 2007; 72 FR 58486, Oct. 16, 2007]

[1] For purposes of this paragraph "electron tubes" include spark gap tubes, power tubes, gas tubes including glow lamps, receiving tubes, microwave tubes, indicator tubes, pickup tubes, radiation detection tubes, and any other completely sealed tube that is designed to conduct or control electrical currents.

§ 30.16 [Removed].

[Top of File]

[32 FR 4241, Mar. 18, 1967, as amended at 43 FR 6921, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993; 72 FR 58486, Oct. 16, 2007]

§ 30.18 Exempt quantities.

[Top of File]

(a) Except as provided in paragraphs (c) through (e) of this section, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in parts 30 through 34, 36, and 39 of this chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires byproduct material in individual quantities, each of which does not exceed the applicable quantity set forth in § 30.71, Schedule B.

(b) Any person, who possesses byproduct material received or acquired before September 25, 1971, under the general license then provided in § 31.4 of this chapter or similar general license of a State, is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in parts 30 through 34, 36 and 39 of this chapter to the extent that this person possesses, uses, transfers, or owns byproduct material.

(c) This section does not authorize for purposes of commercial distribution the production, packaging, repackaging, or transfer of byproduct material or the incorporation of byproduct material into products intended for commercial distribution.

(d) No person may, for purposes of commercial distribution, transfer byproduct material in the individual quantities set forth in § 30.71 Schedule B, knowing or having reason to believe that such quantities of byproduct material will be transferred to persons exempt under this section or equivalent regulations of an Agreement State, except in accordance with a license issued under § 32.18 of this chapter, which license states that the byproduct material may be transferred by the licensee to persons exempt under this section or the equivalent regulations of an Agreement State.

(e) No person may, for purposes of producing an increased radiation level, combine quantities of byproduct material covered by this exemption so that the aggregate quantity exceeds the limits set forth in § 30.71, Schedule B, except for byproduct material combined within a device placed in use before May 3, 1999, or as otherwise permitted by the regulations in this part.

[35 FR 6427, Apr. 22, 1970, as amended at 36 FR 16898, Aug. 26, 1971; 43 FR 6921, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993; 72 FR 55925, Oct. 1, 2007; 72 FR 58486, Oct. 16, 2007]

§ 30.19 Self-luminous products containing tritium, krypton-85, or promethium-147.

[Top of File]

(a) Except for persons who manufacture, process, produce, or initially transfer for sale or distribution self-luminous products containing tritium, krypton-85, or promethium-147, and except as provided in paragraph (c) of this section, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in parts 20 and 30 through 36 and 39 of this chapter to the extent that such person receives, possesses, uses, transfers, owns, or acquires tritium, krypton-85, or promethium-147 in self-luminous products manufactured, processed, produced, or initially transferred in accordance with a specific license issued pursuant to § 32.22 of this chapter, which license authorizes the initial transfer of the product for use under this section.

(b) Any person who desires to manufacture, process, or produce self-luminous products containing tritium, krypton-85, or promethium-147, or to transfer such products for use pursuant to paragraph (a) of this section, should apply for a license pursuant to § 32.22 of this chapter, which license states that the product may be transferred by the licensee to persons exempt from the regulations pursuant to paragraph (a) of this section or equivalent regulations of an Agreement State.

(c) The exemption in paragraph (a) of this section does not apply to tritium, krypton-85, or promethium-147 used in products primarily for frivolous purposes or in toys or adornments.

[34 FR 9026, June 6, 1969, as amended at 40 FR 8785, Mar. 3, 1975; 43 FR 6921, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993]

§ 30.20 Gas and aerosol detectors containing byproduct material.

[Top of File]

(a) Except for persons who manufacture, process, produce, or initially transfer for sale or distribution gas and aerosol detectors containing byproduct material, any person is exempt from the requirements for a license set forth in section 81 of the Act and from the regulations in parts 19, 20, and 30 through 36, and 39 of this chapter to the extent that the person receives, possesses, uses, transfers, owns, or acquires byproduct material in gas and aerosol detectors designed to protect life or property from fires and airborne hazards, and manufactured, processed, produced, or initially transferred in accordance with a specific license issued under § 32.26 of this chapter, which license authorizes the initial transfer of the product for use under this section. This exemption also covers gas and aerosol detectors manufactured or distributed before November 30, 2007 in accordance with a specific license issued by a State under comparable provisions to § 32.26 of this chapter authorizing distribution to persons exempt from regulatory requirements.

(b) Any person who desires to manufacture, process, or produce gas and aerosol detectors containing byproduct material, or to initially transfer such products for use pursuant to paragraph (a) of this section, should apply for a license pursuant to § 32.26 of this chapter, which license states that the product may be initially transferred by the licensee to persons exempt from the regulations pursuant to paragraph (a) of this section or equivalent regulations of an Agreement State.

[34 FR 6653, Apr. 18, 1969, as amended at 40 FR 8785, Mar. 3, 1975; 43 FR 6921, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993; 72 FR 55925, Oct. 1, 2007]

§ 30.21 Radioactive drug: Capsules containing carbon-14 urea for "in vivo" diagnostic use for humans.

[Top of File]

(a) Except as provided in paragraphs (b) and (c) of this section, any person is exempt from the requirements for a license set forth in Section 81 of the Act and from the regulations in this part and part 35 of this chapter provided that such person receives, possesses, uses, transfers, owns, or acquires capsules containing 37 kBq (1 • Ci) carbon-14 urea (allowing for nominal variation that may occur during the manufacturing process) each, for "in vivo" diagnostic use for humans.

(b) Any person who desires to use the capsules for research involving human subjects shall apply for and receive a specific license pursuant to part 35 of this chapter.

(c) Any person who desires to manufacture, prepare, process, produce, package, repackage, or transfer for commercial distribution such capsules shall apply for and receive a specific license pursuant to § 32.21 of this chapter.

(d) Nothing in this section relieves persons from complying with applicable FDA, other Federal, and State requirements governing receipt, administration, and use of drugs.

[62 FR 63640, Dec. 2, 1997]

Licenses

[Top of File]

§ 30.31 Types of licenses.

Licenses for byproduct material are of two types: General and specific.

(a) The Commission issues a specific license to a named person who has filed an application for the license under the provisions of this part and parts 32 through 36, and 39.

(b) A general license is provided by regulation, grants authority to a person for certain activities involving byproduct material, and is effective without the filing of an application with the Commission or the issuance of a licensing document to a particular person. However, registration with the Commission may be required by the particular general license.

[65 FR 79187, Dec. 18, 2000]

§ 30.32 Application for specific licenses.

[Top of File]

(a) A person may file an application on NRC Form 313, "Application for Material License," in accordance with the instructions in § 30.6 of this chapter. Information contained in previous applications, statements or reports filed with the Commission or the Atomic Energy Commission may be incorporated by reference, provided that the reference is clear and specific.

(b) The Commission may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked.

(c) Each application shall be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.

(d) An application for license filed pursuant to the regulations in this part and parts 32 through 35 of this chapter will be considered also as an application for licenses authorizing other activities for which licenses are required by the Act, provided that the application specifies the additional activities for which licenses are requested and complies with regulations of the Commission as to applications for such licenses.

(e) Each application for a byproduct material license, other than a license exempted from part 170 of this chapter, shall be accompanied by the fee prescribed in § 170.31 of this chapter. No fee will be required to accompany an application for renewal or amendment of a license, except as provided in § 170.31 of this chapter.

(f) An application for a license to receive and possess byproduct material for the conduct of any activity which the Commission has determined pursuant to subpart A of part 51 of this chapter will significantly affect the quality of the environment shall be filed at least 9 months prior to commencement of construction of the plant or facility in which the activity will be conducted and shall be accompanied by any Environmental Report required pursuant to subpart A of part 51 of this chapter.

(g) An application for a specific license to use byproduct material in the form of a sealed source or in a device that contains the sealed source must either--

(1) Identify the source or device by manufacturer and model number as registered with the Commission under § 32.210 of this chapter, with an Agreement State, or for a source or a device containing radium-226 or accelerator-produced radioactive material with a State under provisions comparable to § 32.210 of this chapter; or

(2) Contain the information identified in § 32.210(c) of this chapter; or

(3) For sources or devices containing naturally occurring or accelerator-produced radioactive material manufactured prior to November 30, 2007 that are not registered with the Commission under § 32.210 of this chapter or with an Agreement State, and for which the applicant is unable to provide all categories of information specified in § 32.210(c) of this chapter, the applicant must provide:

(i) All available information identified in § 32.210(c) of this chapter concerning the source, and, if applicable, the device; and

(ii) Sufficient additional information to demonstrate that there is reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property. Such information must include a description of the source or device, a description of radiation safety features, the intended use and associated operating experience, and the results of a recent leak test.

(h) As provided by § 30.35, certain applications for specific licenses filed under this part and parts 32 through 35 of this chapter must contain a proposed decommissioning funding plan or a certification of financial assurance for decommissioning. In the case of renewal applications submitted before July 27, 1990, this submittal may follow the renewal application but must be submitted on or before July 27, 1990.

(i)(1) Each application to possess radioactive materials in unsealed form, on foils or plated sources, or sealed in glass in excess of the quantities in § 30.72, "Schedule C--Quantities of Radioactive Materials Requiring Consideration of the Need for an Emergency Plan for Responding to a Release," must contain either:

(i) An evaluation showing that the maximum dose to a person offsite due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or 5 rems to the thyroid; or

(ii) An emergency plan for responding to a release of radioactive material.

(2) One or more of the following factors may be used to support an evaluation submitted under paragraph (i)(1)(i) of this section:

(i) The radioactive material is physically separated so that only a portion could be involved in an accident;

(ii) All or part of the radioactive material is not subject to release during an accident because of the way it is stored or packaged;

(iii) The release fraction in the respirable size range would be lower than the release fraction shown § 30.72 due to the chemical or physical form of the material;

(iv) The solubility of the radioactive material would reduce the dose received;

(v) Facility design or engineered safety features in the facility would cause the release fraction to be lower than shown in § 30.72;

(vi) Operating restrictions or procedures would prevent a release fraction as large as that shown in § 30.72; or

(vii) Other factors appropriate for the specific facility.

(3) An emergency plan for responding to a release of radioactive material submitted under paragraph (i)(1)(ii) of this section must include the following information:

(i) *Facility description.* A brief description of the licensee's facility and area near the site.

(ii) *Types of accidents.* An identification of each type of radio-active materials accident for which protective actions may be needed.

(iii) *Classification of accidents.* A classification system for classifying accidents as alerts or site area emergencies.

(iv) *Detection of accidents.* Identification of the means of detecting each type of accident in a timely manner.

(v) *Mitigation of consequences.* A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(vi) *Assessment of releases.* A brief description of the methods and equipment to assess releases of radioactive materials.

(vii) *Responsibilities.* A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC; also responsibilities for developing, maintaining, and updating the plan.

(viii) *Notification and coordination.* A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the NRC operations center immediately after notification of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency.[1]

(ix) Information to be communicated. A brief description of the types of information on facility status, radioactive releases, and recommended protective actions, if necessary, to be given to offsite response organizations and to the NRC.

(x) *Training.* A brief description of the frequency, performance objectives and plans for the training that the licensee will provide workers on how to respond to an emergency including any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also, the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.

(xi) *Safe shutdown.* A brief description of the means of restoring the facility to a safe condition after an accident.

(xii) *Exercises.* Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the biennial exercises. Participation of offsite response organizations in biennial exercises although recommended is not required. Exercises must use accident scenarios postulated as most probable for the specific site and the scenarios shall not be known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for the plan. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.

(xiii) *Hazardous chemicals.* A certification that the applicant has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, title III, Pub. L. 99-499, if applicable to the applicant's activities at the proposed place of use of the byproduct material.

(4) The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the licensee's emergency plan before submitting it to NRC. The licensee shall provide any comments received within the 60 days to the NRC with the emergency plan.

(j) An application from a medical facility, educational institution, or Federal facility to produce Positron Emission Tomography (PET)

radioactive drugs for noncommercial transfer to licensees in its consortium authorized for medical use under part 35 of this chapter or equivalent Agreement State requirements shall include:

(1) A request for authorization for the production of PET radionuclides or evidence of an existing license issued under part 30 of this chapter or Agreement State requirements for a PET radionuclide production facility within its consortium from which it receives PET radionuclides.

(2) Evidence that the applicant is qualified to produce radioactive drugs for medical use by meeting one of the criteria in § 32.72(a)(2) of this chapter.

(3) Identification of individual(s) authorized to prepare the PET radioactive drugs if the applicant is a pharmacy, and documentation that each individual meets the requirements of an authorized nuclear pharmacist as specified in § 32.72(b)(2) of this chapter.

(4) Information identified in § 32.72(a)(3) of this chapter on the PET drugs to be noncommercially transferred to members of its consortium.

(k) Each applicant for a license for byproduct material shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in §§ 73.21, 73.22 and/or 73.23 of this chapter, as applicable.

[30 FR 8185, June 26, 1965, as amended at 36 FR 145, Jan. 6, 1971; 37 FR 5747, Mar. 21, 1972; 43 FR 6922, Feb. 17, 1978; 49 FR 9403, Mar. 12, 1984; 49 FR 27924, July 9, 1984; 52 FR 27786, July 24, 1987; 53 FR 24044, June 27, 1988; 54 FR 14060, Apr. 7, 1989; 68 FR 58804, Oct. 10, 2003; 72 FR 55925, Oct. 1, 2007; 73 FR 63570, Oct. 24, 2008]

[1] These reporting requirements do not superceed or release licensees of complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499 or other state or federal reporting requirements.

§ 30.33 General requirements for issuance of specific licenses.

[Top of File]

(a) An application for a specific license will be approved if:

(1) The application is for a purpose authorized by the Act;

(2) The applicant's proposed equipment and facilities are adequate to protect health and minimize danger to life or property;

(3) The applicant is qualified by training and experience to use the material for the purpose requested in such manner as to protect health and minimize danger to life or property;

(4) The applicant satisfies any special requirements contained in parts 32 through 36 and 39; and

(5) In the case of an application for a license to receive and possess byproduct material for the conduct of any activity which the Commission determines will significantly affect the quality of the environment, the Director, Office of Federal and State Materials and Environmental Management Program or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to subpart A of part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to such conclusion shall be grounds for denial of a license to receive and possess byproduct material in such plant or facility. As used in this paragraph the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary roads for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

(b) Upon a determination that an application meets the requirements of the Act, and the regulations of the Commission, the Commission will issue a specific license authorizing the possession and use of byproduct material (Form NRC 374, "Byproduct Material License").

[30 FR 8185, June 26, 1965, as amended at 36 FR 12731, July 7, 1971; 37 FR 5747. Mar. 21, 1972; 39 FR 26279, July 18, 1974; 43 FR 6922, Feb. 17, 1978; 49 FR 9403, Mar. 12, 1984; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993; 73 FR 5717, Jan. 31, 2008]

§ 30.34 Terms and conditions of licenses.

[Top of File]

(a) Each license issued pursuant to the regulations in this part and the regulations in parts 31 through 36 and 39 of this chapter shall be subject to all the provisions of the Act, now or hereafter in effect, and to all valid rules, regulations and orders of the Commission.

(b) No license issued or granted pursuant to the regulations in this part and parts 31 through 36, and 39 nor any right under a license shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the

provisions of the Act and shall give its consent in writing.

(c) Each person licensed by the Commission pursuant to the regulations in this part and parts 31 through 36 and 39 shall confine his possession and use of the byproduct material to the locations and purposes authorized in the license. Except as otherwise provided in the license, a license issued pursuant to the regulations in this part and parts 31 through 36 and 39 of this chapter shall carry with it the right to receive, acquire, own, and possess byproduct material. Preparation for shipment and transport of byproduct material shall be in accordance with the provisions of part 71 of this chapter.

(d) Each license issued pursuant to the regulations in this part and parts 31 through 36 and 39 shall be deemed to contain the provisions set forth in section 183b.- d., inclusive, of the Act, whether or not these provisions are expressly set forth in the license.

(e) The Commission may incorporate, in any license issued pursuant to the regulations in this part and parts 31 through 36 and 39, at the time of issuance, or thereafter by appropriate rule, regulation or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use and transfer of byproduct material as it deems appropriate or necessary in order to:

(1) Promote the common defense and security;

(2) Protect health or to minimize danger to life or property;

(3) Protect restricted data;

(4) Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be necessary or appropriate to effectuate the purposes of the Act and regulations thereunder.

(f) Licensees required to submit emergency plans by § 30.32(i) shall follow the emergency plan approved by the Commission. The licensee may change the approved without Commission approval only if the changes do not decrease the effectiveness of the plan. The licensee shall furnish the change to the appropriate NRC Regional Office specified in § 30.6 and to affected offsite response organizations within six months after the change is made. Proposed changes that decrease, or potentially decrease, the effectiveness of the approved emergency plan may not be implemented without prior application to and prior approval by the Commission.

(g) Each licensee preparing technetium-99m radiopharmaceuticals from molybdenum-99/technetium-99m generators or rubidium-82 from strontium-82/rubidium-82 generators shall test the generator eluates for molybdenum-99 breakthrough or strontium-82 and strontium-85 contamination, respectively, in accordance with § 35.204 of this
chapter. The licensee shall record the results of each test and retain each record for 3 years after the record is made.

(h)(1) Each general licensee that is required to register by § 31.5(c)(13) of this chapter and each specific licensee shall notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of title 11 (Bankruptcy) of the United States Code by or against:

(i) The licensee;

(ii) An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or

(iii) An affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.

(2) This notification must indicate:

(i) The bankruptcy court in which the petition for bankruptcy was filed; and

(ii) The date of the filing of the petition.

(i) Security requirements for portable gauges.

Each portable gauge licensee shall use a minimum of two independent physical controls that form tangible barriers to secure portable gauges from unauthorized removal, whenever portable gauges are not under the control and constant surveillance of the licensee.

(j)(1) Authorization under § 30.32(j) to produce Positron Emission Tomography (PET) radioactive drugs for noncommercial transfer to medical use licensees in its consortium does not relieve the licensee from complying with applicable FDA, other Federal, and State requirements governing radioactive drugs.

(2) Each licensee authorized under § 30.32(j) to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall:

(i) Satisfy the labeling requirements in § 32.72(a)(4) of this chapter for each PET radioactive drug transport radiation shield and each syringe, vial, or other container used to hold a PET radioactive drug intended for noncommercial distribution to members of its consortium.

(ii) Possess and use instrumentation to measure the radioactivity of the PET radioactive drugs intended for

noncommercial distribution to members of its consortium and meet the procedural, radioactivity measurement, instrument test, instrument check, and instrument adjustment requirements in § 32.72(c) of this chapter.

(3) A licensee that is a pharmacy authorized under § 30.32(j) to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium shall require that any individual that prepares PET radioactive drugs shall be:

(i) an authorized nuclear pharmacist that meets the requirements in § 32.72(b)(2) of this chapter, or

(ii) an individual under the supervision of an authorized nuclear pharmacist as specified in § 35.27 of this chapter.

(4) A pharmacy, authorized under § 30.32(j) to produce PET radioactive drugs for noncommercial transfer to medical use licensees in its consortium that allows an individual to work as an authorized nuclear pharmacist, shall meet the requirements of § 32.72(b)(5) of this chapter.

(k) As required by the Additional Protocol, each specific licensee authorized to possess and use byproduct material shall file with the Commission location information described in § 75.11 of this chapter on DOC/NRC Forms AP–1 and associated forms. The licensee shall also permit verification of this information by the International Atomic Energy Agency (IAEA) and shall take other action as may be necessary to implement the US/IAEA Safeguards Agreement, as described in part 75 of this chapter.

(l) Each licensee shall ensure that Safeguards Information is protected against unauthorized disclosure in accordance with the requirements in §§ 73.21 and 73.23 of this chapter, as applicable.

[30 FR 8185, June 26, 1965, as amended at 38 FR 33969, Dec. 10, 1973; 43 FR 6922, Feb. 17, 1978; 48 FR 32328, July 15, 1983; 52 FR 1295, Jan. 12, 1987; 52 FR 8241, Mar. 17, 1987; 53 FR 19245, May 27, 1988; 53 FR 23383, June 22, 1988; 54 FR 14061, Apr. 7, 1989; 58 FR 7736, Feb. 9, 1993; 59 FR 61780, Dec. 2, 1994; 65 FR 79187, Dec. 18, 2000; 70 FR 2009, Jan. 12, 2005; 72 FR 55926, Oct. 1, 2007; 73 FR 78604, Dec. 23, 2008; 74 FR 7785, Feb. 20, 2009]

§ 30.35 Financial assurance and recordkeeping for decommissioning.

[Top of File]

(a)(1) Each applicant for a specific license authorizing the possession and use of unsealed byproduct material of half-life greater than 120 days and in quantities exceeding 10^5 times the applicable quantities set forth in appendix B to part 30 shall submit a decommissioning funding plan as described in paragraph (e) of this section. The decommissioning funding plan must also be submitted when a combination of isotopes is involved if R divided by 10^5 is greater than 1 (unity rule), where R is defined here as the sum of the ratios of the quantity of each isotope to the applicable value in appendix B to part 30.

(2) Each holder of, or applicant for, any specific license authorizing the possession and use of sealed sources or plated foils of half-life greater than 120 days and in quantities exceeding 10^{12} times the applicable quantities set forth in appendix B to part 30 (or when a combination of isotopes is involved if R, as defined in § 30.35(a)(1), divided by 10^{12} is greater than 1), shall submit a decommissioning funding plan as described in paragraph (e) of this section. The decommissioning funding plan must be submitted to NRC by December 2, 2005.

(b) Each applicant for a specific license authorizing possession and use of byproduct material of half-life greater than 120 days and in quantities specified in paragraph (d) of this section shall either--

(1) Submit a decommissioning funding plan as described in paragraph (e) of this section; or

(2) Submit a certification that financial assurance for decommissioning has been provided in the amount prescribed by paragraph (d) of this section using one of the methods described in paragraph (f) of this section. For an applicant, this certification may state that the appropriate assurance will be obtained after the application has been approved and the license issued but before the receipt of licensed material. If the applicant defers execution of the financial instrument until after the license has been issued, a signed original of the financial instrument obtained to satisfy the requirements of paragraph (f) of this section must be submitted to NRC before receipt of licensed material. If the applicant does not defer execution of the financial instrument, the applicant shall submit to NRC, as part of the certification, a signed original of the financial instrument obtained to satisfy the requirements of paragraph (f) of this section.

(c)(1) Each holder of a specific license issued on or after July 27, 1990, which is of a type described in paragraph (a) or (b) of this section, shall provide financial assurance for decommissioning in accordance with the criteria set forth in this section.

(2) Each holder of a specific license issued before July 27, 1990, and of a type described in paragraph (a) of this section shall submit a decommissioning funding plan as described in paragraph (e) of this section or a certification of financial assurance for decommissioning in an amount at least equal to $1,125,000 in accordance with the criteria set forth in this section. If the licensee submits the certification of financial assurance rather than a decommissioning funding plan, the licensee shall include a decommissioning funding plan in any application for license renewal.

(3) Each holder of a specific license issued before July 27, 1990, and of a type described in paragraph (b) of this section shall submit, on or before July 27, 1990, a decommissioning funding plan as described, in paragraph (e) of this section, or a certification of financial assurance for decommissioning in accordance with the criteria set forth in this section.

(4) Any licensee who has submitted an application before July 27, 1990, for renewal of license in accordance with § 30.37 shall provide financial assurance for decommissioning in accordance with paragraphs (a) and (b) of this section. This assurance must be submitted when this rule becomes effective November 24, 1995.

(5) Waste collectors and waste processors, as defined in 10 CFR part 20, Appendix G, must provide financial assurance in an amount based on a decommissioning funding plan as described in paragraph (e) of this section. The decommissioning funding plan must include the cost of disposal of the maximum amount (curies) of radioactive material permitted by license, and the cost of disposal of the maximum quantity, by volume, of radioactive material which could be present at the licensee's facility at any time, in addition to the cost to remediate the licensee's site to meet the license termination criteria of 10 CFR part 20. The decommissioning funding plan must be submitted by December 2, 2005.

(d) Table of required amounts of financial assurance for decommissioning by quantity of material. Licensees required to submit the $1,125,000 amount must do so by December 2, 2004. Licensees required to submit the $113,000 or $225,000 amount must do so by June 2, 2005. Licensees having possession limits exceeding the upper bounds of this table must base financial assurance on a decommissioning funding plan.

Greater than 10^4 but less than or equal to 10^5 times the applicable quantities of appendix B to part 30 in unsealed form. (For a combination of isotopes, if R, as defined in § 30.35(a)(1), divided by 10^4 is greater than 1 but R divided by 10^5 is less than or equal to 1.)	$1,125,000
Greater than 10^3 but less than or equal to 10^4 times the applicable quantities of appendix B to part 30 in unsealed form. (For a combination of isotopes, if R, as defined in § 30.35(a)(1), divided by 10^3 is greater than 1 but R divided by 10^4 is less than or equal to 1.)	225,000
Greater than 10^{10} but less than or equal to 10^{12} times the applicable quantities of appendix B to part 30 in sealed sources or plated foils. (For a combination of isotopes, if R, as defined in § 30.35(a)(1), divided by 10^{10} is greater than, 1, but R divided by 10^{12} is less than or equal to 1)	113,000

(e) Each decommissioning funding plan must contain a cost estsimate for decommissioning and a description of the method of assuring funds for decommissioning from paragraph (f) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility. Cost estimates must be adjusted at intervals not to exceed 3 years. The decommissioning funding plan must also contain a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning and a signed original of the financial instrument obtained to satisfy the requriements of paragraph (f) of this section.

(f) Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) Prepayment. Prepayment is the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(2) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to this part. A parent company guarantee may not be used in combination with other financial methods to satisfy the requirements of this section. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to this part. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to this part. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are as contained in appendix E to this part. A guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section or in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Commission, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Commission within 30 days after receipt of notification of cancellation.

(ii) The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(iii) The surety method or insurance must remain in effect until the Commission has terminated the license.

(3) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provisions must be as stated in paragraph (f)(2) of this section.

(4) In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning or an amount based on the Table in paragraph (d) of this section, and indicating that funds for decommissioning will be obtained when necessary.

(5) When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

(g) Each person licensed under this part or parts 32 through 36 and 39 of this chapter shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. Before licensed activities are transferred or assigned in accordance with § 30.34(b), licensees shall transfer all records described in this paragraph to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of--

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) Except for areas containing only sealed sources (provided the sources have not leaked or no contamination remains after any leak) or byproduct materials having only half-lives of less than 65 days, a list contained in a single document and updated every 2 years, of the following:

(i) All areas designated and formerly designated restricted areas as defined in 10 CFR 20.1003 (For requirements prior to January 1, 1994, see 10 CFR 20.3 as contained in the CFR edition revised as of January 1, 1993.);

(ii) All areas outside of restricted areas that require documentation under § 30.35(g)(1).

(iii) All areas outside of restricted areas where current and previous wastes have been buried as documented under 10 CFR 20.2108; and

(iv) All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in 10 CFR part 20, subpart E, or apply for approval for disposal under 10 CFR 20.2002.

(4) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

[53 FR 24044, June 27, 1988, as amended at 56 FR 23471, May 21, 1991; 58 FR 39633, July 26, 1993; 58 FR 67659, Dec. 22, 1993; 58 FR 68730, Dec. 29, 1993; 59 FR 1618, Jan. 12, 1994; 60 FR 38238, July 26, 1995; 61 FR 24673, May 16, 1996; 62 FR 39090, July 21, 1997; 63 FR 29541, June 1, 1998; 68 FR 57335, Oct. 3, 2003]

§ 30.36 Expiration and termination of licenses and decommissioning of sites and separate buildings or outdoor areas.

[Top of File]

(a) Each specific license expires at the end of the day on the expiration date stated in the license, unless the licensee has filed an application for renewal under § 30.37 not less than 30 days before the expiration date stated in the existing license. If an application for renewal has been filed at least 30 days before the expiration date stated in the existing license, the existing license expires at the end of the day on which the Commission makes a final determination to deny the renewal application or, if the determination states an expiration date, the expiration date stated in the determination.

(b) Each specific license revoked by the Commission expires at the end of the day on the date of the Commission's final determination to revoke the license, or on the expiration date stated in the determination, or as otherwise provided by Commission Order.

(c) Each specific license continues in effect, beyond the expiration date if necessary, with respect to possession of byproduct material until the Commission notifies the licensee in writing that the license is terminated. During this time, the licensee shall--

(1) Limit actions involving byproduct material to those related to decommissioning; and

(2) Continue to control entry to restricted areas until they are suitable for release in accordance with NRC requirements.

(d) Within 60 days of the occurrence of any of the following, consistent with the administrative directions in § 30.6, each licensee shall provide notification to the NRC in writing of such occurrence, and either begin decommissioning its site, or any separate building or outdoor

area that contains residual radioactivity so that the building or outdoor area is suitable for release in accordance with NRC requirements, or submit within 12 months of notification a decommissioning plan, if required by paragraph (g)(1) of this section, and begin decommissioning upon approval of that plan if--

(1) The license has expired pursuant to paragraph (a) or (b) of this section; or

(2) The licensee has decided to permanently cease principal activities, as defined in this part, at the entire site or in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements; or

(3) No principal activities under the license have been conducted for a period of 24 months; or

(4) No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements.

(e) Coincident with the notification required by paragraph (d) of this section, the licensee shall maintain in effect all decommissioning financial assurances established by the licensee pursuant to § 30.35 in conjunction with a license issuance or renewal or as required by this section. The amount of the financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to paragraph (g)(4)(v) of this section.

(1) Any licensee who has not provided financial assurance to cover the detailed cost estimate submitted with the decommissioning plan shall do so when this rule becomes effective November 24, 1995.

(2) Following approval of the decommissioning plan, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the Commission.

(f) The Commission may grant a request to extend the time periods established in paragraph (d) if the Commission determines that this relief is not detrimental to the public health and safety and is otherwise in the public interest. The request must be submitted no later than 30 days before notification pursuant to paragraph (d) of this section. The schedule for decommissioning set forth in paragraph (d) of this section may not commence until the Commission has made a determination on the request.

(g)(1) A decommissioning plan must be submitted if required by license condition or if the procedures and activities necessary to carry out decommissioning of the site or separate building or outdoor area have not been previously approved by the Commission and these procedures could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(i) Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(ii) Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(iii) Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or

(iv) Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(2) The Commission may approve an alternate schedule for submittal of a decommissioning plan required pursuant to paragraph (d) of this section if the Commission determines that the alternative schedule is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the public health and safety and is otherwise in the public interest.

(3) Procedures such as those listed in paragraph (g)(1) of this section with potential health and safety impacts may not be carried out prior to approval of the decommissioning plan.

(4) The proposed decommissioning plan for the site or separate building or outdoor area must include:

(i) A description of the conditions of the site or separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(ii) A description of planned decommissioning activities;

(iii) A description of methods used to ensure protection of workers and the environment against radiation hazards during decommissioning;

(iv) A description of the planned final radiation survey; and

(v) An updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning.

(vi) For decommissioning plans calling for completion of decommissioning later than 24 months after plan approval, the plan shall include a justification for the delay based on the criteria in paragraph (i) of this section.

(5) The proposed decommissioning plan will be approved by the Commission if the information therein demonstrates that the

decommissioning will be completed as soon as practicable and that the health and safety of workers and the public will be adequately protected.

(h)(1) Except as provided in paragraph (i) of this section, licensees shall complete decommissioning of the site or separate building or outdoor area as soon as practicable but no later than 24 months following the initiation of decommissioning.

(2) Except as provided in paragraph (i) of this section, when decommissioning involves the entire site, the licensee shall request license termination as soon as practicable but no later than 24 months following the initiation of decommissioning.

(i) The Commission may approve a request for an alternative schedule for completion of decommissioning of the site or separate building or outdoor area, and license termination if appropriate, if the Commission determines that the alternative is warranted by consideration of the following:

(1) Whether it is technically feasible to complete decommissioning within the allotted 24-month period;

(2) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted 24-month period;

(3) Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(4) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(5) Other site-specific factors which the Commission may consider appropriate on a case-by-case basis, such as the regulatory requirements of other government agencies, lawsuits, ground-water treatment activities, monitored natural ground-water restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(j) As the final step in decommissioning, the licensee shall--

(1) Certify the disposition of all licensed material, including accumulated wastes, by submitting a completed NRC Form 314 or equivalent information; and

(2) Conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this survey, unless the licensee demonstrates in some other manner that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E. The licensee shall, as appropriate--

(i) Report levels of gamma radiation in units of millisieverts (microroentgen) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of megabecquerels (disintegrations per minute or microcuries) per 100 square centimeters--removable and fixed--for surfaces, megabecquerels (microcuries) per milliliter for water, and becquerels (picocuries) per gram for solids such as soils or concrete; and

(ii) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

(k) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the Commission determines that:

(1) Byproduct material has been properly disposed;

(2) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and

(3)(i) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E; or

(ii) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E.

(4) Records required by § 30.51 (d) and (f) have been received.

[59 FR 36034, July 15, 1994, as amended at 60 FR 38238, July 26, 1995; 61 FR 1114, Jan. 16, 1996; 61 FR 24673, May 16, 1996; 61 FR 29637, June 12, 1996; 62 FR 39090, July 21, 1997; 73 FR 42673, July 23, 2008]

§ 30.37 Application for renewal of licenses.

[Top of File]

(a) Application for renewal of a specific license must be filed on NRC Form 313 and in accordance with § 30.32.

(b) If any licensee granted the extension described in 10 CFR 30.36(a)(2) has a currently pending renewal application for the extended license, that application will be considered withdrawn by the licensee and any renewal fees paid by the licensee for that application will be refunded.

[59 FR 36035, July 15, 1994, as amended at 61 FR 1114, Jan. 16, 1996; 66 FR 64738, Dec. 14, 2001]

§ 30.38 Application for amendment of licenses.

[Top of File]

Applications for amendment of a license shall be filed on Form NRC-313 in accordance with § 30.32 and shall specify the respects in which the licensee desires its license to be amended and the grounds for the amendment.

[49 FR 19625, May 9, 1984]

§ 30.39 Commission action on applications to renew or amend.

[Top of File]

In considering an application by a licensee to renew or amend his license the Commission will apply the applicable criteria set forth in § 30.33 and parts 32 through 36 and 39 of this chapter.

[30 FR 8185, June 26, 1965, as amended at 43 FR 6922, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993]

§ 30.41 Transfer of byproduct material.

[Top of File]

(a) No licensee shall transfer byproduct material except as authorized pursuant to this section.

(b) Except as otherwise provided in his license and subject to the provisions of paragraphs (c) and (d) of this section, any licensee may transfer byproduct material:

(1) To the Department;

(2) To the agency in any Agreement State which regulates radioactive material pursuant to an agreement under section 274 of the Act;

(3) To any person exempt from the licensing requirements of the Act and regulations in this part, to the extent permitted under such exemption;

(4) To any person in an Agreement State, subject to the jurisdiction of that State, who has been exempted from the licensing requirements and regulations of that State, to the extent permitted under such exemption;

(5) To any person authorized to receive such byproduct material under terms of a specific license or a general license or their equivalents issued by the Atomic Energy Commission, the Commission, or an Agreement State;

(6) To a person abroad pursuant to an export license issued under part 110 of this chapter; or

(7) As otherwise authorized by the Commission in writing.

(c) Before transferring byproduct material to a specific licensee of the Commission or an Agreement State or to a general licensee who is required to register with the Commission or with an Agreement State prior to receipt of the byproduct material, the licensee transferring the material shall verify that the transferee's license authorizes the receipt of the type, form, and quantity of byproduct material to be transferred.

(d) The following methods for the verification required by paragraph (c) of this section are acceptable:

(1) The transferor may have in his possession, and read, a current copy of the transferee's specific license or registration certificate;

(2) The transferor may have in his possession a written certification by the transferee that he is authorized by license or registration certificate to receive the type, form, and quantity of byproduct material to be transferred, specifying the license or registration certificate number, issuing agency and expiration date;

(3) For emergency shipments the transferor may accept oral certification by the transferee that he is authorized by license or registration certificate to receive the type, form, and quantity of byproduct material to be transferred, specifying the license or registration certificate number, issuing agency and expiration date: Provided, That the oral certification is confirmed in writing within 10 days;

(4) The transferor may obtain other sources of information compiled by a reporting service from official records of the Commission or the licensing agency of an Agreement State as to the identity of licensees and the scope and expiration dates of licenses and registration; or

(5) When none of the methods of verification described in paragraphs (d)(1) to (4) of this section are readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the Commission or the licensing agency of an Agreement State that the transferee is licensed to receive the byproduct material.

[38 FR 33969, Dec. 10, 1973, as amended at 40 FR 8785, Mar. 3, 1975; 43 FR 6922, Feb. 17, 1978]

Records, Inspections, Tests, and Reports

[Top of File]

§ 30.50 Reporting requirements.

(a) *Immediate report*. Each licensee shall notify the NRC as soon as possible but not later than 4 hours after the discovery of an event that prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed regulatory limits or releases of licensed material that could exceed regulatory limits (events may include fires, explosions, toxic gas releases, etc.).

(b) *Twenty-four hour report*. Each licensee shall notify the NRC within 24 hours after the discovery of any of the following events involving licensed material:

(1) An unplanned contamination event that:

(i) Requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area;

(ii) Involves a quantity of material greater than five times the lowest annual limit on intake specified in appendix B of §§ 20.1001-20.2401 of 10 CFR part 20 for the material; and

(iii) Has access to the area restricted for a reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.

(2) An event in which equipment is disabled or fails to function as designed when:

(i) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;

(ii) The equipment is required to be available and operable when it is disabled or fails to function; and

(iii) No redundant equipment is available and operable to perform the required safety function.

(3) An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body.

(4) An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:

(i) The quantity of material involved is greater than five times the lowest annual limit on intake specified in appendix B of §§ 20.1001-20.2401 of 10 CFR part 20 for the material; and

(ii) The damage affects the integrity of the licensed material or its container.

(c) Preparation and submission of reports. Reports made by licensees in response to the requirements of this section must be made as follows:

(1) Licensees shall make reports required by paragraphs (a) and (b) of this section by telephone to the NRC Operations Center.[1] To the extent that the information is available at the time of notification, the information provided in these reports must include:

(i) The caller's name and call back telephone number;

(ii) A description of the event, including date and time;

(iii) The exact location of the event;

(iv) The isotopes, quantities, and chemical and physical form of the licensed material involved; and

(v) Any personnel radiation exposure data available.

(2) Written report. Each licensee who makes a report required by paragraph (a) or (b) of this section shall submit a written follow-up report within 30 days of the initial report. Written reports prepared pursuant to other regulations may be submitted to fulfill this requirement if the reports contain all of the necessary information and the appropriate distribution is made. These written reports must be sent to the NRC using an appropriate method listed in § 30.6(a); and a copy must be sent to the appropriate NRC Regional office listed in appendix D to part 20 of this chapter. The reports must include the following:

(i) A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

(ii) The exact location of the event;

(iii) The isotopes, quantities, and chemical and physical form of the licensed material involved;

(iv) Date and time of the event;

(v) Corrective actions taken or planned and the results of any evaluations or assessments; and

(vi) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

(3) The provisions of § 30.50 do not apply to licensees subject to the notification requirements in § 50.72. They do apply to those part 50 licensees possessing material licensed under part 30, who are not subject to the notification requirements in § 50.72.

[56 FR 40767, Aug. 16, 1991, as amended at 59 FR 14086, Mar. 25, 1994; 68 FR 58804, Oct. 10, 2003]

[1] The commercial telephone number for the NRC Operations Center is (301) 816-5100.

§ 30.51 Records.

[Top of File]

(a) Each person who receives byproduct material pursuant to a license issued pursuant to the regulations in this part and parts 31 through 36 of this chapter shall keep records showing the receipt, transfer, and disposal of the byproduct material as follows:

(1) The licensee shall retain each record of receipt of byproduct material as long as the material is possessed and for three years following transfer or disposal of the material.

(2) The licensee who transferred the material shall retain each record of transfer for three years after each transfer unless a specific requirement in another part of the regulations in this chapter dictates otherwise.

(3) The licensee who disposed of the material shall retain each record of disposal of byproduct material until the Commission terminates each license that authorizes disposal of the material.

(b) The licensee shall retain each record that is required by the regulations in this part and parts 31 through 36 of this chapter or by license condition for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified by regulation or license condition, the record must be retained until the Commission terminates each license that authorizes the activity that is subject to the recordkeeping requirement.

(c)(1) Records which must be maintained pursuant to this part and parts 31 through 36 of this chapter may be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

(2) If there is a conflict between the Commission's regulations in this part and parts 31 through 36 and 39 of this chapter, license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part and parts 31 through 36 and 39 of this chapter for such records shall apply unless the Commission, pursuant to § 30.11, has granted a specific exemption from the record retention requirements specified in the regulations in this part or parts 31 through 36 and 39 of this chapter.

(d) Prior to license termination, each licensee authorized to possess radioactive material with a half-life greater than 120 days, in an unsealed form, shall forward the following records to the appropriate NRC Regional Office:

(1) Records of disposal of licensed material made under §§ 20.2002 (including burials authorized before January 28, 1981[1]), 20.2003, 20.2004, 20.2005; and

(2) Records required by § 20.2103(b)(4).

(e) If licensed activities are transferred or assigned in accordance with § 30.34(b), each licensee authorized to possess radioactive material, with a half-life greater than 120 days, in an unsealed form, shall transfer the following records to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated:

(1) Records of disposal of licensed material made under §§ 20.2002 (including burials authorized before January 28, 19811), 20.2003, 20.2004, 20.2005; and

(2) Records required by § 20.2103(b)(4).

(f) Prior to license termination, each licensee shall forward the records required by § 30.35(g) to the appropriate NRC Regional Office.

[41 FR 18301, May 5, 1976, as amended at 43 FR 6922, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 53 FR 19245, May 27, 1988; 58 FR 7736, Feb. 9, 1993; 61 FR 24673, May, 16, 1996]

[1] A previous § 20.304 permitted burial of small quantities of licensed materials in soil before January 28, 1981, without specific Commission authorization. See § 20.304 contained in the 10 CFR, parts 0 to 199, edition revised as of January 1, 1981.

§ 30.52 Inspections.

[Top of File]

(a) Each licensee shall afford to the Commission at all reasonable times opportunity to inspect byproduct material and the premises and facilities wherein byproduct material is used or stored.

(b) Each licensee shall make available to the Commission for inspection, upon reasonable notice, records kept by him pursuant to the regulations in this chapter.

[30 FR 8185, June 26, 1965]

§ 30.53 Tests.

[Top of File]

Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part and parts 31 through 36 and 39 of this chapter, including tests of:

(a) Byproduct material;

(b) Facilities wherein byproduct material is utilized or stored;

(c) Radiation detection and monitoring instruments; and

(d) Other equipment and devices used in connection with the utilization or storage of byproduct material.

[30 FR 8185, June 26, 1965, as amended by 43 FR 6922, Feb. 17, 1978; 52 FR 8241, Mar. 17, 1987; 58 FR 7736, Feb. 9, 1993]

§ 30.55 Tritium reports.

[Top of File]

(a)-(b) [Reserved]

(c) Except as specified in paragraph (d) of this section, each licensee who is authorized to possess tritium shall report promptly to the appropriate NRC Regional Office listed in appendix D of part 20 of this chapter by telephone and telegraph, mailgram, or facsimile any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of more than 10 curies of such material at any one time or more than 100 curies of such material in any one calendar year. The initial report shall be followed within a period of fifteen (15) days by a written report submitted to the appropriate NRC Regional Office which sets forth the details of the incident and its consequences. Copies of such written report shall be sent to the Director, Office of Federal and State Materials and Environmental Management Programs, using an appropriate method listed in § 30.6(a). Subsequent to the submission of the written report required by this paragraph, the licensee shall promptly inform the Office of Federal and State Materials and Environmental Management Programs by means of a written report of any substantive additional information, which becomes available to the licensee, concerning an attempted or apparent theft or unlawful diversion of tritium.

(d) The reports described in this section are not required for tritium possessed pursuant to a general license provided in part 31 of this

chapter or for tritium contained in spent fuel.

[37 FR 9208, May 6, 1972, as amended at 38 FR 1271, Jan. 11, 1973; 38 FR 2330, Jan. 24, 1973; 41 FR 16446, Apr. 19, 1976; 43 FR 6922, Feb. 17, 1978; 46 FR 55085, Nov. 6, 1981; 49 FR 24707, June 15, 1984; 52 FR 31611, Aug. 21, 1987; 68 FR 58804, Oct. 10, 2003; 73 FR 5718, Jan. 31, 2008]

Enforcement

[Top of File]

§ 30.61 Modification and revocation of licenses.

(a) The terms and conditions of each license issued pursuant to the regulations in this part and parts 31 through 35 of this chapter shall be subject to amendment, revision or modification by reason of amendments to the Act, or by reason of rules, regulations and orders issued in accordance with the terms of the Act.

(b) Any license may be revoked, suspended or modified, in whole or in part, for any material false statement in the application or any statement of fact required under section 182 of the Act, or because of conditions revealed by such application or statement of fact or any report, record or inspection or other means which would warrant the Commission to refuse to grant a license on an original application, or for violation of, or failure to observe any of the terms and provisions of the Act or of any rule, regulation or order of the Commission.

(c) Except in cases of willfulness or those in which the public health, interest or safety requires otherwise, no license shall be modified, suspended or revoked unless, prior to the institution of proceedings therefor, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded an opportunity to demonstrate or achieve compliance with all lawful requirements.

[30 FR 8185, June 26, 1965, as amended at 35 FR 11460, July 17, 1970; 43 FR 6922, Feb. 17, 1978]

§ 30.62 Right to cause the withholding or recall of byproduct material.

[Top of File]

The Commission may cause the withholding or recall of byproduct material from any licensee who is not equipped to observe or fails to observe such safety standards to protect health as may be established by the Commission, or who uses such materials in violation of law or regulation of the Commission, or in a manner other than as disclosed in the application therefor or approved by the Commission.

[30 FR 8185, June 26, 1965, as amended at 40 FR 8785, Mar. 3, 1975]

§ 30.63 Violations.

[Top of File]

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55072, Nov. 24, 1992]

§ 30.64 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 30 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 30 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 30.1, 30.2, 30.4, 30.5, 30.6, 30.8, 30.11, 30.12, 30.13, 30.15, 30.31, 30.32, 30.33, 30.37, 30.38, 30.39, 30.61, 30.62, 30.63, 30.64, 30.70, 30.71, and 30.72.

[57 FR 55072, Nov. 24, 1992; 73 FR 42673, July 23, 2008]

Schedules

[Top of File]

§ 30.70 Schedule A--Exempt concentrations.

[See footnotes at the end of this table]

Element (atomic number)	Isotope	Col. I	Col. II
		Gas Concentration •Ci/ml[1]	Liquid and Solid Concentration •Ci/ml[2]
Antimony (51)	Sb 122		3×10^{-4}
	Sb 124		2×10^{-4}
	Sb 125		1×10^{-3}
Argon (18)	A 37	1×10^{-3}	
	A 41	4×10^{-7}	
Arsenic (33)	As 73		5×10^{-3}
	As 74		5×10^{-4}
	As 76		2×10^{-4}
	As 77		8×10^{-4}
Barium (56)	Ba 131		2×10^{-3}
	Ba 140		3×10^{-4}
Beryllium (4)	Be 7		2×10^{-2}
Bismuth (83)	Bi 206		4×10^{-4}
Bromine (35)	Br 82	4×10^{-7}	3×10^{-3}
Cadmium (48)	Cd 109		2×10^{-3}
	Cd 115M		3×10^{-4}
	Cd 115		3×10^{-4}
Calcium (20)	Ca 45		9×10^{-5}
	Ca 47		5×10^{-4}
Carbon (6)	C 14	1×10^{-6}	8×10^{-3}
Cerium (58)	Ce 141		9×10^{-4}
	Ce 143		4×10^{-4}
	Ce 144		1×10^{-4}
Cesium (55)	Cs 131		2×10^{-2}

	Cs 134m		6×10^{-2}
	Cs 134		9×10^{-5}
Chlorine (17)	Cl 38	9×10^{-7}	4×10^{-3}
Chromium (24)	Cr 51		2×10^{-2}
Cobalt (27)	Co 57		5×10^{-3}
	Co 58		1×10^{-3}
	Co 60		5×10^{-4}
Copper (29)	Cu 64		3×10^{-3}
Dysprosium (66)	Dy 165		4×10^{-3}
	Dy 166		4×10^{-4}
Erbium (68)	Er 169		9×10^{-4}
	Er 171		1×10^{-3}
Europium (63)	Eu 152 (T/2=9.2 hrs)		6×10^{-4}
	Eu 155		2×10^{-3}
Fluorine (9)	F 18	2×10^{-6}	8×10^{-3}
Gadolinium (64)	Gd 153		2×10^{-3}
	Gd 159		$8 \times `0^{-4}$
Gallium (31)	Ga 72		4×10^{-4}
Germanium (32)	Ge 71		2×10^{-2}
Gold (79)	Au 196		2×10^{-3}
	Au 198		5×10^{-4}
	Au 199		2×10^{-3}
Hafnium (72)	Hf 181		7×10^{-4}
Hydrogen (1)	H 3	5×10^{-6}	3×10^{-2}
Indium (49)	In 113M		1×10^{-2}
	In 114M		2×10^{-4}
Iodine (53)	I 126	3×10^{-9}	2×10^{-5}
	I 131	3×10^{-9}	2×10^{-5}
	I 132	8×10^{-8}	6×10^{-4}
	I 133	1×10^{-8}	7×10^{-5}
	I 134	2×10^{-7}	1×10^{-3}
Iridium (77)	Ir 190		2×10^{-3}
	Ir 192		4×10^{-4}
	Ir 194		3×10^{-4}
Iron (26)	Fe 55		8×10^{-3}
	Fe 59		6×10^{-4}
Krypton (36)	Kr 85M	1×10^{-6}	
	Kr 85	3×10^{-6}	
Lanthanum (57)	La 140		2×10^{-4}
Lead (82)	Pb 203		4×10^{-3}
Lutetium (71)	Lu 177		1×10^{-3}
Manganese (25)	Mn 52		3×10^{-4}

	Mn 54		1×10^{-3}
	Mn 56		1×10^{-3}
Mercury (80)	Hg 197M		2×10^{-3}
	Hg 197		3×10^{-3}
	Hg 203		2×10^{-4}
Molybdenum (42)	Mo 99		2×10^{-3}
Neodymium (60)	Nd 147		6×10^{-4}
	Nd 149		3×10^{-3}
Nickel (28)	Ni 65		1×10^{-3}
Niobium (Columbium) (41)	Nb 95		1×10^{-3}
	Nb 97		9×10^{-3}
Osmium (76)	Os 185		7×10^{-4}
	Os 191M		3×10^{-2}
	Os 191		2×10^{-3}
	Os 193		6×10^{-4}
Palladium (46)	Pd 103		3×10^{-3}
	Pd 109		9×10^{-4}
Phosphorus (15)	P 32		2×10^{-4}
Platinum (78)	Pt 191		1×10^{-3}
	Pt 193M		1×10^{-2}
	Pt 197M		1×10^{-2}
	Pt 197		1×10^{-3}
Potassium (19)	K 42		3×10^{-3}
Praseodymium (59)	Pr 142		3×10^{-4}
	Pr 143		5×10^{-4}
Promethium (61)	Pm 147		2×10^{-3}
	Pm 149		4×10^{-4}
Rhenium (75)	Re 183		6×10^{-3}
	Re 186		9×10^{-4}
	Re 188		6×10^{-4}
Rhodium (45)	Rh 103M		1×10^{-1}
	Rh 105		1×10^{-3}
Rubidium (37)	Rb 86		7×10^{-4}
Ruthenium (44)	Ru 97		4×10^{-4}
	Ru 103		8×10^{-4}
	Ru 105		1×10^{-3}
	Ru 106		1×10^{-4}
Samarium (62)	Sm 153		8×10^{-4}
Scandium (21)	Sc 46		4×10^{-4}
	Sc 47		9×10^{-4}
	Sc 48		3×10^{-4}
Selenium (34)	Se 75		3×10^{-3}

Silicon (14)	Si 31		9×10^{-3}
Silver (47)	Ag 105		1×10^{-3}
	Ag 110M		3×10^{-4}
	Ag 111		4×10^{-4}
Sodium (11)	Na 24		2×10^{-3}
Strontium (38)	Sr 85		1×10^{-4}
	Sr 89		1×10^{-4}
	Sr 91		7×10^{-4}
	Sr 92		7×10^{-4}
Sulfur (16)	S 35	9×10^{-8}	6×10^{-4}
Tantalum (73)	Ta 182		4×10^{-4}
Technetium (43)	Tc 96M Tc 96		1×10^{-1} 1×10^{-3}
Tellurium (52)	Te 125M		2×10^{-3}
	Te 125M		6×10^{-4}
	Te 127		3×10^{-3}
	Te 129M		3×10^{-4}
	Te 131M		6×10^{-4}
	Te 132		3×10^{-4}
Terbium (65)	Tb 160		4×10^{-4}
Thallium (81)	Tl 200 Tl 201 Tl 202 Tl 204		4×10^{-3} 3×10^{-3} 1×10^{-3} 1×10^{-3}
Thulium (69)	Tm 170 Tm 171		5×10^{-4} 5×10^{-3}
Tin (50)	Sn 113 Sn 125		9×10^{-4} 2×10^{-4}
Tungsten (Wolfram) (74)	W 181 W 187		4×10^{-3} 7×10^{-4}
Vanadium (23)	V 48		3×10^{-4}
Xenon (54)	Xe 131M	4×10^{-6}	
	Xe 133	3×10^{-6}	
	Xe 135	1×10^{-6}	
Ytterbium (70)	Yb 175		1×10^{-3}
Yttrium (39)	Y 90		2×10^{-4}
	Y 91M		3×10^{-2}
	Y 91		3×10^{-4}
	Y 92		6×10^{-4}
	Y 93		3×10^{-4}
Zinc (30)	Zn 65		1×10^{-3}
	Zn 69M		7×10^{-4}
	Zn 69		2×10^{-2}
Zirconium (40)	Zr 95		6×10^{-4}
	Zr 97		2×10^{-4}

Beta and/or gamma emitting byproduct not listed above with half-life less than three years		1×10^{-10}	1×10^{-6}

Footnotes to Schedule A

1. Values are given only for those materials normally used as gases.
2. •Ci/gm for solids.

NOTE 1: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in Schedule A, the activity stated is that of the parent isotope and takes into account the daughters.

NOTE 2: For purposes of 30.14 where there is involved a combination of isotopes, the limit for the combination should be derived as follows: Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Schedule A for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

Example:

$$\frac{\text{Concentration of Isotope A in product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in product}}{\text{Exempt concentration of Isotope B}} \leq 1$$

[30 FR 8185, June 26, 1965, as amended at 35 FR 3982, Mar. 3, 1970; 38 FR 29314, Oct. 24, 1973; 59 FR 5520, Feb. 7, 1994]

§ 30.71 Schedule B.

[Top of File]

Byproduct material	Microcuries
Antimony 122 (Sb 122)	100
Antimony 124 (Sb 124)	10
Antimony 125 (Sb 125)	10
Arsenic 73 (As 73)	100
Arsenic 74 (As 74)	10
Arsenic 76 (As 76)	10
Arsenic 77 (as 77)	100
Barium 131 (Ba 131)	10
Barium 133 (Ba 133)	10
Barium 140 (Ba 140)	10
Bismuth 210 (Bi 210)	1
Bromine 82 (Br 82)	10
Cadmium 109 (Cd 109)	10
Cadmium 115m (Cd 115m)	10
Cadmium 115 (Cd 115)	100
Calcium 45 (Ca 45)	10
Calcium 47 (Ca 47)	10
Carbon 14 (C 14)	100
Cerium 141 (Ce 141)	100
Cerium 143 (Ce 143)	100
Cerium 144 (Ce 144)	1
Cesium 129 (Cs 129)	100
Cesium 131 (Cs 131)	1,000
Cesium 134m (Cs 134m)	100
Cesium 134 (Cs 134)	1
Cesium 135 (Cs 135)	10

Cesium 136 (Cs 136)	10
Cesium 137 (Cs 137)	10
Chlorine 36 (Cl 36)	10
Chlorine 38 (Cl 38)	10
Chromium 51 (Cr 51)	1,000
Cobalt 57 (Co 57)	100
Cobalt 58m (Co 58m)	10
Cobalt 58 (Co 58)	10
Cobalt 60 (Co 60)	1
Copper 64 (Cu 64)	100
Dysprosium 165 (Dy 165)	10
Dysprosium 166 (Dy 166)	100
Erbium 169 (Er 169)	100
Erbium 171 (Er 171)	100
Europium 152 9.2 h (Eu 152 9.2 h)	100
Europium 152 13 yr (Eu 152 13 yr)	1
Europium 154 (Eu 154)	1
Europium 155 (Eu 155)	10
Fluorine 18 (F 18)	1,000
Gadolinium 153 (Gd 153)	10
Gadolinium 159 (Gd 159)	100
Gallium 67 (Ga 67)	100
Gallium 72 (Ga 72)	10
Germanium 68 (Ge 68)	10
Germanium 71 (Ge 71)	100
Gold 195 (Au 195)	10
Gold 198 (Au 198)	100
Gold 199 (Au 199)	100
Hafnium 181 (Hf 181)	10
Holmium 166 (Ho 166)	100
Hydrogen 3 (H3)	1,000
Indium 111 (In 111)	100
Indium 113m (In 113m)	100
Indium 114m (In 114m)	10
Indium 115m (In 115m)	100
Indium 115 (In 115)	10
Iodine 123 (I 123)	100
Iodine 125 (I 125)	1
Iodine 126 (I 126)	1
Iodine 129 (I 129)	0,1
Iodine 131 (I 131)	1
Iodine 132 (I 132)	10
Iodine 133 (I 133)	1
Iodine 134 (I 134)	10
Iodine 135 (I 135)	10
Iridium 192 (Ir 192)	10
Iridium 194 (Ir 194)	100
Iron 52 (Fe 52)	10

Iron 55 (Fe 55)	100
Iron 59 (Fe 59)	10
Krypton 85 (Kr 85)	100
Krypton 87 (Kr 87)	10
Lanthanum 140 (La 140)	10
Lutetium 177 (Lu 177)	100
Manganese 52 (Mn 52)	10
Manganese 54 (Mn 54)	10
Manganese 56 (Mn 56)	10
Mercury 197m (Hg 197m)	100
Mercury 197 (Hg 197)	100
Mercury 203 (Hg 203)	10
Molybdenum 99 (Mo 99)	100
Neodymium 147 (Nd 147)	100
Neodymium 149 (Nd 149)	100
Nickel 59 (Ni 59)	100
Nickel 63 (Ni 63)	10
Nickel 65 (Ni 65)	100
Niobium 93m (Nb 93m)	10
Niobium 95 (Nb 95)`	10
Niobium 97 (Nb 97)	10
Osmium 185 (Os 185)	10
Osmium 191m (Os 191)	100
Osmium 191 (Os 191)	100
Osmium 193 (Os 193)	100
Palladium 103 (Pd 103)	100
Palladium 109 (Pd 109)	100
Phosphorus 32 (P 32)	10
Platinum 191 (Pt 191)	100
Platinum 193m (Pt 193m)	100
Platinum 193 (Pt 193)	100
Platinum 197m (Pt 197m)	100
Platinum 197 (Pt 197)	100
Polonium 210 (Po 210)	0.1
Potassium 42 (K 42)	10
Potassium 43 (K 43)	10
Praseodymium 142 (Pr 142)	100
Praseodymium 143 (Pr 143)	100
Promethium 147 (Pm 147)	10
Promethium 149 (Pm 149)	10
Rhenium 186 (Re 186)	100
Rhenium 188 (Re 188)	100
Rhodium 103m (Rh 103m)	100
Rhodium 105 (Rh 105)	100
Rubidium 81 (Rb 81)	10
Rubidium 86 (Rb 86)	10
Rubidium 87 (Rb 87)	10
Ruthenium 97 (Ru 97)	100

Ruthenium 103 (Ru 103)	10
Ruthenium 105 (Ru 105)	10
Ruthenium 106 (Ru 106)	1
Samarium 151 (Sm 151)	10
Samarium 153 (Sm 153)	100
Scandium 46 (Sc 46)	10
Scandium 47 (Sc 47)	100
Scandium 48 (Sc 48)	10
Selenium 75 (Se 75)	10
Silicon 31 (Si 31)	100
Silver 105 (Ag 105)	10
Silver 110m (Ag 110m)	1
Silver 111 (Ag 111)	100
Sodium 22 (Na 22)	10
Sodium 24 (Na 24)	10
Strontium 85 (Sr 85)	10
Strontium 89 (Sr 89)	1
Strontium 90 (Sr 90)	0.1
Strontium 91 (Sr 91)	10
Strontium 92 (Sr 92)	10
Sulphur 35 (S 35)	100
Tantalum 182 (Ta 182)	10
Technetium 96 (Tc 96)	10
Technetium 97m (Tc 97m)	100
Technetium 97 (Tc 97)	100
Technetium 99m (Tc 99m)	100
Technetium 99 (Tc 99)	10
Tellurium 125 m (Te 125 m)	10
Tellurium 127m (Te 127m)	10
Tellurium 127 (Te 127)	100
Tellurium 129m (Te 129m)	10
Tellurium 129 (Te 129)	100
Tellurium 131m (Te 131m)	10
Tellurium 132 (Te 132)	10
Terbium 160 (Tb 160)	10
Thallium 200 (Tl 200)	100
Thallium 201 (Tl 201)	100
Thallium 202 (Tl 202)	100
Thallium 204 (Tl 204)	10
Thulium 170 (Tm 170)	10
Thulium 171 (Tm 171)	10
Tin 113 (Sn 113)	10
Tin 125 (Sn 125)	10
Tungsten 181 (W 181)	10
Tungsten 185 (W 185)	10
Tungsten 187 (W 187)	100
Vanadium 48 (V 48)	10
Xenon 131m (Xe 131m)	1,000

Xenon 133 (Xe 133)	100
Xenon 135 (Xe 135)	100
Ytterbium 175 (Yb 175)	100
Yttrium 87 (Y 87)	10
Yttrium 88 (Y 88)	10
Yttrium 90 (Y 90)	10
Yttrium 91 (Y91)	10
Yttrium 92 (Y92)	100
Yttrium 93 (Y93)	100
Zinc 65 (Zn 65)	10
Zinc 69m (Zn 69m)	100
Zinc 69 (Zn 69)	1,000
Zirconium 93 (Zr 93)	10
Zirconium 95 (Zr 95)	10
Zirconium 97 (Zr 97)	10
Any byproduct material not listed above other than alpha emitting byproduct materials	0.1

[35 FR 6427, Apr. 22, 1970, as amended at 36 FR 16898, Aug. 26, 1971; 59 FR 5519, Feb. 7, 1994; 72 FR 55926, Oct. 1, 2007]

§ 30.72 Schedule C--Quantities of radioactive materials requiring consideration of the need for an emergency plan for responding to a release.

[Top of File]

Radioactive material[1]	Release fraction	Quantity (curies)
Actinium-228	0.001	4,000
Americium 241	.001	2
Americium-242	.001	2
Americium-243	.001	2
Antimony-124	.01	4,000
Antimony-126	.01	6,000
Barium-133	.01	10,000
Barium-140	.01	30,000
Bismuth-207	.01	5,000
Bismuth-210	.01	600
Cadmium-109	.01	1,000
Cadmium-113	.01	80
Calcium-45	.01	20,000
Californium-252	.001	g (20 mg)
Carbon-14 (non-carbon dioxide)	.01	50,000
Cerium-141	.01	10,000
Cerium-144	.01	300
Cesium-134	.01	2,000
Cesium-137	.01	3,000
Chlorine-36	.5	100
Chromium-51	.01	300,000
Cobalt-60	.001	5,000
Copper-64	.01	200,000
Curium-242	.001	60
Curium-243	.001	3

Curium-244	.001	4
Curium-245	.001	2
Europium-152	.01	500
Europium-154	.01	400
Europium-155	.01	3,000
Germanium-68	.01	2,000
Gadolinium-153	.01	5,000
Gold-198	.01	30,000
Hafnium-172	.01	400
Hafnium-181	.01	7,000
Holmium-166m	.01	100
Hydrogen-3	.5	20,000
Iodine-125	.5	10
Iodine-131	.5	10
Indium-114m	.01	1,000
Iridium-192	.001	40,000
Iron-55	.01	40,000
Iron-59	.01	7,000
Krypton-85	1.0	6,000,000
Lead-210	.01	8
Manganese-56	.01	60,000
Mercury-203	.01	10,000
Molybdenum-99	.01	30,000
Neptunium-237	.001	2
Nickel-63	.01	20,000
Niobium-94	.01	300
Phosphorus-32	.5	100
Phosphorus-33	.5	1,000
Polonium-210	.01	10
Potassium-42	.01	9,000
Promethium-145	.01	4,000
Promethium-147	.01	4,000
Radium-226	.001	100
Ruthenium-106	.01	200
Samarium-151	.01	4,000
Scandium-46	.01	3,000
Selenium-75	.01	10,000
Silver-110m	.01	1,000
Sodium-22	.01	9,000
Sodium-24	.01	10,000
Strontium-89	.01	3,000
Strontium-90	.01	90
Sulfur-35	.5	900
Technitium-99	.01	10,000
Technitium-99m	.01	400,000
Tellurium-127m	.01	5,000
Tellurium-129m	.01	5,000
Terbium-160	.01	4,000

Thulium-170	.01	4,000
Tin-113	.01	10,00
Tin-123	.01	3,000
Tin-126	.01	1,000
Titanium-44	.01	100
Vanadium-48	.01	7,000
Xenon-133	1.0	900,000
Yttrium-91	.01	2,000
Zinc-65	.01	5,000
Zirconium-93	.01	400
Zirconium-95	.01	5,000
Any other beta-gamma emitter	.01	10,000
Mixed fission products	.01	1,000
Mixed corrosion products	.01	10,000
Contaminated equipment beta-gamma	.001	10,000
Irradiated material, any form other than solid noncombustible	.01	1,000
Irradiated material, solid noncombustible	.001	10,000
Mixed radioactive waste, beta-gamma	.01	1,000
Packaged mixed waste, beta-gamma[4]	.001	10,000
Any other alpha emitter	.001	2
Contaminated equipment, alpha	.0001	20
Packaged waste, alpha[4]	.0001	20
Combinations of radioactive materials listed above[1]		

[1] For combinations of radioactive materials, consideration of the need for an emergency plan is required if the sum of the ratios of the quantity of each radioactive material authorized to the quantity listed for that material in Schedule C exceeds one.

[2] Waste packaged in Type B containers does not require an emergency plan.

[54 FR 14061, Apr. 7, 1989, as amended at 61 FR 9902, Mar. 12, 1996; 72 FR 55926, Oct. 1, 2007]

Appendix A to Part 30--Criteria Relating to Use of Financial Tests and Parent Company Guarantees for Providing Reasonable Assurance of Funds for Decommissioning

[Top of File]

I. Introduction

An applicant or licensee may provide reasonable assurance of the availability of funds for decommissioning based on obtaining a parent company guarantee that funds will be available for decommissioning costs and on a demonstration that the parent company passes a financial test. This appendix establishes criteria for passing the financial test and for obtaining the parent company guarantee.

II. Financial Test

A. To pass the financial test, the parent company must meet the criteria of either paragraph A.1 or A.2 of this section:

1. The parent company must have:

(i) Two of the following three ratios: A ratio of total liabilities to net worth less than 2.0; a ratio of the sum of net income plus depreciation, depletion, and amortization to total liabilities greater than 0.1; and a ratio of current assets to current liabilities greater than 1.5; and

(ii) Net working capital and tangible net worth each at least six times the current decommissioning cost estimates for the total of all facilities or parts thereof (or prescribed amount if a certification is used), or, for a power reactor licensee, at least six times the amount of decommissioning funds being assured by a parent company guarantee for the total of all reactor units or parts thereof (Tangible net worth shall be calculated to exclude the net book value of the nuclear unit(s)); and

(iii) Tangible net worth of at least $10 million; and

(iv) Assets located in the United States amounting to at least 90 percent of the total assets or at least six times the current decommissioning cost estimates for the total of all facilities or parts thereof (or prescribed amount if a certification is used), or, for a power reactor licensee, at least six times the amount of decommissioning funds being assured by a parent company guarantee for the total of all reactor units or parts thereof.

2. The parent company must have:

(i) A current rating for its most recent bond issuance of AAA, AA, A, or BBB as issued by Standard and Poor's or AAA, AA, A, or BAA as issued by Moody's; and

(ii) Tangible net worth each at least six times the current decommissioning cost estimates for the total of all facilities or parts thereof (or prescribed amount if a certification is used), or, for a power reactor licensee, at least six times the amount of decommissioning funds being assured by a parent company guarantee for the total of all reactor units or parts thereof (Tangible net worth shall be calculated to exclude the net book value of the nuclear unit(s)); and

(iii) Tangible net worth of at least $10 million; and

(iv) Assets located in the United States amounting to at least 90 percent of the total assets or at least six times the current decommissioning cost estimates for the total of all facilities or parts thereof (or prescribed amount if a certification is used), or, for a power reactor licensee, at least six times the amount of decommissioning funds being assured by a parent company guarantee for the total of all reactor units or parts thereof.

B. The parent company's independent certified public accountant must have compared the data used by the parent company in the financial test, which is derived from the independently audited, year end financial statements for the latest fiscal year, with the amounts in such financial statement. In connection with that procedure the licensee shall inform NRC within 90 days of any matters coming to the auditor's attention which cause the auditor to believe that the data specified in the financial test should be adjusted and that the company no longer passes the test.

C. 1. After the initial financial test, the parent company must repeat the passage of the test within 90 days after the close of each succeeding fiscal year.

2. If the parent company no longer meets the requirements of paragraph A of this section, the licensee must send notice to the Commission of intent to establish alternate financial assurance as specified in the Commission's regulations. The notice must be sent by certified mail within 90 days after the end of the fiscal year for which the year end financial data show that the parent company no longer meets the financial test requirements. The licensee must provide alternate financial assurance within 120 days after the end of such fiscal year.

III. Parent Company Guarantee

The terms of a parent company guarantee which an applicant or licensee obtains must provide that:

A. The parent company guarantee will remain in force unless the guarantor sends notice of cancellation by certified mail to the licensee and the Commission. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by both the licensee and the Commission, as evidenced by the return receipts.

B. If the licensee fails to provide alternate financial assurance as specified in the Commission's regulations within 90 days after receipt by the licensee and Commission of a notice of cancellation of the parent company guarantee from the guarantor, the guarantor will provide such alternative financial assurance in the name of the licensee.

C. The parent company guarantee and financial test provisions must remain in effect until the Commission has terminated the license.

D. If a trust is established for decommissioning costs, the trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal Government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

[53 FR 24046, June 27, 1988 as amended at 63 FR 50479, Sept. 22, 1998]

Appendix B to Part 30--Quantities[1] of Licensed Material Requiring Labeling

[Top of File]

Materials	Microcuries
Americium-241	.01
Antimony-122	100
Antimony-124	10

Antimony-125	10
Arsenic-73	100
Arsenic-74	10
Arsenic-76	10
Arsenic-77	100
Barium-131	10
Barium-133	10
Barium-140	10
Bismuth-210	1
Bromine-82	10
Cadmium-109	10
Cadmium-115m	10
Cadmium-115	100
Calcium-45	10
Calcium-47	10
Carbon-14	100
Cerium-141	100
Cerium-143	100
Cerium-144	1
Cesium-131	1,000
Cesium-134m	100
Cesium-134	1
Cesium-135	10
Cesium-136	10
Cesium-137	10
Chlorine-36	10
Chlorine-38	10
Chromium-51	1,000
Cobalt-58m	10
Cobalt-58	10
Cobalt-60	1
Copper-64	100
Dysprosium-165	10
Dysprosium-166	100
Erbium-169	100
Erbium-171	100
Europium-152 9.2h	100
Europium-152 13 yr	1
Europium-154	1
Europium-155	10
Fluorine-18	1,000
Gadolinium-153	10
Gadolinium-159	100
Gallium-72	10
Germanium-71	100
Gold-198	100
Gold-199	100
Hafnium-181	10

Holmium-166	100
Hydrogen-3	1,000
Indium-113m	100
Indium-114m	10
Indium-115m	100
Indium-115	10
Iodine-125	1
Iodine-126	1
Iodine-129	0.1
Iodine-131	1
Iodine-132	10
Iodine-133	1
Iodine-134	10
Iodine-135	10
Iridium-192	10
Iridium-194	100
Iron-55	100
Iron-59	10
Krypton-85	100
Krpton-87	10
Lanthanum-140	10
Lutetium-177	100
Manganese-52	10
Manganese-54	10
Manganese-56	10
Mercury-197m	100
Mercury-197	100
Mercury-203	10
Molbdenum-99	100
Neodymium-147	100
Neodymium-149	100
Nickel-59	100
Nickel-63	10
Nickel-65	100
Niobium-93m	10
Niobium-95	10
Niobium-97	10
Osmium-185	10
Osmium-191m	100
Osmium-191	100
Osmium-193	100
Palladium-103	100
Palladium-109	100
Phosphorus-32	10
Platinum-191	100
Platinum-193m	100
Platinum-193	100
Platinum-197m	100

Platinum-197	100
Plutonium-239	.01
Polonium-210	0.1
Potassium-42	10
Praseodymium-142	100
Praseodymium-143	100
Promethium-147	10
Promethium-149	10
Radium-226	.01
Rhenium-186	100
Rhenium-188	100
Rhodium-103m	100
Rhodium-105	100
Rubidium-86	10
Rubidium-87	10
Ruthenium-97	100
Ruthenium-103	10
Ruthenium-105	10
Ruthenium-106	1
Samarium-151	10
Samarium-153	100
Scandium-46	10
Scandium-47	100
Scandium-48	10
Seleium-75	10
Silicon-31	100
Silver-105	10
Silver-110m	1
Silver-111	100
Sodium-24	10
Strontium-85	10
Strontium-89	1
Strontium-90	0.10
Strontium-91	10
Strontium-92	10
Sulphur-35	100
Tantalum-182	10
Technetium-96	10
Technetium-97m	100
Technetium-97	100
Technetium-99m	100
Technetium-99	10
Tellurium-125m	10
Tellurium127m	10
Tellurium-127	100
Tellurium129m	10
Tellurium-129	100
Tellurium-131m	10

Tellurium-132	10
Terbium-160	10
Thallium-200	100
Thallium-201	100
Thallium-202	100
Thallium-204	10
Throium (natural)[1]	100
Thulium-170	10
Thulium-171	10
Tin-113	10
Tin-125	10
Tungsten-181	10
Tungsten-185	10
Tungsten-187	100
Uranium (natural)[2]	100
Uranium-233	.01
Uranium-234--Uranium-235	.01
Vandium-48	10
Xenon-131m	1,000
Xenon-133	100
Xenon-135	100
Ytterbium-175	100
Yttrium-90	10
Yttrium-91	10
Yttrium-92	100
Yttrium-93	100
Zinc-65	10
Zinc-69m	100
Zinc-69	1,000
Zirconium-93	10
Zirconium-95	10
Zirconium-97	10
Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition	.01
Any radionuclide other than alpha emitting radio-nuclides, not listed above or mixtures of beta emitters of unknown composition	.1

[1]Based on alpha disintegration rate of Th-232, Th-230 and their daughter products.

[2]Based on alpha disintegration rate of U-238, U-234, and U-235.

Note: For purposes of § 20.303, where there is involved a combination of isotopes in known amounts, the limit for the combination should be derived as follows: Determine, for each isotope in the combination, the ratio between the quantity present in the combination and the limit otherwise established for the specific isotope when not in combination. The sum of such ratios for all the isotopes in the combination may not exceed "1" (i.e., "unity").

[35 FR 6425, Apr. 22, 1970, as amended at 36 FR 16898, Aug. 26, 1971; 38 FR 29314, Oct. 24, 1973; 39 FR 23991, June 28, 1974; 45 FR 71763, Oct. 30, 1980. Redesignated at 56 FR 23391, May 21, 1991, and further redesignated at 58 FR 67659, Dec. 22, 1993]

Appendix C to Part 30--Criteria Relating to Use of Financial Tests and Self Guarantees for Providing Reasonable Assurance of Funds for Decommissioning

[Top of File]

I. Introduction

An applicant or licensee may provide reasonable assurance of the availability of funds for decommissioning based on furnishing its own guarantee that funds will be available for decommissioning costs and on a demonstration that the company passes the financial test of Section II of this appendix. The terms of the self-guarantee are in Section III of this appendix. This appendix establishes criteria for passing the financial test for the self guarantee and establishes the terms for a self-guarantee.

II. Financial Test

A. To pass the financial test, a company must meet all of the following criteria:

(1) Tangible net worth at least 10 times the total current decommissioning cost estimate for the total of all facilities or parts thereof (or the current amount required if certification is used), or, for a power reactor licensee, at least 10 times the amount of decommissioning funds being assured by a self guarantee, for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor for the total of all reactor units or parts thereof (Tangible net worth shall be calculated to exclude the net book value of the nuclear unit(s)).

(2) Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the total current decommissioning cost estimate for the total of all facilities or parts thereof (or the current amount required if certification is used), or, for a power reactor licensee, at least 10 times the amount of decommissioning funds being assured by a self guarantee, for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor for the total of all reactor units or parts thereof.

(3) A current rating for its most recent bond issuance of AAA, AA, or A as issued by Standard and Poors (S&P), or Aaa, Aa, or A as issued by Moodys.

B. To pass the financial test, a company must meet all of the following additional requirements:

(1) The company must have at least one class of equity securities registered under the Securities Exchange Act of 1934.

(2) The company's independent certified public accountant must have compared the data used by the company in the financial test which is derived from the independently audited, yearend financial statements for the latest fiscal year, with the amounts in such financial statement. In connection with that procedure, the licensee shall inform NRC within 90 days of any matters coming to the attention of the auditor that cause the auditor to believe that the data specified in the financial test should be adjusted and that the company no longer passes the test.

(3) After the initial financial test, the company must repeat passage of the test within 90 days after the close of each succeeding fiscal year.

C. If the licensee no longer meets the requirements of Section II.A. of this appendix, the licensee must send immediate notice to the Commission of its intent to establish alternate financial assurance as specified in the Commission's regulations within 120 days of such notice.

III. Company Self-Guarantee

The terms of a self-guarantee which an applicant or licensee furnishes must provide that:

A. The guarantee will remain in force unless the licensee sends notice of cancellation by certified mail to the Commission. Cancellation may not occur, however, during the 120 days beginning on the date of receipt of the notice of cancellation by the Commission, as evidenced by the return receipt.

B. The licensee shall provide alternative financial assurance as specified in the Commission's regulations within 90 days following receipt by the Commission of a notice of cancellation of the guarantee.

C. The guarantee and financial test provisions must remain in effect until the Commission has terminated the license or until another financial assurance method acceptable to the Commission has been put in effect by the licensee.

D. The licensee will promptly forward to the Commission and the licensee's independent auditor all reports covering the latest fiscal year filed by the licensee with the Securities and Exchange Commission pursuant to the requirements of section 13 of the Securities and Exchange Act of 1934.

E. If, at any time, the licensee's most recent bond issuance ceases to be rated in any category of "A" or above by either Standard and Poors or Moodys, the licensee will provide notice in writing of such fact to the Commission within 20 days after publication of the change by the rating service. If the licensee's most recent bond issuance ceases to be rated in any category of A or above by both Standard and Poors and Moodys, the licensee no longer meets the requirements of Section II.A. of this appendix.

F. The applicant or licensee must provide to the Commission a written guarantee (a written commitment by a corporate officer) which states that the licensee will fund and carry out the required decommissioning activities or, upon issuance of an order by the Commission, the licensee will set up and fund a trust in the amount of the current cost estimates for decommissioning.

[58 FR 68730, Dec. 29, 1993; 59 FR 1618, Jan. 12, 1994; 63 FR 50479, Sept. 22, 1998]

Appendix D to Part 30--Criteria Relating To Use of Financial Tests and Self-Guarantee for Providing Reasonable Assurance of Funds for Decommissioning by Commercial Companies That Have no Outstanding Rated Bonds

[Top of File]

I. Introduction

An applicant or licensee may provide reasonable assurance of the availability of funds for decommissioning based on furnishing its own guarantee that funds will be available for decommissioning costs and on a demonstration that the company passes the financial test of Section II of this appendix. The terms of the self-guarantee are in Section III of this appendix. This appendix establishes criteria for passing the financial test for the self-guarantee and establishes the terms for a self-guarantee.

II. Financial Test

A. To pass the financial test a company must meet the following criteria:

(1) Tangible net worth greater than $10 million, or at least 10 times the total current decommissioning cost estimate (or the current amount required if certification is used), whichever is greater, for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor.

(2) Assets located in the United States amounting to at least 90 percent of total assets or at least 10 times the total current decommissioning cost estimate (or the current amount required if certification is used) for all decommissioning activities for which the company is responsible as self-guaranteeing licensee and as parent-guarantor.

(3) A ratio of cash flow divided by total liabilities greater than 0.15 and a ratio of total liabilities divided by net worth less than 1.5.

B. In addition, to pass the financial test, a company must meet all of the following requirements:

(1) The company's independent certified public accountant must have compared the data used by the company in the financial test, which is required to be derived from the independently audited year end financial statement based on United States generally accepted accounting practices for the latest fiscal year, with the amounts in such financial statement. In connection with that procedure, the licensee shall inform NRC within 90 days of any matters that may cause the auditor to believe that the data specified in the financial test should be adjusted and that the company no longer passes the test.

(2) After the initial financial test, the company must repeat passage of the test within 90 days after the close of each succeeding fiscal year.

(3) If the licensee no longer meets the requirements of paragraph II.A of this appendix, the licensee must send notice to the NRC of intent to establish alternative financial assurance as specified in NRC regulations. The notice must be sent by certified mail, return receipt requested, within 90 days after the end of the fiscal year for which the year end financial data show that the licensee no longer meets the financial test requirements. The licensee must provide alternative financial assurance within 120 days after the end of such fiscal year.

III. Company Self-Guarantee

The terms of a self-guarantee which an applicant or licensee furnishes must provide that:

A. The guarantee shall remain in force unless the licensee sends notice of cancellation by certified mail, return receipt requested, to the NRC. Cancellation may not occur until an alternative financial assurance mechanism is in place.

B. The licensee shall provide alternative financial assurance as specified in the regulations within 90 days following receipt by the NRC of a notice of cancellation of the guarantee.

C. The guarantee and financial test provisions must remain in effect until the Commission has terminated the license or until another financial assurance method acceptable to the Commission has been put in effect by the licensee.

D. The applicant or licensee must provide to the Commission a written guarantee (a written commitment by a corporate officer) which states that the licensee will fund and carry out the required decommissioning activities or, upon issuance of an order by the Commission, the licensee will set up and fund a trust in the amount of the current cost estimates for decommissioning.

[63 FR 29542, June 1, 1998]

Appendix E to Part 30--Criteria Relating to Use of Financial Tests and Self-Guarantee For Providing Reasonable Assurance of Funds For Decommissioning by Nonprofit Colleges, Universities, and Hospitals

[Top of File]

I. Introduction

An applicant or licensee may provide reasonable assurance of the availability of funds for decommissioning based on furnishing its own guarantee that funds will be available for decommissioning costs and on a demonstration that the applicant or licensee passes the financial test of Section II of this appendix. The terms of the self-guarantee are in Section III of this appendix. This appendix establishes criteria for passing the financial test for the self-guarantee and establishes the terms for a self-guarantee.

II. Financial Test

A. For colleges and universities, to pass the financial test a college or university must meet either the criteria in Paragraph II.A.(1) or the criteria in Paragraph II.A.(2) of this appendix.

(1) For applicants or licensees that issue bonds, a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A as issued by Standard and Poors (S&P) or Aaa, Aa, or A as issued by Moodys.

(2) For applicants or licensees that do not issue bonds, unrestricted endowment consisting of assets located in the United States of at least $50 million, or at least 30 times the total current decommissioning cost estimate (or the current amount required if certification is used), whichever is greater, for all decommissioning activities for which the college or university is responsible as a self-guaranteeing licensee.

B. For hospitals, to pass the financial test a hospital must meet either the criteria in Paragraph II.B.(1) or the criteria in Paragraph II.B.(2) of this appendix:

(1) For applicants or licensees that issue bonds, a current rating for its most recent uninsured, uncollateralized, and unencumbered bond issuance of AAA, AA, or A as issued by Standard and Poors (S&P) or Aaa, Aa, or A as issued by Moodys.

(2) For applicants or licensees that do not issue bonds, all the following tests must be met:

(a) (Total Revenues less total expenditures) divided by total revenues must be equal to or greater than 0.04.

(b) Long term debt divided by net fixed assets must be less than or equal to 0.67.

(c) (Current assets and depreciation fund) divided by current liabilities must be greater than or equal to 2.55.

(d) Operating revenues must be at least 100 times the total current decommissioning cost estimate (or the current amount required if certification is used) for all decommissioning activities for which the hospital is responsible as a self-guaranteeing license.

C. In addition, to pass the financial test, a licensee must meet all the following requirements:

(1) The licensee's independent certified public accountant must have compared the data used by the licensee in the financial test, which is required to be derived from the independently audited year end financial statements, based on United States generally accepted accounting practices, for the latest fiscal year, with the amounts in such financial statement. In connection with that procedure, the licensee shall inform NRC within 90 days of any matters coming to the attention of the auditor that cause the auditor to believe that the data specified in the financial test should be adjusted and that the licensee no longer passes the test.

(2) After the initial financial test, the licensee must repeat passage of the test within 90 days after the close of each succeeding fiscal year.

(3) If the licensee no longer meets the requirements of Section I of this appendix, the licensee must send notice to the NRC of its intent to establish alternative financial assurance as specified in NRC regulations. The notice must be sent by certified mail, return receipt requested, within 90 days after the end of the fiscal year for which the year end financial data show that the licensee no longer meets the financial test requirements. The licensee must provide alternate financial assurance within 120 days after the end of such fiscal year.

III. Self-Guarantee

The terms of a self-guarantee which an applicant or licensee furnishes must provide that--

A. The guarantee shall remain in force unless the licensee sends notice of cancellation by certified mail, and/or return receipt requested, to the Commission. Cancellation may not occur unless an alternative financial assurance mechanism is in place.

B. The licensee shall provide alternative financial assurance as specified in the Commission's regulations within 90 days following receipt by the Commission of a notice of cancellation of the guarantee.

C. The guarantee and financial test provisions must remain in effect until the Commission has terminated the license or until another financial assurance method acceptable to the Commission has been put in effect by the licensee.

D. The applicant or licensee must provide to the Commission a written guarantee (a written commitment by a corporate officer or officer of the institution) which states that the licensee will fund and carry out the required decommissioning activities or, upon issuance of an order by the Commission, the licensee will set up and fund a trust in the amount of the current cost estimates for decommissioning.

E. If, at any time, the licensee's most recent bond issuance ceases to be rated in any category of "A" or above by either Standard and Poors or Moodys, the licensee shall provide notice in writing of such fact to the Commission within 20 days after publication of the change by the rating service.

[63 FR 29542, June 1, 1998]

PART 31—GENERAL DOMESTIC LICENSES FOR BYPRODUCT MATERIAL

[Top of File]

§ 31.1 Purpose and scope.

[Top of File]

This part establishes general licenses for the possession and use of byproduct material and a general license for ownership of byproduct material. Specific provisions of 10 CFR Part 30 are applicable to general licenses established by this part. These provisions are specified in § 31.2 or in the particular general license.

[65 FR 79187, Dec. 18, 2000]

§ 31.2 Terms and conditions.

[Top of File]

The general licenses provided in this part are subject to the general provisions of Part 30 of this chapter (Secs. 30.1 through 30.10), the provisions of §§ 30.14(d), 30.34(a) to (e), 30.41, 30.50 to 30.53, 30.61 to 30.63, and Parts 19, 20, and 21, of this chapter[1] unless indicated otherwise in the specific provision of the general license.

[65 FR 79187, Dec. 18, 2000]

[1] Attention is directed particularly to the provisions of Part 20 of this chapter concerning labeling of containers.

§ 31.3 Certain devices and equipment.

[Top of File]

A general license is hereby issued to transfer, receive, acquire, own, possess and use byproduct material incorporated in the following devices or equipment which have been manufactured, tested and labeled by the manufacturer in accordance with the specifications contained in a specific license issued to him by the Commission.

(a) *Static elimination device*. Devices designed for use as static eliminators which contain, as a sealed source or sources, byproduct material consisting of a total of not more than 500 microcuries of polonium 210 per device.

(b)-(c) [Reserved]

(d) *Ion generating tube*. Devices designed for ionization of air which contain, as a sealed source or sources, byproduct material consisting of a total of not more than 500 microcuries of polonium 210 per device or of a total of not more than 50 millicuries of hydrogen 3 (tritium) per device.

[30 FR 8189, June 26, 1965, as amended at 34 FR 6652, Apr. 18, 1969; 35 FR 3982, Mar. 3, 1970]

§ 31.4 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0016.

(b) The approved information collection requirements contained in this part appear in §§31.5, 31.8, 31.11, and 31.12.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 31.11, NRC Form 483 is approved under control number 3150-0038.

(2) [Reserved]

[62 FR 52186, Oct. 6, 1997, as amended at 67 FR 67099, Nov. 4, 2002; 72 FR 55926, Oct. 1, 2007]

§ 31.5 Certain detecting, measuring, gauging, or controlling devices and certain devices for producing light or an ionized atmosphere.[5]

[Top of File]

(a) A general license is hereby issued to commercial and industrial firms and research, educational and medical institutions, individuals in the conduct of their business, and Federal, State or local government agencies to acquire, receive, possess, use or transfer, in accordance with the provisions of paragraphs (b), (c) and (d) of this section, byproduct material contained in devices designed and manufactured for the purpose of detecting, measuring, gauging or controlling thickness, density, level, interface location, radiation, leakage, or qualitative or quantitative chemical composition, or for producing light or an ionized atmosphere.

(b)(1) The general license in paragraph (a) of this section applies only to byproduct material contained in devices which have been manufactured or initially transferred and labeled in accordance with the specifications contained in--

(i) A specific license issued under § 32.51 of this chapter; or

(ii) An equivalent specific license issued by an Agreement State; or

(iii) An equivalent specific license issued by a State with provisions comparable to § 32.51 of this chapter.

(2) The devices must have been received from one of the specific licensees described in paragraph (b)(1) of this section or through a transfer made under paragraph (c)(9) of this section.

(c) Any person who acquires, receives, possesses, uses or transfers byproduct material in a device pursuant to the general license in paragraph (a) of this section:

(1) Shall assure that all labels affixed to the device at the time of receipt and bearing a statement that removal of the label is prohibited are maintained thereon and shall comply with all instructions and precautions provided by such labels;

(2) Shall assure that the device is tested for leakage of radioactive material and proper operation of the on-off mechanism and indicator, if any, at no longer than six-month intervals or at such other intervals as are specified in the label; however:

(i) Devices containing only krypton need not be tested for leakage of radioactive material, and

(ii) Devices containing only tritium or not more than 100 microcuries of other beta and/or gamma emitting material or 10 microcuries of alpha emitting material and devices held in storage in the original shipping container prior to initial installation need not be tested for any purpose;

(3) Shall assure that the tests required by paragraph (c)(2) of this section and other testing, installation, servicing, and removal from installation involving the radioactive materials, its shielding or containment, are performed:

(i) In accordance with the instructions provided by the labels; or

(ii) By a person holding a specific license pursuant to parts 30 and 32 of this chapter or from an Agreement State to perform such activities;

(4) Shall maintain records showing compliance with the requirements of paragraphs (c)(2) and (c)(3) of this section. The records must show the results of tests. The records also must show the dates of performance of, and the names of persons performing, testing, installing, servicing, and removing from the installation radioactive material and its shielding or containment. The licensee shall retain these records as follows:

(i) Each record of a test for leakage or radioactive material required by paragraph (c)(2) of this section must be retained for three years after the next required leak test is performed or until the sealed source is transferred or disposed of.

(ii) Each record of a test of the on-off mechanism and indicator required by paragraph (c)(2) of this section must be retained for three years after the next required test of the on-off mechanism and indicator is performed or until the sealed source is transferred or disposed of.

(iii) Each record that is required by paragraph (c)(3) of this section must be retained for three years from the date of the recorded event or until the device is transferred or disposed of.

(5) Shall immediately suspend operation of the device if there is a failure of, or damage to, or any indication of a possible failure of or damage to, the shielding of the radioactive material or the on-off mechanism or indicator, or upon the detection of 185 bequerel (0.005 microcurie) or more removable radioactive material. The device may not be operated until it has been repaired by the manufacturer or other person holding a specific license to repair such devices that was issued under parts 30 and 32 of this chapter or by an Agreement State. The device and any radioactive material from the device may only be disposed of by transfer to a person authorized by a specific license to receive the byproduct material in the device or as otherwise approved by the Commission. A report containing a brief description of the event and the remedial action taken; and, in the case of detection of 0.005 microcurie or more removable radioactive material or

failure of or damage to a source likely to result in contamination of the premises or the environs, a plan for ensuring that the premises and environs are acceptable for unrestricted use, must be furnished to the Director, Office of Federal and State Materials and Environmental Management Programs,
ATTN: GLTS, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001 within 30 days. Under these circumstances, the criteria set out in § 20.1402 of this chapter, "Radiological criteria for unrestricted use," may be applicable, as determined by the Commission on a case-by-case basis;

(6) Shall not abandon the device containing byproduct material;

(7) Shall not export the device containing byproduct material except in accordance with part 110 of this chapter;

(8)(i) Shall transfer or dispose of the device containing byproduct material only by export as provided by paragraph (c)(7) of this section, by transfer to another general licensee as authorized in paragraph (c)(9) of this section, or to a person authorized to receive the device by a specific license issued under parts 30 and 32 of this chapter, or part 30 of this chapter that authorizes waste collection, or equivalent regulations of an Agreement State, or as otherwise approved under paragraph (c)(8)(iii) of this section.

(ii) Shall, within 30 days after the transfer of a device to a specific licensee or export, furnish a report to the Director, Office of Federal and State Materials and Environmental Management Programs, ATTN: Document Control Desk/GLTS, using an appropriate method listed in § 30.6(a) of this chapter. The report must contain—

(A) The identification of the device by manufacturer's (or initial transferor's) name, model number, and serial number;

(B) The name, address, and license number of the person receiving the device (license number not applicable if exported); and

(C) The date of the transfer.

(iii) Shall obtain written NRC approval before transferring the device to any other specific licensee not specifically identified in paragraph (c)(8)(i) of this section; however, a holder of a specific license may transfer a device for possession and use under its own specific license without prior approval, if, the holder:

(A) Verifies that the specific license authorizes the possession and use, or applies for and obtains an amendment to the license authorizing the possession and use;

(B) Removes, alters, covers, or clearly and unambiguously augments the existing label (otherwise required by paragraph (c)(1) of this section) so that the device is labeled in compliance with § 20.1904 of this chapter; however the manufacturer, model number, and serial number must be retained;

(C) Obtains the manufacturer's or initial transferor's information concerning maintenance that would be applicable under the specific license (such as leak testing procedures); and

(D) Reports the transfer under paragraph (c)(8)(ii) of this section.

(9) Shall transfer the device to another general licensee only if--

(i) The device remains in use at a particular location. In this case, the transferor shall give the transferee a copy of this section, a copy of § 31.2, 30.51, 20.2201, and 20.2202 of this chapter, and any safety documents identified in the label of the device. Within 30 days of the transfer, the transferor shall report to the Director, Office of Federal and State Materials and Environmental Management Programs, ATTN: Document Control Desk/GLTS, using an appropriate method listed in § 30.6(a) of this chapter—

(A) The manufacturer's (or initial transferor's) name;

(B) The model number and the serial number of the device transferred;

(C) The transferee's name and mailing address for the location of use; and

(D) The name, title, and phone number of the responsible individual identified by the transferee in accordance with paragraph (c)(12) of this section to have knowledge of and authority to take actions to ensure compliance with the appropriate regulations and requirements; or

(ii) The device is held in storage by an intermediate person in the original shipping container at its intended location of use prior to initial use by a general licensee.

(10) Shall comply with the provisions of §§ 20.2201, and 20.2202 of this chapter for reporting radiation incidents, theft or loss of licensed material, but shall be exempt from the other requirements of parts 19, 20, and 21, of this chapter.

(11) Shall respond to written requests from the Nuclear Regulatory Commission to provide information relating to the general license within 30 calendar days of the date of the request, or other time specified in the request. If the general licensee cannot provide the requested information within the allotted time, it shall, within that same time period, request a longer period to supply the information by providing the Director, Office of Federal and State
Materials and Environmental Management Programs, by an appropriate method listed in § 30.6(a) of this chapter, a written justification for

the request.

(12) Shall appoint an individual responsible for having knowledge of the appropriate regulations and requirements and the authority for taking required actions to comply with appropriate regulations and requirements. The general licensee, through this individual, shall ensure the day-to-day compliance with appropriate regulations and requirements. This appointment does not relieve the general licensee of any of its responsibility in this regard.

(13)(i) Shall register, in accordance with paragraphs (c)(13)(ii) and (iii) of this section, devices containing at least 370 megabecquerels (10 millicuries) of cesium-137, 3.7 megabecquerels (0.1 millicurie) of strontium-90, 37 megabecquerels (1 millicurie) of cobalt-60, 3.7 megabecquerels (0.1 millicurie) of radium-226, or 37 megabecquerels (1 millicurie) of americium-241 or any other transuranic (i.e., element with atomic number greater than uranium (92)), based on the activity indicated on the label. Each address for a location of use, as described under paragraph (c)(13)(iii)(D) of this section, represents a separate general licensee and requires a separate registration and fee.

(ii) If in possession of a device meeting the criteria of paragraph (c)(13)(i) of this section, shall register these devices annually with the Commission and shall pay the fee required by Sec. 170.31 of this chapter. Registration must be done by verifying, correcting, and/or adding to the information provided in a request for registration received from the Commission. The registration information must be submitted to the NRC within 30 days of the date of the request for registration or as otherwise indicated in the request. In addition, a general licensee holding devices meeting the criteria of paragraph (c)(13)(i) of this section is subject to the bankruptcy notification requirement in § 30.34 (h) of this chapter.

(iii) In registering devices, the general licensee shall furnish the following information and any other information specifically requested by the Commission--

(A) Name and mailing address of the general licensee.

(B) Information about each device: the manufacturer (or initial transferor), model number, serial number, the radioisotope and activity (as indicated on the label).

(C) Name, title, and telephone number of the responsible person designated as a representative of the general licensee under paragraph (c)(12) of this section.

(D) Address or location at which the device(s) are used and/or stored. For portable devices, the address of the primary place of storage.

(E) Certification by the responsible representative of the general licensee that the information concerning the device(s) has been verified through a physical inventory and checking of label information.

(F) Certification by the responsible representative of the general licensee that they are aware of the requirements of the general license.

(iv) Persons generally licensed by an Agreement State with respect to devices meeting the criteria in paragraph (c)(13)(i) of this section are not subject to registration requirements if the devices are used in areas subject to NRC jurisdiction for a period less than 180 days in any calendar year. The Commission will not request registration information from such licensees.

(14) Shall report changes to the mailing address for the location of use (including change in name of general licensee) to the Director, Office of Federal and State Materials and Environmental Management Programs, ATTN: GLTS, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001 within 30 days of the effective date of the change. For a portable device, a report of address change is only required for a change in the device's primary place of storage.

(15) May not hold devices that are not in use for longer than 2 years. If devices with shutters are not being used, the shutter must be locked in the closed position. The testing required by paragraph (c)(2) of this section need not be performed during the period of storage only. However, when devices are put back into service or transferred to another person, and have not been tested within the required test interval, they must be tested for leakage before use or transfer and the shutter tested before use. Devices kept in standby for future use are excluded from the two-year time limit if the general licensee performs quarterly physical inventories of these devices while they are in standby.

(d) The general license in paragraph (a) of this section does not authorize the manufacture or import of devices containing byproduct material.

[39 FR 43532, Dec. 16, 1974, as amended at 40 FR 8785, Mar. 3, 1975; 40 FR 14085, Mar. 28, 1975; 42 FR 25721, May 19, 1977; 42 FR 28896, June 6, 1977; 43 FR 6922, Feb. 17, 1978; 53 FR 19246, May 27, 1988; 56 FR 23471, May 21, 1991; 56 FR 61352, Dec. 3, 1991; 58 FR 67659, Dec. 22, 1993; 64 FR 42275, Aug. 4, 1999; 65 FR 79188, Dec. 18, 2000; 68 FR 58804, Oct. 10, 2003; 72 FR 55926, Oct. 1, 2007; 72 FR 58486, Oct. 16, 2007; 73 FR 5718, Jan. 31, 2008; 73 FR 42673, July 23, 2008]

[5] Persons possessing byproduct material in devices under a general license in § 31.5 before January 15, 1975, may continue to possess, use, or transfer that material in accordance with the labeling requirements of § 31.5 in effect on January 14, 1975.

§ 31.6 General license to install devices generally licensed in § 31.5.

[Top of File]

Any person who holds a specific license issued by an Agreement State authorizing the holder to manufacture, install, or service a device described in § 31.5 within such Agreement State is hereby granted a general license to install and service such device in any non-Agreement State and a general license to install and service such device in offshore waters, as defined in § 150.3(f) of this chapter: *Provided*, That:

(a) [Reserved]

(b) The device has been manufactured, labeled, installed, and serviced in accordance with applicable provisions of the specific license issued to such person by the Agreement State.

(c) Such person assures that any labels required to be affixed to the device under regulations of the Agreement State which licensed manufacture of the device bear a statement that removal of the label is prohibited.

[30 FR 8189, June 26, 1965, as amended at 30 FR 10947, Aug. 24, 1965; 39 FR 43533, Dec. 16, 1974; 46 FR 44151, Sept. 3, 1981]

§ 31.7 Luminous safety devices for use in aircraft.

[Top of File]

(a) A general license is hereby issued to own, receive, acquire, possess, and use tritium or promethium-147 contained in luminous safety devices for use in aircraft, provided each device contains not more than 10 curies of tritium or 300 millicuries of promethium-147 and that each device has been manufactured, assembled or initially transferred in accordance with a license issued under the provisions of § 32.53 of this chapter or manufactured or assembled in accordance with a specific license issued by an Agreement State which authorizes manufacture or assembly of the device for distribution to persons generally licensed by the Agreement State.

(b) Persons who own, receive, acquire, possess or use luminous safety devices pursuant to the general license in this section are exempt from the requirements of parts 19, 20, and 21, of this chapter, except that they shall comply with the provisions of §§ 20.2201, and 20.2202 of this chapter.

(c) This general license does not authorize the manufacture, assembly, repair or import of luminous safety devices containing tritium or promethium-147.

(d) This general license does not authorize the export of luminous safety devices containing tritium or promethium-147.

(e) This general license does not authorize the ownership, receipt, acquisition, possession or use of promethium-147 contained in instrument dials.

[30 FR 8189, June 26, 1965, as amended at 33 FR 6463, Apr. 27, 1968; 38 FR 22220, Aug. 17, 1973; 42 FR 28896, June 6, 1977; 43 FR 6922, Feb. 17, 1978; 56 FR 23471, May 21, 1991; 56 FR 61352, Dec. 3, 1991; 58 FR 67659, Dec. 22, 1993]

§ 31.8 Americium-241 and radium-226 in the form of calibration or reference sources.

[Top of File]

(a) A general license is issued to those persons listed in this section to own, receive, acquire, possess, use, and transfer, in accordance with the provisions of paragraphs (b) and (c) of this section, americium-241 or radium-226 in the form of calibration or reference sources:

(1) Any person in a non-Agreement State who holds a specific license issued under this chapter which authorizes receipt, possession, use, and transfer of byproduct material, source material, or special nuclear material; and

(2) Any Government agency, as defined in § 30.4 of this chapter, which holds a specific license issued under this chapter which authorizes it to receive, possess, use, and transfer byproduct material, source material, or special nuclear material.

(b) The general license in paragraph (a) of this section applies only to calibration or reference sources which have been manufactured or initially transferred in accordance with the specifications contained in a specific license issued under § 32.57 of this chapter or in accordance with the specifications contained in a specific license issued to the manufacturer by an Agreement State which authorizes manufacture of the sources for distribution to persons generally licensed by the Agreement State, or in accordance with a specific license issued by a State with comparable provisions to § 32.57.

(c) The general license in paragraph (a) of this section is subject to the provisions of §§30.14(d), 30.34 (a) to (e), and 30.50 to 30.63 of this chapter, and to the provisions of parts 19, 20, and 21, of this chapter. In addition, persons who own, receive, acquire, possess, use, and transfer one or more calibration or reference sources under this general license:

(1) Shall not possess at any one time, at any one location of storage or use, more than 0.185 megabecquerel (5 microcuries) of americium-241 or 0.185 megabecquerel (5 microcuries) of radium-226 in such sources;

(2) Shall not receive, possess, use, or transfer a source unless the source, or the storage container, bears a label

which includes the following statement or a substantially similar statement which contains the information called for in the following statement:[1]

> The receipt, possession, use, and transfer of this source, Model XX, Serial No. XX, are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.
>
> CAUTION—RADIOACTIVE MATERIAL—THIS SOURCE CONTAINS AMERICIUM–241 [or RADIUM–226, as appropriate]. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.
>
> _____
> (Name of manufacturer or initial transferor)

(3) Shall not transfer, abandon, or dispose of a source except by transfer to a person authorized by a license issued under this chapter or by an Agreement State to receive the source.

(4) Shall store a source, except when the source is being used, in a closed container adequately designed and constructed to contain americium-241 or radium-226 which might otherwise escape during storage.

(5) Shall not use a source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(d) This general license does not authorize the manufacture or import of calibration or reference sources containing americium-241 or radium-226.

(e) This general license does not authorize the export of calibration or reference sources containing americium-241 or radium-226.

[30 FR 8189, June 26, 1965, as amended at 38 FR 22220, Aug. 17, 1973; 40 FR 8785, Mar. 3, 1975; 42 FR 28896, June 6, 1977; 43 FR 6922, Feb. 17, 1978; 56 FR 40767, Aug. 16, 1991; 72 FR 55927, Oct. 1, 2007]

[1] Sources generally licensed under this section before January 19, 1975, may bear labels authorized by the regulations in effect on January 1, 1975. Sources containing radium-226 generally licensed under this section and manufactured before November 30, 2007 shall be labeled in accordance with the applicable State regulations at the time of manufacture or import.

§ 31.9 General license to own byproduct material.

[Top of File]

A general license is hereby issued to own byproduct material without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this paragraph is not authorized to manufacture, produce, transfer, receive, possess, use, import or export byproduct material, except as authorized in a specific license.

[30 FR 8189, June 26, 1965]

§ 31.10 General license for strontium 90 in ice detection devices.

[Top of File]

(a) A general license is hereby issued to own, receive, acquire, possess, use, and transfer strontium 90 contained in ice detection devices, provided each device contains not more than fifty microcuries of strontium 90 and each device has been manufactured or initially transferred in accordance with the specifications contained in a license issued pursuant to § 32.61 of this chapter or in accordance with the specifications contained in a specific license issued to the manufacturer by an Agreement State which authorizes manufacture of the ice detection devices for distribution to persons generally licensed by the Agreement State.

(b) Persons who own, receive, acquire, possess, use, or transfer strontium 90 contained in ice detection devices pursuant to the general license in paragraph (a) of this section:

(1) Shall, upon occurrence of visually observable damage, such as a bend or crack or discoloration from overheating, to the device, discontinue use of the device until it has been inspected, tested for leakage and repaired by a person holding a specific license pursuant to part 30 or 32 of this chapter or from an Agreement State to manufacture or service such devices; or shall dispose of the device pursuant to the provisions of § 20.2001.

(2) Shall assure that all labels affixed to the device at the time of receipt, and which bear a statement which prohibits removal of the labels, are maintained thereon;

(3) Are exempt from the requirements of parts 19, 20, and 21, of this chapter except that such persons shall comply with the provisions of §§ 20.2001, 20.2201, and 20.2202 of this chapter.

(c) The general license does not authorize the manufacture, assembly, disassembly, repair, or import of strontium 90 in ice detection devices.

[30 FR 9905, Aug. 10, 1965, as amended at 38 FR 22220, Aug. 17, 1973; 40 FR 8785, Mar. 3, 1975; 42 FR 28896, June 6, 1977; 43 FR 6922, Feb. 17, 1978; 56 FR 23471, May 21, 1991; 56 FR 61352, Dec. 3, 1991; 58 FR 67659, Dec. 22, 1993]

§ 31.11 General license for use of byproduct material for certain in vitro clinical or laboratory testing.

[Top of File]

(a) A general license is hereby issued to any physician, veterinarian in the practice of veterinary medicine, clinical laboratory or hospital to receive, acquire, possess, transfer, or use, for any of the following stated tests, in accordance with the provisions of paragraphs (b), (c), (d), (e), and (f) of this section, the following byproduct materials in prepackaged units:

(1) Iodine-125, in units not exceeding 10 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration of byproduct material, or the radiation therefrom, to human beings or animals.

(2) Iodine-131, in units not exceeding 10 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration of byproduct material, or the radiation therefrom, to human beings or animals.

(3) Carbon-14, in units not exceeding 10 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration of byproduct material, or the radiation therefrom, to human beings or animals.

(4) Hydrogen-3 (tritium), in units not exceeding 50 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration of byproduct material, or the radiation therefrom, to human beings or animals.

(5) Iron-59, in units not exceeding 20 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration of byproduct material, or the radiation therefrom, to human beings, or animals.

(6) Selenium-75, in units not exceeding 10 microcuries each for use in in vitro clinical or laboratory tests not involving internal or external administration of byproduct material, or the radiation therefrom, to human beings or animals.

(7) Mock Iodine-125 reference or calibration sources, in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each for use in in vitro clinical or laboratory tests not involving internal or external administration of byproduct material, or the radiation therefrom, to human beings or animals.

(8) Cobalt-57, in units not exceeding 0.37 megabecquerel (10 microcuries) each for use in in vitro clinical or laboratory tests not involving internal or external administration of byproduct material, or the radiation therefrom, to human beings or animals.

(b) A person shall not receive, acquire, possess, use, or transfer byproduct material under the general license established by paragraph (a) of this section unless that person:

(1) Has filed NRC Form 483, "Registration Certificate—In Vitro Testing with Byproduct Material Under General License," with the Director, Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 30.6(a) of this chapter, and has received from the Commission a validated copy of NRC Form 483 with a registration number assigned; or

(2) Has a license that authorizes the medical use of byproduct material that was issued under part 35 of this chapter.

(c) A person who receives, acquires, possesses, or uses byproduct material pursuant to the general license established by paragraph (a) of this section shall comply with the following:

(1) The general licensee shall not possess at any one time, under the general license in paragraph (a) of this section, at any one location of storage or use, a total amount of iodine-125, iodine-131, selenium-75, cobalt-57 and/or iron-59 in excess of 7.4 megabecquerels (200 microcuries).

(2) The general licensee shall store the byproduct material, until used, in the original shipping container or in a container providing equivalent radiation protection.

(3) The general licensee shall use the byproduct material only for the uses authorized by paragraph (a) of this section.

(4) The general licensee shall not transfer the byproduct material except by transfer to a person authorized to receive it by a license pursuant to this chapter or from an Agreement State, nor transfer the byproduct material in any manner other than in the unopened, labeled shipping container as received from the supplier.

(5) The general licensee shall dispose of the Mock Iodine-125 reference or calibration sources described in paragraph (a)(7) of this section as required by § 20.2001.

(d) The general licensee shall not receive, acquire, possess, or use byproduct material pursuant to paragraph (a) of this section:

(1) Except as prepackaged units which are labeled in accordance with the provisions of a specific license issued under the provisions of § 32.71 of this chapter or in accordance with the provisions of a specific license issued by an Agreement State, or before November 30, 2007, and the provisions of a specific license issued by a State with comparable provisions to § 32.71 that authorize manufacture and distribution of iodine-125, iodine-131, carbon-14, hydrogen-3 (tritium), selenium-75, iron-59, cobalt-57, or Mock Iodine-125 for distribution to persons generally licensed by the Agreement State or the State with comparable provisions to § 32.71.

(2) Unless the following statement, or a substantially similar statement which contains the information called for in the following statement, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:[1]

> This radioactive material may be received, acquired, possessed, and used only by physicians, veterinarians in the practice of veterinary medicine, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority.
>
> (Name of Manufacturer)

(e) The registrant possessing or using byproduct materials under the general license of paragraph (a) of this section shall report in writing to the Director, Office of Federal and State Materials and Environmental Management Programs, any changes in the information furnished by him in the "Registration Certificate—In Vitro Testing With Byproduct Material Under General License." Form NRC–483. The report shall be furnished within 30 days after the effective date of such change.

(f) Any person using byproduct material pursuant to the general license of paragraph (a) of this section is exempt from the requirements of parts 19, 20, and 21, of this chapter with respect to byproduct materials covered by that general license, except that such persons using the Mock Iodine-125 described in paragraph (a)(7) of this section shall comply with the provisions of §§ 20.2001, 20.2201, and 20.2202.

[33 FR 16553, Nov. 14, 1968, as amended at 38 FR 1271, Jan. 11, 1973; 38 FR 34110, Dec. 11, 1973; 39 FR 26147, July 17, 1974; 40 FR 8785, Mar. 3, 1975; 41 FR 16446, Apr. 19, 1976; 42 FR 21604, Apr. 28, 1977; 42 FR 26987, May 26, 1977; 42 FR 28896, June 6, 1977; 44 FR 50325, Aug. 28, 1979; 51 FR 36967, Oct. 16, 1986; 56 FR 23471, May 21, 1991; 56 FR 61352, Dec. 3, 1991; 58 FR 67659, Dec. 22, 1993; 68 FR 58804, Oct. 10, 2003; 72 FR 55927 Oct. 1, 2007; 73 FR 5718, Jan. 31, 2008]

[1] Labels authorized by the regulations in effect on September 26, 1979, may be used until one year from September 27, 1979.

§ 31.12 General license for certain items and self-luminous products containing radium-226.

[Top of File]

(a) A general license is hereby issued to any person to acquire, receive, possess, use, or transfer, in accordance with the provisions of paragraphs (b), (c), and (d) of this section, radium-226 contained in the following products manufactured prior to November 30, 2007.

(1) Antiquities originally intended for use by the general public. For the purposes of this paragraph, antiquities mean products originally intended for use by the general public and distributed in the late 19th and early 20th centuries, such as radium emanator jars, revigators, radium water jars, radon generators, refrigerator cards, radium bath salts, and healing pads.

(2) Intact timepieces containing greater than 0.037 megabecquerel (1 microcurie), nonintact timepieces, and timepiece hands and dials no longer installed in timepieces.

(3) Luminous items installed in air, marine, or land vehicles.

(4) All other luminous products, provided that no more than 100 items are used or stored at the same location at any one time.

(5) Small radium sources containing no more than 0.037 megabecquerel (1 microcurie) of radium-226. For the purposes of this paragraph, "small radium sources" means discrete survey instrument check sources, sources contained in radiation measuring instruments, sources used in educational demonstrations (such as cloud chambers and spinthariscopes), electron tubes, lightning rods, ionization sources, static eliminators, or as designated by the NRC.

(b) Persons who acquire, receive, possess, use, or transfer byproduct material under the general license issued in paragraph (a) of this section are exempt from the provisions of 10 CFR parts 19, 20, and 21, and § 30.50 and 30.51 of this chapter, to the extent that the receipt, possession, use, or transfer of byproduct material is within the terms of the general license; provided, however, that this exemption shall not be deemed to apply to any such person specifically licensed under this chapter.

(c) Any person who acquires, receives, possesses, uses, or transfers byproduct material in accordance with the general license in paragraph (a) of this section:

(1) Shall notify the NRC should there be any indication of possible damage to the product so that it appears it could result in a loss of the radioactive material. A report containing a brief description of the event, and the remedial action taken, must be furnished to the Director of the Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001 within 30 days.

(2) Shall not abandon products containing radium-226. The product, and any radioactive material from the product, may only be disposed of according to § 20.2008 of this chapter or by transfer to a person authorized by a specific license to receive the radium-226 in the product or as otherwise approved by the NRC.

(3) Shall not export products containing radium-226 except in accordance with part 110 of this chapter.

(4) Shall dispose of products containing radium-226 at a disposal facility authorized to dispose of radioactive material in accordance with any Federal or State solid or hazardous waste law, including the Solid Waste Disposal Act, as authorized under the Energy Policy Act of 2005, by transfer to a person authorized to receive radium-226 by a specific license issued under part 30 of this chapter, or equivalent regulations of an Agreement State, or as otherwise approved by the NRC.

(5) Shall respond to written requests from the NRC to provide information relating to the general license within 30 calendar days of the date of the request, or other time specified in the request. If the general licensee cannot provide the requested information within the allotted time, it shall, within that same time period, request a longer period to supply the information by providing the Director of the Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 30.6(a) of this chapter, a written justification for the request.

(d) The general license in paragraph (a) of this section does not authorize the manufacture, assembly, disassembly, repair, or import of products containing radium-226, except that timepieces may be disassembled and repaired.

[53 FR 19246, May 27, 1988; 72 FR 55927 Oct. 1, 2007]

§ 31.13 [Reserved].

[Top of File]

[57 FR 55072, Nov. 24, 1992; 72 FR 55927 Oct. 1, 2007]

§ 31.14 [Reserved].

[Top of File]

[57 FR 55073, Nov. 24, 1992; 72 FR 55927 Oct. 1, 2007]

§ 31.15 [Reserved].

[Top of File]

[72 FR 55927 Oct. 1, 2007]

§ 31.16 [Reserved].

[Top of File]

[72 FR 55927 Oct. 1, 2007]

§ 31.17 [Reserved].

[Top of File]

[72 FR 55927 Oct. 1, 2007]

§ 31.18 [Reserved].

[Top of File]

[72 FR 55927 Oct. 1, 2007]

§ 31.19 [Reserved].

[Top of File]

[72 FR 55927 Oct. 1, 2007]

§ 31.20 [Reserved].

[Top of File]

[72 FR 55927 Oct. 1, 2007]

§ 31.21 Maintenance of records.

[Top of File]

Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as letters, stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[72 FR 55927 Oct. 1, 2007]

§ 31.22 Violations.

[Top of File]

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[72 FR 55927 Oct. 1, 2007]

§ 31.23 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 31 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 31 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 31.1, 31.2, 31.3, 31.4, 31.9, 31.13, and 31.14.

[72 FR 55927 Oct. 1, 2007]

PART 32--SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL

[Top of File]

§ 32.1 Purpose and scope.

[Top of File]

(a) This part prescribes requirements for the issuance of specific licenses to persons who manufacture or initially transfer items containing byproduct material for sale or distribution to:

(1) Persons exempted from the licensing requirements of part 30 of this chapter, or

(2) Persons generally licensed under part 31 or 35 of this chapter.

This part also prescribes certain regulations governing holders of these licenses. In addition, this part prescribes requirements for the issuance of specific licenses to persons who introduce byproduct material into a product or material owned by or in the possession of the licensee or another and regulations governing holders of such licenses. Further, this part describes procedures and prescribes requirements for the issuance of certificates of registration (covering radiation safety information about a product) to manufacturers or initial transferors of sealed source or devices containing sealed sources which are to be used by persons specifically licensed under part 30 of this chapter or equivalent regulations of an Agreement State.

(b) The provisions and requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In particular, the provisions of part 30 of this chapter apply to applications, licenses and certificates of registration subject to this part.

(c)(1) The requirements in this part, including provisions that are specific to licensees, shall apply to Government agencies and Federally recognized Indian Tribes with respect to accelerator-produced radioactive material or discrete sources of radium-226 on November 30, 2007 except that the agency or tribe may continue to manufacture or initially transfer items containing accelerator-produced radioactive material or discrete sources of radium-226 for sale or distribution to persons exempted from the licensing requirements of part 30 of this chapter, and to persons generally licensed under part 31 of this chapter, and radioactive drugs and sources and devices to medical use licensees, until the date of the NRC's final licensing determination, provided that the agency or tribe submits a new license application for these activities on or before December 1, 2008 or an amendment application for these activities on or before June 2, 2008.

(2) The requirements in this part, including provisions that are specific to licensees, shall apply to all persons other than those included in paragraph (c)(1) of this section with respect to accelerator-produced radioactive material or discrete sources of radium-226 on August 8, 2009, or earlier as noticed by the NRC, except that these persons may continue to manufacture or initially transfer items containing accelerator-produced radioactive material or discrete sources of radium-226 for sale or distribution to persons exempted from the licensing requirements of part 30 of this chapter, and to persons generally licensed under part 31 of this chapter, and to sell or manufacture radioactive drugs and sources and devices to medical use licensees until the date of the NRC's final licensing determination, provided that the person submits a license application within 12 months from the waiver expiration date of August 7, 2009 or within 12 months from the date of an earlier termination of the waiver as noticed by the NRC, whichever is earlier; or that the person submits an amendment request within 6 months from the waiver expiration date of August 7, 2009 or within 6 months from the date of an earlier termination of the waiver as noticed by the NRC, whichever date is earlier.

[30 FR 8192, June 26, 1965, as amended at 52 FR 27786, July 24, 1987; 63 FR 1896, Jan. 13, 1998; 72 FR 55928 Oct. 1, 2007]

§ 32.2 Definitions.

[Top of File]

As used in this part:

Dose commitment means the total radiation dose to a part of the body that will result from retention in the body of radioactive material. For purposes of estimating the dose commitment, it is assumed that from the time of intake the period of exposure to retained material will not exceed 50 years.

Lot Tolerance Percent Defective means, expressed in percent defective, the poorest quality in an individual inspection lot that should be accepted.

Nationally tracked source is a sealed source containing a quantity equal to or greater than Category 1 or Category 2 levels of any radioactive material listed in Appendix E to part 20 of this Chapter. In this context a sealed source is defined as radioactive material that is sealed in a capsule or closely bonded, in a solid form and which is not exempt from regulatory control. It does not mean material encapsulated solely for disposal, or nuclear material contained in any fuel assembly, subassembly, fuel rod, or fuel pellet. Category 1 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 1 threshold. Category 2 nationally tracked sources are those containing radioactive material at a quantity equal to or greater than the Category 2 threshold but less than the Category 1 threshold.

[34 FR 6653, Apr. 18, 1969, as amended at 39 FR 22129, June 20, 1974; 71 FR 65686, Nov. 8, 2006]

§ 32.3 Maintenance of records.

[Top of File]

Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy of a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[53 FR 19246, May 27, 1988]

§ 32.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0001.

(b) The approved information collection requirements contained in this part appear in §§ 32.11, 32.12, 32.14, 32.15, 32.16, 32.18, 32.19, 32.20, 32.21, 32.21a, 32.22, 32.23, 32.25, 32.26, 32.27, 32.29, 32.51, 32.51a, 32.52, 32.53, 32.54, 32.55, 32.56, 32.57, 32.58, 32.61, 32.62, 32.71, 32.72, 32.74, and 32.210.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 32.11, NRC Form 313 is approved under control number 3150-0120.

(2) [Reserved]

[49 FR 19625, May 9, 1984, as amended at 59 FR 61780, Dec. 2, 1994; 62 FR 52186, Oct. 6 1997; 62 FR 63640, Dec. 2, 1997; 72 FR 58486, Oct. 16, 2007]

Subpart A--Exempt Concentrations and Items

[Top of File]

§ 32.11 Introduction of byproduct material in exempt concentrations into products or materials, and transfer of ownership or possession: Requirements for license.

An application for a specific license on Form NRC-313 authorizing the introduction of byproduct material into a product or material owned by or in the possession of the licensee or another and the transfer of ownership or possession of the product or material containing the byproduct material will be approved if the applicant:

(a) Satisfies the general requirements specified in § 30.33 of this chapter; *provided, however*, that the requirements of § 30.33(a)(2) and (3) do not apply to an application for a license to introduce byproduct material into a product or material owned by or in the possession of the licensee or another and the transfer of ownership or possession of the product or material containing the byproduct material, if the possession and use of the byproduct material to be introduced is authorized by a license issued by an Agreement State;

(b) Provides a description of the product or material into which the byproduct material will be introduced, intended use of the byproduct material and the product or material into which it is introduced, method of introduction, initial concentration of the byproduct material in the product or material, control methods to assure that no more than the specified concentration is introduced into the product or material, estimated time interval between introduction and transfer of the product or material, and estimated concentration of the radioisotopes in the product or material at the time of transfer; and

(c) Provides reasonable assurance that the concentrations of byproduct material at the time of transfer will not exceed the concentrations in § 30.70 of this chapter, that reconcentration of the byproduct material in concentrations exceeding those in § 30.70 is not likely, that use of lower concentrations is not feasible, and that the product or material is not likely to be incorporated in any food, beverage, cosmetic, drug or other commodity or product designed for ingestion or inhalation by, or application to, a human being.

[30 FR 8192, June 26, 1965, as amended at 49 FR 19625, May 9, 1984; 72 FR 58487, Oct. 16, 2007]

§ 32.12 Same: Records and material transfer reports.

[Top of File]

(a) Each person licensed under § 32.11 shall maintain records of transfer of byproduct material and file a report with the Director of the Office of Federal and State Materials and Environmental Management Programs by an appropriate method listed in § 30.6(a) of this chapter, including in the address: ATTN: Document Control Desk/Exempt Distribution.

(1) The report must clearly identify the specific licensee submitting the report and include the license number of the specific licensee.

(2) The report must indicate that the byproduct material is transferred for use under § 30.14 of this chapter or equivalent regulations of an Agreement State.

(b) The report must identify the:

(1) Type and quantity of each product or material into which byproduct material has been introduced during the reporting period;

(2) Name and address of the person who owned or possessed the product or material, into which byproduct material has been introduced, at the time of introduction;

(3) The type and quantity of radionuclide introduced into each product or material; and

(4) The initial concentrations of the radionuclide in the product or material at time of transfer of the byproduct material by the licensee.

(c)(1) The licensee shall file the report, covering the preceding calendar year, on or before January 31 of each year. In its first report after December 17, 2007, the licensee shall separately include data for transfers in prior years not previously reported to the Commission or to an Agreement State.

(2) Licensees who permanently discontinue activities authorized by the license issued under § 32.11 shall file a report for the current calendar year within 30 days after ceasing distribution.

(d) If no transfers of byproduct material have been made under § 32.11 during the reporting period, the report must so indicate.

(e) The licensee shall maintain the record of a transfer for one year after the transfer is included in a report to the Commission.

[48 FR 12333, Mar. 24, 1983; 48 FR 14863, Apr. 6, 1983; 68 FR 58804, Oct. 10, 2003; 72 FR 58487, Oct. 16, 2007; 73 FR 5719, Jan. 31, 2008; 73 FR 42673, July 23, 2008]

§ 32.13 Same: Prohibition of introduction.

[Top of File]

No person may introduce byproduct material into a product or material knowing or having reason to believe that it will be transferred to persons exempt under § 30.14 of this chapter or equivalent regulations of an Agreement State, except in accordance with a license issued under § 32.11.

[30 FR 8192, June 26, 1965; 72 FR 58487, Oct. 16, 2007]

§ 32.14 Certain items containing byproduct material; requirements for license to apply or initially transfer.

[Top of File]

An application for a specific license to apply byproduct material to, or to incorporate byproduct material into, the products specified in § 30.15 of this chapter or to initially transfer for sale or distribution such products containing byproduct material for use pursuant to § 30.15 of this chapter will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter;

(b) The applicant submits sufficient information regarding the product pertinent to evaluation of the potential radiation exposure, including:

(1) Chemical and physical form and maximum quantity of byproduct material in each product;

(2) Details of construction and design of each product;

(3) The method of containment or binding of the byproduct material in the product;

(4) Procedures for and results of prototype testing to demonstrate that the material will not become detached from the product and that the byproduct material will not be released to the environment under the most severe conditions likely to be encountered in normal use of the product;

(5) Quality control procedures to be followed in the fabrication of production lots of the product and the quality control standards the product will be required to meet;

(6) The proposed method of labeling or marking each unit, except timepieces or hands or dials containing tritium or promethium-147, and its container with the identification of the manufacturer or initial transferor of the product and the byproduct material in the product;

(7) For products for which limits on levels of radiation are specified in § 30.15 of this chapter, the radiation level and the method of measurement;

(8) Any additional information, including experimental studies and tests, required by the Commission to facilitate a determination of the safety of the product.

(c) Each product will contain no more than the quantity of byproduct material specified for that product in § 30.15 of this chapter. The levels of radiation from each product containing byproduct material will not exceed the limits specified for that product in § 30.15 of this chapter.

(d) The Commission determines that the byproduct material is properly contained in the product under the most severe conditions that are likely to be encountered in normal use and handling.

[31 FR 5316, Apr. 2, 1966, as amended at 34 FR 6652, Apr. 18, 1969; 43 FR 6922, Feb. 17, 1978; 63 FR 32971, June 17, 1998; 72 FR 58487, Oct. 16, 2007]

§ 32.15 Same: Quality assurance, prohibition of transfer, and labeling.

[Top of File]

(a) Each person licensed under § 32.14 shall:

(1) Maintain quality assurance practices in the manufacture of the part or product, or the installation of the part into the product;

(2) Subject inspection lots to such testing as may be required as a condition of the license issued under § 32.14 taking a random sample of the size required by the tables in § 32.110, and for Lot Tolerance Percent Defective of 5.0 percent, accept or reject inspection lots in accordance with the directions of § 32.110; and

(3) Visually inspect each unit, except electron tubes containing byproduct material, in inspection lots. Any unit which has an observable physical defect that could affect containment of the byproduct material shall be considered as a defective unit.

(b) An application for a license or for amendment of a license may include a description of procedures proposed as alternatives to those prescribed by paragraph (a)(2) of this section, and proposed criteria for acceptance under those procedures. The Commission will approve the proposed alternative procedures if the applicant demonstrates that the operating characteristic curve or confidence interval estimate for the alternative procedures provides a Lot Tolerance Percent Defective of 5.0 percent at the consumer's risk of 0.10.

(c) No person licensed under § 32.14 shall transfer to other persons for use under § 30.15 of this chapter or equivalent regulations of an Agreement State:

(1) Any part or product which has been tested and found defective under the criteria and procedures specified in the license issued under § 32.14, unless the defective units have been repaired or reworked and have then met such criteria as may be required as a condition of the license issued under § 32.14; or

(2) Any inspection lot which has been rejected as a result of the procedures in § 32.110 or alternative procedures in paragraph (b) of this section, unless the defective units have been sorted and removed or have been repaired or reworked and have then met such criteria as may be required as a condition of the license issued under § 32.14.

(d)(1) Label or mark each unit, except timepieces or hands or dials containing tritium or promethium-147, and its container so that the manufacturer or initial transferor of the product and the byproduct material in the product can be identified.

(2) For ionization chamber smoke detectors, label or mark each detector and its point-of-sale package so that:

(i) Each detector has a durable, legible, readily visible label or marking on the external surface of the detector containing:

(A) The following statement: "CONTAINS RADIOACTIVE MATERIAL";

(B) The name of the radionuclide ("americium-241" or "Am-241") and the quantity of activity; and

(C) An identification of the person licensed under § 32.14 to transfer the detector for use under § 30.15(a)(7) of this chapter or equivalent regulations of an Agreement State.

(ii) The labeling or marking specified in paragraph (d)(2)(i) of this section is located where it will be readily visible when the detector is removed from its mounting.

(iii) The external surface of the point-of-sale package has a legible, readily visible label or marking containing:

(A) The name of the radionuclide and quantity of activity;

(B) An identification of the person licensed under § 32.14 to transfer the detector for use under § 30.15(a)(7) or equivalent regulations of an Agreement State; and

(C) The following or a substantially similar statement: "THIS DETECTOR CONTAINS RADIOACTIVE MATERIAL. THE PURCHASER IS EXEMPT FROM ANY REGULATORY REQUIREMENTS."

(iv) Each detector and point-of-sale package is provided with such other information as may be required by the Commission.

[31 FR 5317, Apr. 2, 1966, as amended at 34 FR 6652, Apr. 18, 1969; 39 FR 22129, June 20, 1974; 43 FR 6922, Feb. 17, 1978; 72 FR 58487, Oct. 16, 2007; 73 FR 42673, July 23, 2008]

§ 32.16 Certain items containing byproduct material: Records and reports of transfer.

[Top of File]

(a) Each person licensed under § 32.14 shall maintain records of all transfers of byproduct material and file a report with the Director of the Office of Federal and State Materials and Environmental Management Programs by an appropriate method listed in § 30.6(a) of this chapter, including in the address: ATTN: Document Control Desk/Exempt Distribution.

(1) The report must clearly identify the specific licensee submitting the report and include the license number of the specific licensee.

(2) The report must indicate that the products are transferred for use under § 30.15 of this chapter, giving the specific paragraph designation, or equivalent regulations of an Agreement State.

(b) The report must include the following information on products transferred to other persons for use under § 30.15 or equivalent regulations of an Agreement State:

(1) A description or identification of the type of each product and the model number(s), if applicable;

(2) For each radionuclide in each type of product and each model number, if applicable, the total quantity of the radionuclide; and

(3) The number of units of each type of product transferred during the reporting period by model number, if applicable.

(c)(1) The licensee shall file the report, covering the preceding calendar year, on or before January 31 of each year. In its first report after December 17, 2007, the licensee shall separately include data for transfers in prior years not previously reported to the Commission.

(2) Licensees who permanently discontinue activities authorized by the license issued under § 32.14 shall file a report for the current calendar year within 30 days after ceasing distribution.

(d) If no transfers of byproduct material have been made under § 32.14 during the reporting period, the report must so indicate.

(e) The licensee shall maintain the record of a transfer for one year after the transfer is included in a report to the Commission.

[48 FR 12333, Mar. 24, 1983; 48 FR 23383, May 25, 1983; 68 FR 58804, Oct. 10, 2003; 72 FR 58487, Oct. 16, 2007; 73 FR 5719, Jan. 31, 2008; 73 FR 42673, Jul. 23, 2008]

§ 32.17 [Removed].

[Top of File]

[32 FR 4241, Mar. 18, 1967, as amended by 38 FR 29314, Oct. 24, 1973; 43 FR 6922, Feb. 17, 1978; 72 FR 58488, Oct. 16, 2007]

§ 32.18 Manufacture, distribution and transfer of exempt quantities of byproduct material: Requirements for license.

[Top of File]

An application for a specific license to manufacture, process, produce, package, repackage, or transfer quantities of byproduct material for commercial distribution to persons exempt pursuant to § 30.18 of this chapter or the equivalent regulations of an Agreement State will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter: *Provided, however,* That the requirements of § 30.33(a) (2) and (3) of this chapter do not apply to an application for a license to transfer byproduct material manufactured, processed, produced, packaged, or repackaged pursuant to a license issued by an Agreement State;

(b) The byproduct material is not contained in any food, beverage, cosmetic, drug, or other commodity designed for ingestion or inhalation by, or application to, a human being;

(c) The byproduct material is in the form of processed chemical elements, compounds, or mixtures, tissue samples, bioassay samples, counting standards, plated or encapsulated sources, or similar substances, identified as radioactive and to be used for its radioactive properties, but is not incorporated into any manufactured or assembled commodity, product, or device intended for commercial distribution; and

(d) The applicant submits copies of prototype labels and brochures and the Commission approves such labels and brochures.

[35 FR 6428, Apr. 22, 1970, as amended at 43 FR 6922, Feb. 17, 1978]

§ 32.19 Same: Conditions of licenses.

[Top of File]

Each license issued under § 32.18 is subject to the following conditions:

(a) No more than 10 exempt quantities set forth in § 30.71, Schedule B of this chapter shall be sold or transferred in any single transaction. For purposes of this requirement, an individual exempt quantity may be composed of fractional parts of one or more of the exempt quantities in § 30.71, Schedule B of this chapter, provided that the sum of such fractions shall not exceed unity.

(b) Each quantity of byproduct material set forth in § 30.71, Schedule B of this chapter shall be separately and individually packaged. No more than 10 such packaged exempt quantities shall be contained in any outer package for transfer to persons exempt pursuant to § 30.18 of this chapter. The outer package shall be such that the dose rate at the external surface of the package does not exceed 0.5 millirem per hour.

(c) The immediate container of each quantity or separately packaged fractional quantity of byproduct material shall bear a durable, legible label which (1) identifies the radioisotope and the quantity of radioactivity, and (2) bears the words "Radioactive Material."

(d) In addition to the labeling information required by paragraph (c) of this section, the label affixed to the immediate container, or an accompanying brochure, shall also (1) state that the contents are exempt from NRC or Agreement State licensing requirements; (2) bear the words "Radioactive Material--Not for Human Use--Introduction Into Foods, Beverages, Cosmetics, Drugs, or Medicinals, or Into Products Manufactured for Commercial Distribution is Prohibited -- Exempt Quantities Should Not be Combined"; and (3) set forth appropriate additional radiation safety precautions and instructions relating to the handling, use, storage, and disposal of the radioactive material.

[35 FR 6428, Apr. 22, 1970]

§ 32.20 Same: Records and material transfer reports.

[Top of File]

(a) Each person licensed under § 32.18 shall maintain records of transfer of material identifying, by name and address, each person to whom byproduct material is transferred for use under § 30.18 of this chapter or the equivalent regulations of an Agreement State and stating the kinds, quantities, and physical form of byproduct material transferred.

(b) The licensee shall file a summary report with the Director of the Office of Federal and State Materials and Environmental Management Programs by an appropriate method listed in § 30.6(a) of this chapter, including in the address: ATTN: Document Control Desk/Exempt Distribution.

(1) The report must clearly identify the specific licensee submitting the report and include the license number of the specific licensee.

(2) The report must indicate that the materials are transferred for use under § 30.18 or equivalent regulations of an Agreement State.

(c) For each radionuclide in each physical form, the report shall indicate the total quantity of each radionuclide and the physical form, transferred under the specific license.

(d)(1) The licensee shall file the report, covering the preceding calendar year, on or before January 31 of each year. In its first report after December 17, 2007, the licensee shall separately include the total quantity of each radionuclide transferred for transfers in prior years not previously reported to the Commission.

(2) Licensees who permanently discontinue activities authorized by the license issued under § 32.18 shall file a report for the current calendar year within 30 days after ceasing distribution.

(e) If no transfers of byproduct material have been made under § 32.18 during the reporting period, the report must so indicate.

(f) The licensee shall maintain the record of a transfer for one year after the transfer is included in a summary report to the Commission.

[48 FR 12333, Mar. 24, 1983; 68 FR 58804, Oct. 10, 2003; 72 FR 58488, Oct. 16, 2007; 73 FR 5719, Jan. 31, 2008; 73 FR 42673, Jul. 23, 2008]

§ 32.21 Radioactive drug: Manufacture, preparation, or transfer for commercial distribution of capsules containing carbon-14 urea each for "in vivo" diagnostic use for humans to persons exempt from licensing; Requirements for a license.

[Top of File]

(a) An application for a specific license to manufacture, prepare, process, produce, package, repackage, or transfer for commercial distribution capsules containing 37 kBq (1 µCi) carbon-14 urea (allowing for nominal variation that may occur during the manufacturing process) each for "in vivo" diagnostic use, to persons exempt from licensing under § 30.21 of this chapter or the equivalent regulations of an Agreement State will be approved if:

(1) The applicant satisfies the general requirements specified in § 30.33 of this chapter, provided that the requirements of § 30.33(a)(2) and (3) of this chapter do not apply to an application for a license to transfer byproduct material manufactured, prepared, processed, produced, packaged, or repackaged pursuant to a license issued by an Agreement State;

(2) The applicant meets the requirements under § 32.72(a)(2) of this part;

(3) The applicant provides evidence that each capsule contains 37 kBq (1 µCi) carbon-14 urea (allowing for nominal variation that may occur during the manufacturing process);

(4) The carbon-14 urea is not contained in any food, beverage, cosmetic, drug (except as described in this section) or other commodity designed for ingestion or inhalation by, or topical application to, a human being;

(5) The carbon-14 urea is in the form of a capsule, identified as radioactive, and to be used for its radioactive properties, but is not incorporated into any manufactured or assembled commodity, product, or device intended for commercial distribution; and

(6) The applicant submits copies of prototype labels and brochures and the NRC approves these labels and brochures.

(b) Nothing in this section relieves the licensee from complying with applicable FDA, other Federal, and State requirements governing drugs.

[62 FR 63640, Dec. 2, 1997, as amended at 66 FR 64738, Dec. 14, 2001]

§ 32.21a Same: Conditions of license.

[Top of File]

Each license issued under § 32.21 of this part is subject to the following conditions:

(a) The immediate container of the capsule(s) must bear a durable, legible label which:

(1) Identifies the radioisotope, the physical and chemical form, the quantity of radioactivity of each capsule at a specific date; and

(2) Bears the words "Radioactive Material."

(b) In addition to the labeling information required by paragraph (a) of this section, the label affixed to the immediate container, or an accompanying brochure also must:

(1) State that the contents are exempt from NRC or Agreement State licensing requirements; and

(2) Bears the words "Radioactive Material. For "In Vivo" Diagnostic Use Only. This Material Is Not To Be Used for Research Involving Human Subjects and Must Not Be Introduced into Foods, Beverages, Cosmetics, or Other Drugs or Medicinals, or into Products Manufactured for Commercial Distribution. This Material May Be Disposed
of in Ordinary Trash."

[62 FR 63640, Dec. 2, 1997]

§ 32.22 Self-luminous products containing tritium, krypton-85 or promethium-147: Requirements for license to manufacture, process, produce, or initially transfer.

[Top of File]

(a) An application for a specific license to manufacture, process, or produce self-luminous products containing tritium, krypton-85, or promethium-147, or to initially transfer such products for use pursuant to § 30.19 of this chapter or equivalent regulations of an Agreement State, will be approved if:

(1) The applicant satisfies the general requirements specified in § 30.33 of this chapter: *Provided, however*, That the requirements of § 30.33(a) (2) and (3) do not apply to an application for a license to transfer tritium, krypton-85, or promethium-147 in self-luminous products manufactured, processed, or produced pursuant to a license issued by an Agreement State.

(2) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, and conditions of handling, storage, use, and disposal of the self-luminous product to demonstrate that the product will meet the safety criteria set forth in § 32.23. The information should include:

(i) A description of the product and its intended use or uses.

(ii) The type and quantity of byproduct material in each unit.

(iii) Chemical and physical form of the byproduct material in the product and changes in chemical and physical form that may occur during the useful life of the product.

(iv) Solubility in water and body fluids of the forms of the byproduct material identified in paragraphs (a)(2) (iii) and (xii) of this section.

(v) Details of construction and design of the product as related to containment and shielding of the byproduct material and other safety features under normal and severe conditions of handling, storage, use, and disposal of the product.

(vi) Maximum external radiation levels at 5 and 25 centimeters from any external surface of the product, averaged over an area not to exceed 10 square centimeters, and the method of measurement.

(vii) Degree of access of human beings to the product during normal handling and use.

(viii) Total quantity of byproduct material expected to be distributed in the product annually.

(ix) The expected useful life of the product.

(x) The proposed method of labeling or marking each unit with identification of the manufacturer or initial transferor of the product and the byproduct material in the product.

(xi) Procedures for prototype testing of the product to demonstrate the effectiveness of the containment, shielding, and other safety features under both normal and severe conditions of handling, storage, use, and disposal of the product.

(xii) Results of the prototype testing of the product, including any change in the form of the byproduct material contained in the product, the extent to which the byproduct material may be released to the environment, any increase in external radiation levels, and any other changes in safety features.

(xiii) The estimated external radiation doses and dose commitments relevant to the safety criteria in § 32.23 and the basis for such estimates.

(xiv) A determination that the probabilities with respect to the doses referred to in § 32.23(d) meet the criteria of that paragraph.

(xv) Quality control procedures to be followed in the fabrication of production lots of the product and the quality control standards the product will be required to meet.

(xvi) Any additional information, including experimental studies and tests, required by the Commission.

(b) Notwithstanding the provisions of paragraph (a) of this section, the Commission may deny an application for a specific license under this section if the end uses of the product cannot be reasonably foreseen.

[34 FR 9026, June 6, 1969, as amended at 43 FR 6923, Feb. 17, 1978]

§ 32.23 Same: Safety criteria.

[Top of File]

An applicant for a license under § 32.22 shall demonstrate that the product is designed and will be manufactured so that:

(a) In normal use and disposal of a single exempt unit, it is unlikely that the external radiation dose in any one year, or the dose commitment resulting from the intake of radioactive material in any one year, to a suitable sample of the group of individuals expected to be most highly exposed to radiation or radioactive material from the product will exceed the dose to the appropriate organ as specified in Column I of the table in § 32.24 of this part.

(b) In normal handling and storage of the quantities of exempt units likely to accumulate in one location during marketing, distribution, installation, and servicing of the product, it is unlikely that the external radiation dose in any one year, or the dose commitment resulting from the intake of radioactive material in any one year, to a suitable sample of the group of individuals expected to be most highly exposed to radiation or radioactive material from the product will exceed the dose to the appropriate organ as specified in Column II of the table in § 32.24.

(c) It is unlikely that there will be a significant reduction in the effectiveness of the containment, shielding, or other safety features of the product from wear and abuse likely to occur in normal handling and use of the product during its useful life.

(d)[1] In use and disposal of a single exempt unit, or in handling and storage of the quantities of exempt units likely to accumulate in one location during marketing, distribution, installation, and servicing of the product, the probability is low that the containment, shielding, or other safety features of the product would fail under such circumstances that a person would receive an external radiation dose or dose commitment in excess of the dose to the appropriate organ as specified in Column III of the table in § 32.24, and the probability is negligible that a person would receive an external radiation dose or dose commitment in excess of the dose to the appropriate organ as specified in Column IV of the table in § 32.24.

Negligible--not more than one such failure per year for each 1 million exempt units distributed.

[34 FR 9027, June 6, 1969]

[1] It is the intent of this paragraph that as the magnitude of the potential dose increases above that permitted under normal conditions, the probability that any individual will receive such a dose must decrease. The probabilities have been expressed in general terms to emphasize the approximate nature of the estimates which are to be made. The following values may be used as guides in estimating compliance with the criteria:
Low--not more than one such failure per year for each 10,000 exempt units distributed.

§ 32.24 Same: Table of organ doses.

[Top of File]

Part of body	Column 1 (rem)	Column II (rem)	Column III (rem)	Column IV (rem)
Whole body; head and trunk; active blood-forming organs; gonads; or lens of eye	0.001	0.01	0.5	15
Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than 1 square centimeter	0.015	0.15	7.5	200
Other organs	0.003	0.03	1.5	50

[34 FR 9329, June 13, 1969]

§ 32.25 Conditions of licenses issued under § 32.22: Quality control, labeling, and reports of transfer.

[Top of File]

Each person licensed under § 32.22 shall:

(a) Carry out adequate control procedures in the manufacture of the product to assure that each production lot meets the quality control standards approved by the Commission;

(b) Label or mark each unit so that the manufacturer, processor, producer, or initial transferor of the product and the byproduct material in the product can be identified; and

(c) Maintain records of all transfers and file a report with the Director of the Office of Federal and State Materials and Environmental Management Programs by an appropriate method listed in § 30.6(a) of this chapter, including in the address: ATTN: Document Control Desk/Exempt Distribution.

(1) The report must clearly identify the specific licensee submitting the report and include the license number of the specific licensee.

(2) The report must indicate that the products are transferred for use under § 30.19 of this chapter or equivalent regulations of an Agreement State.

(3) The report must include the following information on products transferred to other persons for use under § 30.19 or equivalent regulations of an Agreement State:

(i) A description or identification of the type of each product and the model number(s);

(ii) For each radionuclide in each type of product and each model number, the total quantity of the radionuclide;

(iii) The number of units of each type of product transferred during the reporting period by model number.

(4)(i) The licensee shall file the report, covering the preceding calendar year, on or before January 31 of each year. In its first report after December 17, 2007, the licensee shall separately include data for transfers in prior years not previously reported to the Commission.

(ii) Licensees who permanently discontinue activities authorized by the license issued under § 32.22 shall file a report for the current calendar year within 30 days after ceasing distribution.

(5) If no transfers of byproduct material have been made under § 32.22 during the reporting period, the report must so indicate.

(6) The licensee shall maintain the record of a transfer for one year after the transfer is included in a report to the Commission.

[34 FR 9027, June 6, 1969, as amended at 43 FR 6923, Feb. 17, 1978; 48 FR 12334, Mar. 24, 1983; 68 FR 58804, Oct. 10, 2003; 72 FR 58488, Oct. 16, 2007; 73 FR 5719, Jan. 31, 2008; 73 FR 42673, Jul. 23, 2008]

§ 32.26 Gas and aerosol detectors containing byproduct material: Requirements for license to manufacture, process, produce, or initially transfer.

[Top of File]

An application for a specific license to manufacture, process, or produce gas and aerosol detectors containing byproduct material and designed to protect life or property from fires and airborne hazards, or to initially transfer such products for use pursuant to § 30.20 of this chapter or equivalent regulations of an Agreement State, will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter: *Provided, however*, That the requirements of § 30.33(a) (2) and (3) do not apply to an application for a license to transfer byproduct material in gas and aerosol detectors manufactured, processed or produced pursuant to a license issued by an Agreement State.

(b) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, and conditions of handling, storage, use, and disposal of the gas and aerosol detector to demonstrate that the product will meet the safety criteria set forth in § 32.27. The information should include:

(1) A description of the product and its intended use or uses;

(2) The type and quantity of byproduct material in each unit;

(3) Chemical and physical form of the byproduct material in the product and changes in chemical and physical form that may occur during the useful life of the product;

(4) Solubility in water and body fluids of the forms of the byproduct material identified in paragraphs (b) (3) and (12) of this section;

(5) Details of construction and design of the product as related to containment and shielding of the byproduct material and other safety features under normal and severe conditions of handling, storage, use, and disposal of the product;

(6) Maximum external radiation levels at 5 and 25 centimeters from any external surface of the product, averaged over an area not to exceed 10 square centimeters, and the method of measurement;

(7) Degree of access of human beings to the product during normal handling and use;

(8) Total quantity of byproduct material expected to be distributed in the product annually;

(9) The expected useful life of the product;

(10) The proposed methods of labeling or marking the detector and its point-of-sale package to satisfy the requirements of § 32.29(b);

(11) Procedures for prototype testing of the product to demonstrate the effectiveness of the containment, shielding, and other safety features under both normal and severe conditions of handling, storage, use, and disposal of the product;

(12) Results of the prototype testing of the product, including any change in the form of the byproduct material contained in the product, the extent to which the byproduct material may be released to the environment, any increase in external radiation levels, and any other changes in safety features;

(13) The estimated external radiation doses and dose commitments relevant to the safety criteria in § 32.27 and the basis for such estimates;

(14) A determination that the probabilities with respect to the doses referred to in § 32.27(c) meet the criteria of that paragraph;

(15) Quality control procedures to be followed in the fabrication of production lots of the product and the quality control standards the product will be required to meet; and

(16) Any additional information, including experimental studies and tests, required by the Commission.

[34 FR 6653, Apr. 18, 1969, as amended at 43 FR 6923, Feb. 17, 1978; 45 FR 38342, June 9, 1980]

§ 32.27 Same: Safety criteria.

[Top of File]

An applicant for a license under § 32.26 shall demonstrate that the product is designed and will be manufactured so that:

(a) In normal use and disposal of a single exempt unit, and in normal handling and storage of the quantities of exempt units likely to accumulate in one location during marketing, distribution, installation, and servicing of the product, it is unlikely that the external radiation dose in any one year, or the dose commitment resulting from the intake of radioactive material in any one year, to a suitable sample of the group of individuals expected to be most highly exposed to radiation or radioactive material from the product will exceed the dose to the appropriate organ as specified in Column I of the table in § 32.28.

(b) It is unlikely that there will be a significant reduction in the effectiveness of the containment, shielding, or other safety features of the product from wear and abuse likely to occur in normal handling and use of the product during its useful life.

(c) In use and disposal of a single exempt unit and in handling and storage of the quantities of exempt units likely to accumulate in one location during marketing, distribution, installation, and servicing of the product, the probability is low that the containment, shielding, or other safety features of the product would fail under such circumstances that a person would receive an external radiation dose or dose commitment in excess of the dose to the appropriate organ as specified in Column II of the table in § 32.28, and the probability is negligible that a person would receive an external radiation dose or dose commitment in excess of the dose to the appropriate organ as specified in Column III of the table in § 32.28.[1]

[34 FR 6654, Apr. 18, 1969]

[1] It is the intent of this paragraph that as the magnitude of the potential dose increases above that permitted under normal conditions, the probability that any individual will receive such a dose must decrease. The probabilities have been expressed in general terms to emphasize the approximate nature of the estimates which are to be made. The following values may be used as guides in estimating compliance with the criteria:

Low--not more than one such failure per year for each 10,000 exempt units distributed.

Negligible--not more than one such failure per year for each one million exempt units distributed.

§ 32.28 Same: Table of organ doses

[Top of File]

Part of body	Column 1 (rem)	Column II (rem)	Column III (rem)

Whole body; head and trunk: active blood-forming organs; gonads; or lens of eye	0.005	0.5	15
Hands and forearms; feet and ankles; localized areas of skin averaged over areas no larger than 1 square centimeter	0.075	7.5	200
Other organs	0.015	1.5	50

[34 FR 6654, Apr. 18, 1969]

§ 32.29 Conditions of licenses issued under § 32.26: Quality control, labeling, and reports of transfer.

[Top of File]

Each person licensed under § 32.26 shall:

(a) Carry out adequate control procedures in the manufacture of the product to assure that each production lot meets the quality control standards approved by the Commission;

(b) Label or mark each detector and its point-of-sale package so that:

(1) Each detector has a durable, legible, readily visible label or marking on the external surface of the detector containing:

(i) The following statement: "CONTAINS RADIOACTIVE MATERIAL";

(ii) The name of the radionuclide and quantity of activity; and

(iii) An identification of the person licensed under § 32.26 to transfer the detector for use pursuant to § 30.20 of this chapter or equivalent regulations of an Agreement State.

(2) The labeling or marking specified in paragraph (b)(1) of this section is located where its will be readily visible when the detector is removed from its mounting.

(3) The external surface of the point-of-sale package has a legible, readily visible label or marking containing:

(i) The name of the radionuclide and quantity of activity;

(ii) An identification of the person licensed under § 32.26 to transfer the detector for use pursuant to § 30.20 of this chapter or equivalent regulations of an Agreement State; and

(iii) The following or a substantially similar statement:

THIS DETECTOR CONTAINS RADIOACTIVE MATERIAL AND HAS BEEN MANUFACTURED IN COMPLIANCE WITH U.S. NRC SAFETY CRITERIA IN 10 CFR 32.27. THE PURCHASER IS EXEMPT FROM ANY REGULATORY REQUIREMENTS.

(4) Each detector and point-of-sale package is provided with such other information as may be required by the Commission; and

(c) Maintain records of all transfers and file a report with the Director of the Office of Federal and State Materials and Environmental Management Programs by an appropriate method listed in § 30.6(a) of this chapter, including in the address: ATTN: Document Control Desk/Exempt Distribution.

(1) The report must clearly identify the specific licensee submitting the report and include the license number of the specific licensee.

(2) The report must indicate that the products are transferred for use under § 30.20 of this chapter or equivalent regulations of an Agreement State.

(3) The report must include the following information on products transferred to other persons for use under § 30.20 or equivalent regulations of an Agreement State:

(i) A description or identification of the type of each product and the model number(s);

(ii) For each radionuclide in each type of product and each model number, the total quantity of the radionuclide;

(iii) The number of units of each type of product transferred during the reporting period by model number.

(4)(i) The licensee shall file the report, covering the preceding calendar year, on or before January 31 of each year. In its first report after December 17, 2007, the licensee shall separately include data for transfers in prior years not

previously reported to the Commission.

(ii) Licensees who permanently discontinue activities authorized by the license issued under § 32.26 shall file a report for the current calendar year within 30 days after ceasing distribution.

(5) If no transfers of byproduct material have been made under § 32.26 during the reporting period, the report must so indicate.

(6) The licensee shall maintain the record of a transfer for one year after the transfer is included in a report to the Commission.

[34 FR 6654, Apr. 18, 1969, as amended at 43 FR 6923, Feb. 17, 1978; 45 FR 38342, June 9, 1980; 48 FR 12334, Mar. 24, 1983; 72 FR 58488, Oct. 16, 2007; 73 FR 5719, Jan. 31, 2008; 73 FR 42673, July 23, 2008]

§ 32.40 [Removed].

[Top of File]

[30 FR 8192, June 26, 1965, as amended at 31 FR 5317, Apr. 2, 1966; 43 FR 6923, Feb. 17, 1978; 72 FR 58489, Oct. 16, 2007]

Subpart B--Generally Licensed Items

[Top of File]

§ 32.51 Byproduct material contained in devices for use under § 31.5; requirements for license to manufacture, or initially transfer.

(a) An application for a specific license to manufacture, or initially transfer devices containing byproduct material to persons generally licensed under § 31.5 of this chapter or equivalent regulations of an Agreement State will be approved if:

(1) The applicant satisfies the general requirements of § 30.33 of this chapter;

(2) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control, labels, proposed uses, installation, servicing, leak testing, operating and safety instructions, and potential hazards of the device to provide reasonable assurance that:

(i) The device can be safely operated by persons not having training in radiological protection;

(ii) Under ordinary conditions of handling, storage, and use of the device, the byproduct material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive in 1 year a dose in excess of 10 percent of the annual limits specified in § 20.1201(a) of this chapter; and

(iii) Under accident conditions (such as fire and explosion) associated with handling, storage and use of the device, it is unlikely that any person would receive an external radiation dose or dose commitment in excess of the dose to the appropriate organ as specified in Column IV of the table in § 32.24.

(3) Each device bears a durable, legible, clearly visible label or labels approved by the Commission which contain in a clearly identified and separate statement:

(i) Instructions and precautions necessary to assure safe installation, operation, and servicing of the device (documents such as operating and service manuals may be identified in the label and used to provide this information);

(ii) The requirements, or lack of requirement, for leak testing, or for testing any on-off mechanism and indicator, including the maximum time interval for such testing, and the identification of radioactive material by isotope, quantity of radioactivity, and date of determination of the quantity; and

(iii) The information called for in the following statement in the same or substantially similar form:[1]

The receipt, possession, use, and transfer of this device Model_____,[2] Serial No. _____,[2] are subject to a general license or the equivalent and the regulations of the U.S. NRC or of a State with which the NRC has entered into an agreement for the exercise of regulatory authority. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION--RADIOACTIVE MATERIAL

_____
(Name of manufacturer, or initial transferor)[2]

(4) Each device having a separable source housing that provides the primary shielding for the source also bears, on the source housing, a durable label containing the device model number and serial number, the isotope and quantity, the words, "Caution-Radioactive Material," the radiation symbol described in § 20.1901 of this chapter, and the name of the manufacturer or initial distributor.

(5) Each device meeting the criteria of § 31.5(c)(13)(i) of this chapter, bears a permanent (e.g., embossed, etched, stamped, or engraved) label affixed to the source housing if separable, or the device if the source housing is not separable, that includes the words, "Caution-Radioactive Material," and, if practicable, the radiation symbol described in § 20.1901 of this chapter.

(b) In the event the applicant desires that the device be required to be tested at intervals longer than six months, either for proper operation of the on-off mechanism and indicator, if any, or for leakage of radioactive material or for both, he shall include in this application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the device or similar devices, and by design features which have a significant bearing on the probability or consequences of leakage of radioactive material from the device or failure of the on-off mechanism and indicator. In determining the acceptable interval for the test for leakage of radioactive material, the Commission will consider information which includes, but is not limited to:

(1) Primary containment (source capsule);

(2) Protection of primary containment;

(3) Method of sealing containment;

(4) Containment construction materials;

(5) Form of contained radioactive material;

(6) Maximum temperature withstood during prototype tests;

(7) Maximum pressure withstood during prototype tests;

(8) Maximum quantity of contained radioactive material;

(9) Radiotoxicity of contained radioactive material; and

(10) Operating experience with identical devices or similarly designed and constructed devices.

(c) In the event the applicant desires that the general licensee under § 31.5 of this chapter, or under equivalent regulations of an Agreement State, be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the on-off mechanism and indicator, or remove the device from installation, the applicant shall include in the application written instructions to be followed by the general licensee, estimated calendar quarter doses associated with such activity or activities, and the bases for these estimates. The submitted information must demonstrate that performance of this activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive a dose in excess of 10 percent of the annual limits specified in § 20.1201(a) of this chapter.

[39 FR 43533, Dec. 16, 1974, as amended at 40 FR 8785, Mar. 3, 1975; 42 FR 25721, May 19, 1977; 43 FR 6923, Feb. 17, 1978; 58 FR 67660, Dec. 22, 1993; 59 FR 5520, Feb. 7, 1994; 65 FR 79189, Dec. 18, 2000]

[1] Devices licensed under § 32.51 prior to January 19, 1975 may bear labels authorized by the regulations in effect on January 1, 1975.

[2] The model, serial number, and the name of the manufacturer, or initial transferor may be omitted from this label provided the information is elsewhere specified in labeling affixed to the device.

§ 32.51a Same: Conditions of licenses.

[Top of File]

(a) If a device containing byproduct material is to be transferred for use under the general license contained in § 31.5 of this chapter, each person that is licensed under § 32.51 shall provide the information specified in this paragraph to each person to whom a device is to be transferred. This information must be provided before the device may be transferred. In the case of a transfer through an intermediate person, the information must also be provided to the intended user prior to initial transfer to the intermediate person. The required information includes--

(1) A copy of the general license contained in § 31.5 of this chapter; if paragraphs (c)(2) through (4) or (c)(13) of § 31.5 do not apply to the particular device, those paragraphs may be omitted.

(2) A copy of §§ 31.2, 30.51, 20.2201, and 20.2202 of this chapter;

(3) A list of the services that can only be performed by a specific licensee;

(4) Information on acceptable disposal options including estimated costs of disposal; and

(5) An indication that NRC's policy is to issue high civil penalties for improper disposal.

(b) If byproduct material is to be transferred in a device for use under an equivalent general license of an Agreement State, each person that is licensed under § 32.51 shall provide the information specified in this paragraph to each person to whom a device is to be transferred. This information must be provided before the device may be transferred. In the case of a transfer through an intermediate person, the information must also be provided to the intended user prior to initial transfer to the intermediate person. The required information includes--

(1) A copy of the Agreement State's regulations equivalent to §§ 31.5, 31.2, 30.51, 20.2201, and 20.2202 of this chapter or a copy of §§ 31.5, 31.2, 30.51, 20.2201, and 20.2202 of this chapter. If a copy of the NRC regulations is provided to a prospective general licensee in lieu of the Agreement State's regulations, it shall be accompanied by a note explaining that use of the device is regulated by the Agreement State; if certain paragraphs of the regulations do not apply to the particular device, those paragraphs may be omitted.

(2) A list of the services that can only be performed by a specific licensee;

(3) Information on acceptable disposal options including estimated costs of disposal; and

(4) The name or title, address, and phone number of the contact at the Agreement State regulatory agency from which additional information may be obtained.

(c) An alternative approach to informing customers may be proposed by the licensee for approval by the Commission.

(d) Each device that is transferred after February 19, 2002 must meet the labeling requirements in § 32.51(a)(3) through (5).

(e) If a notification of bankruptcy has been made under § 30.34(h) or the license is to be terminated, each person licensed under § 32.51 shall provide, upon request, to the NRC and to any appropriate Agreement State, records of final disposition required under § 32.52(c).

[65 FR 79189, Dec. 18, 2000; 65 FR 80991, Dec. 22, 2000]

§ 32.52 Same: Material transfer reports and records.

[Top of File]

Each person licensed under § 32.51 to initially transfer devices to generally licensed persons shall comply with the requirements of this section.

(a) The person shall report to the Director, Office of Federal and State Materials and Environmental Management Programs, ATTN: GLTS, by an appropriate method listed in § 30.6(a) of this chapter, all transfers of such devices to persons for use under the general license in § 31.5 of this chapter and all receipts of devices from persons licensed under § 31.5 of this chapter. The report must be submitted on a quarterly basis on NRC Form 653—"Transfers of Industrial Devices Report" or in a clear and legible report containing all of the data required by the form.

(1) The required information for transfers to general licensees includes—

(i) The identity of each general licensee by name and mailing address for the location of use; if there is no mailing address for the location of use, an alternate address for the general licensee shall be submitted along with information on the actual location of use.

(ii) The name, title, and phone number of the person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the appropriate regulations and requirements;

(iii) The date of transfer;

(iv) The type, model number, and serial number of the device transferred; and

(v) The quantity and type of byproduct material contained in the device.

(2) If one or more intermediate persons will temporarily possess the device at the intended place of use before its possession by the user, the report must include the same information for both the intended user and each intermediate person, and clearly designate the intermediate person(s).

(3) For devices received from a § 31.5 general licensee, the report must include the identity of the general licensee by name and address, the type, model number, and serial number of the device received, the date of receipt, and, in the case of devices not initially transferred by the reporting licensee, the name of the manufacturer or initial transferor.

(4) If the licensee makes changes to a device possessed by a § 31.5 general licensee, such that the label must be changed to update

required information, the report must identify the general licensee, the device, and the changes to information on the device label.

(5) The report must cover each calendar quarter, must be filed within 30 days of the end of the calendar quarter, and must clearly indicate the period covered by the report.

(6) The report must clearly identify the specific licensee submitting the report and include the license number of the specific licensee.

(7) If no transfers have been made to or from persons generally licensed under § 31.5 of this chapter during the reporting period, the report must so indicate.

(b) The person shall report all transfers of devices to persons for use under a general license in an Agreement State's regulations that are equivalent to § 31.5 of this chapter and all receipts of devices from general licensees in the Agreement State's jurisdiction to the responsible Agreement State agency. The report must be submitted on Form 653--``Transfers of Industrial Devices Report'' or in a clear and legible report containing all of the data required by the form.

(1) The required information for transfers to general licensees includes--

(i) The identity of each general licensee by name and mailing address for the location of use; if there is no mailing address for the location of use, an alternate address for the general licensee shall be submitted along with information on the actual location of use.

(ii) The name, title, and phone number of the person identified by the general licensee as having knowledge of and authority to take required actions to ensure compliance with the appropriate regulations and requirements;

(iii) The date of transfer;

(iv) The type, model number, and serial number of the device transferred; and

(v) The quantity and type of byproduct material contained in the device.

(2) If one or more intermediate persons will temporarily possess the device at the intended place of use before its possession by the user, the report must include the same information for both the intended user and each intermediate person, and clearly designate the intermediate person(s).

(3) For devices received from a general licensee, the report must include the identity of the general licensee by name and address, the type, model number, and serial number of the device received, the date of receipt, and, in the case of devices not initially transferred by the reporting licensee, the name of the manufacturer or initial transferor.

(4) If the licensee makes changes to a device possessed by a general licensee, such that the label must be changed to update required information, the report must identify the general licensee, the device, and the changes to information on the device label.

(5) The report must cover each calendar quarter, must be filed within 30 days of the end of the calendar quarter, and must clearly indicate the period covered by the report.

(6) The report must clearly identify the specific licensee submitting the report and must include the license number of the specific licensee.

(7) If no transfers have been made to or from a particular Agreement State during the reporting period, this information shall be reported to the responsible Agreement State agency upon request of the agency.

(c) The person shall maintain all information concerning transfers and receipts of devices that supports the reports required by this section. Records required by this paragraph must be maintained for a period of 3 years following the date of the recorded event.

[65 FR 79189, Dec. 18, 2000; 68 FR 58805, Oct. 10, 2003; 73 FR 5719, Jan. 31, 2008]

§ 32.53 Luminous safety devices for use in aircraft: Requirements for license to manufacture, assemble, repair or initially transfer.

[Top of File]

An application for a specific license to manufacture, assemble, repair or initially transfer luminous safety devices containing tritium or promethium-147 for use in aircraft, for distribution to persons generally licensed under § 31.7 of this chapter, will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter;

(b) The applicant submits sufficient information regarding each device pertinent to evaluation of the potential radiation exposure, including:

(1) Chemical and physical form and maximum quantity of tritium or promethium-147 in each device;

(2) Details of construction and design;

(3) Details of the method of binding or containing the tritium or promethium-147;

(4) Procedures for and results of prototype testing to demonstrate that the tritium or promethium-147 will not be released to the environment under the most severe conditions likely to be encountered in normal use;

(5) Any quality control procedures proposed as alternatives to those prescribed by § 32.55;

(6) Any additional information, including experimental studies and tests, required by the Commission to facilitate a determination of the safety of the device.

(c) Each device will contain no more than 10 curies of tritium or 300 millicuries of promethium-147. The levels of radiation from each device containing promethium-147 will not exceed 0.5 millirad per hour at 10 centimeters from any surface when measured through 50 milligrams per square centimeter of absorber.

(d) The Commission determines that:

(1) The method of incorporation and binding of the tritium or promethium-147 in the device is such that the tritium or promethium-147 will not be released under the most severe conditions which are likely to be encountered in normal use and handling of the device;

(2) The tritium or promethium-147 is incorporated or enclosed so as to preclude direct physical contact by any person with it;

(3) The device is so designed that it cannot easily be disassembled; and

(4) The device has been subjected to and has satisfactorily passed the prototype tests prescribed by § 32.101, Schedule B, of this part.

[30 FR 8192, June 26, 1965, as amended at 33 FR 6463, Apr. 27, 1968; 43 FR 6923, Feb. 17, 1978]

§ 32.54 Same: Labeling of devices.

[Top of File]

(a) A person licensed under § 32.53 to manufacture, assemble, or initially transfer devices containing tritium or promethium-147 for distribution to persons generally licensed under § 31.7 of this chapter shall, except as provided in paragraph (b) of this section, affix to each device a label containing the radiation symbol prescribed by § 20.1901 of this chapter, such other information as may be required by the Commission including disposal instructions when appropriate, and the following or a substantially similar statement which contains the information called for in the following statement:[1]

The receipt, possession, use, and transfer of this device, Model* _____, Serial No.* ___, containing _____ (Identity and quantity of radioactive material) are subject to a general license or the equivalent and the regulations of the U.S. NRC or of a State with which the NRC has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION--RADIOACTIVE MATERIAL

_____
(Name of manufacturer, assembler, or initial transferor.)*

*The model, serial number, and name of manufacturer, assembler, or initial transferor may be omitted from this label provided they are elsewhere specified in labeling affixed to the device.

(b) If the Commission determines that it is not feasible to affix a label to the device containing all the information called for in paragraph (a) of this section, it may waive the requirements of that paragraph and require in lieu thereof that:

(1) A label be affixed to the device identifying:

(i) The manufacturer, assembler, or initial transferor; and

(ii) The type of radioactive material; and

(2) A leaflet bearing the following information be enclosed in or accompany the container in which the device is shipped:

(i) The name of the manufacturer, assembler, or initial transferor,

(ii) The type and quantity of radioactive material,

(iii) The model number,

(iv) A statement that the receipt, possession, use, and transfer of the device are subject to a general license or the equivalent and the regulations of the U.S. NRC or of an Agreement State, and

(v) Such other information as may be required by the Commission, including disposal instructions when appropriate.

[33 FR 16331, Nov. 7, 1968, as amended at 40 FR 8785, Mar. 3, 1975; 43 FR 6923, Feb. 17, 1978; 63 FR 39483, July 23, 1998]

[1] Devices licensed under § 32.53 prior to January 19, 1975 may bear labels authorized by the regulations in effect on January 1, 1975.

§ 32.55 Same: Quality assurance; prohibition of transfer.

[Top of File]

(a) Each person licensed under § 32.53 shall visually inspect each device and shall reject any which has an observable physical defect that could affect containment of the tritium or promethium-147.

(b) Each person licensed under § 32.53 shall take a random sample of the size required by the table in § 32.110 for Lot Tolerance Percent Defective of 5.0 percent from each inspection lot, and shall subject each unit in the sample to the following tests:

(1) Each device shall be immersed in 30 inches of water for 24 hours and shall show no visible evidence of water entry. Absolute pressure of the air above the water shall then be reduced to 1 inch of mercury. Lowered pressure shall be maintained for 1 minute or until air bubbles cease to be given off by the water, whichever is the longer. Pressure shall then be increased to normal atmospheric pressure. Any device which leaks as evidenced by bubbles emanating from within the device, or water entering the device, shall be considered as a defective unit.

(2) The immersion test water from the preceding test in paragraph (b)(1) of this section shall be measured for tritium or promethium-147 content by an apparatus that has been calibrated to measure tritium or promethium-147, as appropriate. If more than 0.1 percent of the original amount of tritium or promethium-147 in any device is found to have leaked into the immersion test water, the leaking device shall be considered as a defective unit.

(3) The levels of radiation from each device containing promethium-147 shall be measured. Any device which has a radiation level in excess of 0.5 millirad per hour at 10 centimeters from any surface when measured through 50 milligrams per square centimeter of absorber, shall be considered as a defective unit.

(c) An application for a license or for amendment of a license may include a description of procedures proposed as alternatives to those prescribed by paragraph (b) of this section, and proposed criteria for acceptance under those procedures. The Commission will approve the proposed alternative procedures if the applicant demonstrates that:

(1) They will consider defective any sampled device which has a leakage rate exceeding 0.1 percent of the original quantity of tritium or promethium 147 in any 24-hour period; and

(2) The operating characteristic curve or confidence interval estimate for the alternative procedures provides a Lot Tolerance Percent Defective of 5.0 percent at the consumer's risk of 0.10.

(d) No person licensed under § 32.53 shall transfer to persons generally licensed under § 31.7 of this chapter:

(1) Any luminous safety device which has been tested and found defective under the criteria and procedures specified in this section, unless the defective units have been repaired or reworked and have then met the tests set out in paragraph (b) of this section; or

(2) Any inspection lot which has been rejected as a result of the procedures in § 32.110 or alternative procedures in paragraph (c) of this section, unless the defective units have been sorted and removed or have been repaired or reworked and have then met the tests set out in paragraph (b) of this section.

[30 FR 8192, June 26, 1965, as amended at 39 FR 22129, June 20, 1974; 39 FR 26397, July 19, 1974]

§ 32.56 Same: Material transfer reports.

[Top of File]

Each person licensed under § 32.53 shall file an annual report with the Director, Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 30.6(a) of this chapter, which must state the total quantity of tritium or promethium-147 transferred to persons generally licensed under § 31.7 of this chapter. The report must identify each general licensee by name, state the kinds and numbers of luminous devices transferred, and specify the quantity of tritium or promethium-147 in each kind of device. Each report must cover the year ending June 30 and must be filed within thirty (30) days thereafter.

[60 FR 3737, Jan. 19, 1995; 68 FR 58805, Oct. 10, 2003; 73 FR 5719, Jan. 31, 2008]

§ 32.57 Calibration or reference sources containing americium-241 or radium-226: Requirements for license to manufacture or initially transfer.

[Top of File]

An application for a specific license to manufacture or initially transfer calibration or reference sources containing americium-241 or radium-226, for distribution to persons generally licensed under § 31.8 of this chapter, will be approved if:

(a) The applicant satisfies the general requirements of § 30.33 of this chapter;

(b) The applicant submits sufficient information regarding each type of calibration or reference source pertinent to evaluation of the potential radiation exposure, including:

(1) Chemical and physical form and maximum quantity of americium 241 or radium-226 in the source;

(2) Details of construction and design;

(3) Details of the method of incorporation and binding of the americium-241 or radium-226 in the source;

(4) Procedures for and results of prototype testing of sources, which are designed to contain more than 0.005 microcurie of americium-241 or radium-226, to demonstrate that the americium-241 or radium-226 contained in each source will not be released or be removed from the source under normal conditions of use;

(5) Details of quality control procedures to be followed in manufacture of the source;

(6) Description of labeling to be affixed to the source or the storage container for the source;

(7) Any additional information, including experimental studies and tests, required by the Commission to facilitate a determination of the safety of the source.

(c) Each source will contain no more than 5 microcuries of americium-241 or radium-226.

(d) The Commission determines, with respect to any type of source containing more than 0.005 microcurie of americium-241 or radium-226, that:

(1) The method of incorporation and binding of the americium-241 or radium-226 in the source is such that the americium-241 will not be released or be removed from the source under normal conditions of use and handling of the source; and

(2) The source has been subjected to and has satisfactorily passed the prototype tests prescribed by § 32.102, Schedule C, of this part.

[30 FR 8192, June 26, 1965, as amended at 43 FR 6923, Feb. 17, 19781; 72 FR 55928, Oct. 1, 2007; 73 FR 42674, July 23, 2008]

§ 32.58 Same: Labeling of devices.

[Top of File]

Each person licensed under § 32.57 shall affix to each source, or storage container for the source, a label which shall contain sufficient information relative to safe use and storage of the source and shall include the following statement or a substantially similar statement which contains the information called for in the following statement:[1]

The receipt, possession, use, and transfer of this source, Model , Serial No., are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

CAUTION-RADIOACTIVE MATERIAL–THIS SOURCE CONTAINS AMERICIUM-241 (or RADIUM-226). DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

_____
Name of manufacturer or initial transferor

[30 FR 8192, June 26, 1965, as amended at 40 FR 8786, Mar. 3, 1975; 43 FR 6923, Feb. 17, 1978; 72 FR 55929 Oct. 1, 2007]

[1] Sources licensed under § 32.57 before January 19, 1975 may bear labels authorized by the regulations in effect on January 1, 1975.

§ 32.59 Same: Leak testing of each source.

[Top of File]

Each person licensed under § 32.57 shall perform a dry wipe test upon each source containing more than 3.7 kilobecquerels (0.1 microcurie) of americium-241 or radium-226 before transferring the source to a general licensee under § 31.8 of this chapter. This test shall be performed by wiping the entire radioactive surface of the source with a filter paper with the application of moderate finger pressure. The radioactivity on the paper shall be measured by using radiation detection instrumentation capable of detecting 0.185 kilobecquerel (0.005 microcurie) of americium-241 or radium-226. If this test discloses more than 0.185 kilobecquerel (0.005 microcurie) of radioactive material, the source shall be deemed to be leaking or losing americium-241 or radium-226 and shall not be transferred to a general licensee under § 31.8 of this chapter or equivalent regulations of an Agreement State.

[30 FR 8192, June 26, 1965; 72 FR 55929 Oct. 1, 2007]

§ 32.60 [Reserved]

[Top of File]

§ 32.61 Ice detection devices containing strontium-90; requirements for license to manufacture or initially transfer.

[Top of File]

An application for a specific license to manufacture or initially transfer ice detection devices containing strontium-90 for distribution to persons generally licensed under § 31.10 of this chapter will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter;

(b) The applicant submits sufficient information regarding each type of device pertinent to evaluation of the potential radiation exposure, including:

(1) Chemical and physical form and maximum quantity of strontium-90 in the device;

(2) Details of construction and design of the source of radiation and its shielding;

(3) Radiation profile of a prototype device;

(4) Procedures for and results of prototype testing of devices to demonstrate that the strontium-90 contained in each device will not be released or be removed from the device under the most severe conditions likely to be encountered in normal handling and use;

(5) Details of quality control procedures to be followed in manufacture of the device;

(6) Description of labeling to be affixed to the device;

(7) Instructions for handling and installation of the device;

(8) Any additional information, including experimental studies and tests, required by the Commission to facilitate a determination of the safety of the device;

(c) Each device will contain no more than 50 microcuries of strontium-90 in an insoluble form;

(d) Each device will bear durable, legible labeling which includes the radiation caution symbol prescribed by § 20.1901(a) of this chapter, a statement that the device contains strontium-90 and the quantity thereof, instructions for disposal and statements that the device may be possessed pursuant to a general license, that the manufacturer or civil authorities should be notified if the device is found, that removal of the labeling is prohibited and that disassembly and repair of the device may be performed only by a person holding a specific license to manufacture or service such devices;

(e) The Commission determines that:

(1) The method of incorporation and binding of the strontium-90 in the device is such that the strontium-90 will not be released from the device under the most severe conditions which are likely to be encountered in normal use and handling of the device;

(2) The strontium-90 is incorporated or enclosed so as to preclude direct physical contact by any individual with it and is shielded so that no individual will receive a radiation exposure to a major portion of his body in excess of 0.5 rem in a year under ordinary circumstances of use;

(3) The device is so designed that it cannot be easily disassembled;

(4) The device has been subjected to and has satisfactorily passed the prototype tests prescribed by § 32.103; and

(5) Quality control procedures have been established to satisfy the requirements of § 32.62.

[30 FR 9905, Aug. 10, 1965, as amended at 43 FR 6923, Feb. 17, 1978; 56 FR 23472, May 21, 1991; 58 FR 67660, Dec. 22, 1993]

§ 32.62 Same: Quality assurance; prohibition of transfer.

[Top of File]

(a) Each person licensed under § 32.61 shall visually inspect each device and shall reject any which has an observable physical defect that could affect containment of the strontium-90.

(b) Each person licensed under § 32.61 shall test each device for possible loss of strontium-90 or for contamination by wiping with filter paper an area of at least 100 square centimeters on the outside surface of the device, or by wiping the entire surface area if it is less than 100 square centimeters. The detection on the filter paper of more than 2,200 disintegrations per minute of radioactive material per 100 square centimeters of surface wiped shall be cause for rejection of the tested device.

(c) Each person licensed under § 32.61 shall take a random sample of the size required by the table in § 32.110 for Lot Tolerance Percent Defective of 5.0 percent from each inspection lot, and shall subject each unit in the sample to the following tests:

(1) Each device shall be immersed in 30 inches of water for 24 hours and shall show no visible evidence of physical contact between the water and the strontium-90. Absolute pressure of the air above the water shall then be reduced to 1 inch of mercury. Lowered pressure shall be maintained for 1 minute or until air bubbles cease to be given off by the water, whichever is the longer. Pressure shall then be increased to normal atmospheric pressure. Any device which leaks, as evidenced by physical contact between the water and the strontium-90, shall be considered as a defective unit.

(2) The immersion test water from the preceding test in paragraph (c)(1) of this section shall be measured for radioactive material. If the amount of radioactive material in the immersion test water is greater than 0.1 percent of the original amount of strontium-90 in any device, the device shall be considered as a defective unit.

(d) An application for a license or for amendment of a license may include a description of procedures proposed as alternatives to those prescribed by paragraph (c) of this section, and proposed criteria for acceptance under those procedures. The Commission will approve the proposed alternative procedures if the applicant demonstrates that:

(1) They will consider defective any sampled device which has a leakage rate exceeding 0.1 percent of the original quantity of strontium-90 in any 24-hour period; and

(2) The operating characteristic curve or confidence interval estimate for the alternative procedures provides a Lot Tolerance Percent Defective of 5.0 percent at the consumer's risk of 0.10.

(e) No person licensed under § 32.61 shall transfer to persons generally licensed under § 31.10 of this chapter:

(1) Any device which has been tested and found defective under the criteria and procedures specified in this § 32.62 unless the defective units have been repaired or reworked and then met the tests set out in paragraph (c) of this section; or

(2) Any inspection lot which has been rejected as a result of the procedures in § 32.110 or alternative procedures in paragraph (d) of this section, unless the defective units have been sorted and removed or have been repaired or reworked and have then met the tests set out in paragraph (c) of this section.

[30 FR 9905, Aug. 10, 1965, as amended at 39 FR 22130, June 20, 1974; 39 FR 26397, July 19, 1974; 43 FR 6923, Feb. 17, 1978]

§ 32.71 Manufacture and distribution of byproduct material for certain in vitro clinical or laboratory testing under general license.

[Top of File]

An application for a specific license to manufacturer or distribute byproduct material for use under the general license of § 31.11 of this chapter will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter.

(b) The byproduct material is to be prepared for distribution in prepackaged units of:

(1) Iodine-125 in units not exceeding 10 microcuries each.

(2) Iodine-131 in units not exceeding 10 microcuries each.

(3) Carbon-14 in units not exceeding 10 microcuries each.

(4) Hydrogen-3 (tritium) in units not exceeding 50 microcuries each.

(5) Iron-59 in units not exceeding 20 microcuries each.

(6) Selenium-75 in units not exceeding 10 microcuries each.

(7) Mock Iodine-125 in units not exceeding 0.05 microcurie of iodine-129 and 0.005 microcurie of americium-241 each.

(8) Cobalt-57 in units not exceeding 0.37 megabecquerel (10 microcuries) each.

(c) Each prepackaged unit bears a durable, clearly visible label:

(1) Identifying the radioactive contents as to chemical form and radionuclide, and indicating that the amount of radioactivity does not exceed 0.37 megabecquerel (10 microcuries) of iodine-131, iodine-125, selenium-75, or carbon-14; 1.85 megabecquerels (50 microcuries) of hydrogen-3 (tritium); or 0.74 megabecquerel (20 microcuries) of iron-59; or Mock Iodine-125 in units not exceeding 1.85 kilobecquerels (0.05 microcurie) of iodine-129 and 0.185 kilobecquerel (0.005 microcurie) of americium-241 each; or cobalt-57 in units not exceeding 0.37 megabecquerel (10 microcuries); and

(2) Displaying the radiation caution symbol described in § 20.1901(a) of this chapter and the words, "Caution, Radioactive Material", and "Not for Internal or External Use in Humans or Animals."

(d) The following statement, or a substantially similar statement which contains the information called for in the following statement, appears on a label affixed to each prepackaged unit or appears in a leaflet or brochure which accompanies the package:[1]

The radioactive material may be received, acquired, possessed, and used only by physicians, veterinarians in the practice of veterinary medicine, clinical laboratories or hospitals and only for in vitro clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations and a general license of the U.S. Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority.

_____
(Name of Manufacturer)

(e) The label affixed to the unit, or the leaflet or brochure which accompanies the package, contains adequate information as to the precautions to be observed in handling and storing such byproduct material. In the case of the Mock Iodine-125 reference or calibration source, the information accompanying the source must also contain directions to the licensee regarding the waste disposal requirements set out in § 20.2001

[33 FR 16553, Nov. 14, 1968, as amended at 38 FR 34110, Dec. 11, 1973; 39 FR 26148, July 17, 1974; 40 FR 8786, Mar. 3, 1975; 42 FR 21604, Apr. 28, 1977; 42 FR 26987, May 26, 1977; 44 FR 50325, Aug. 28, 1979; 56 FR 23472, May 21, 1991; 58 FR 67660, Dec. 22, 1993; 72 FR 55929 Oct. 1, 2007]

[1] Labels authorized by the regulations in effect on September 26, 1979, may be used until one year from September 27, 1979.

§ 32.72 Manufacture, preparation, or transfer for commercial distribution of radioactive drugs containing byproduct material for medical use under part 35.

[Top of File]

(a) An application for a specific license to manufacture, prepare, or transfer for commercial distribution radioactive drugs containing byproduct material for use by persons authorized pursuant to part 35 of this chapter will be approved if:

(1) The applicant satisfies the general requirements specified in 10 CFR 30.33;

(2) The applicant submits evidence that the applicant is at least one of the following:

(i) Registered with the U.S. Food and Drug Administration (FDA) as the owner or operator of a drug establishment that engages in the manufacture, preparation, propagation, compounding, or processing of a drug under 21 CFR 207.20(a);

(ii) Registered or licensed with a state agency as a drug manufacturer;

(iii) Licensed as a pharmacy by a State Board of Pharmacy;

(iv) Operating as a nuclear pharmacy within a Federal medical institution; or

(v) A Positron Emission Tomography (PET) drug production facility registered with a State agency.

(3) The applicant submits information on the radionuclide; the chemical and physical form; the maximum activity per vial, syringe, generator, or other container of the radioactive drug; and the shielding provided by the packaging to show it is appropriate for the safe handling and storage of the radioactive drugs by medical use licensees; and

(4) The applicant satisfies the following labeling requirements:

(i) A label is affixed to each transport radiation shield, whether it is constructed of lead, glass, plastic, or other material, of a radioactive drug to be transferred for commercial distribution. The label must include the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL"; the name of the radioactive drug or its abbreviation; and the quantity of radioactivity at a specified date and time. For radioactive drugs with a half life greater than 100 days, the time may be omitted.

(ii) A label is affixed to each syringe, vial, or other container used to hold a radioactive drug to be transferred for commercial distribution. The label must include the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL" and an identifier that ensures that the syringe, vial, or other container can be correlated with the information on the transport radiation shield label.

(b) A licensee described by paragraph (a)(2)(iii) or (iv) of this section:

(1) May prepare radioactive drugs for medical use, as defined in 10 CFR 35.2, provided that the radioactive drug is prepared by either an authorized nuclear pharmacist, as specified in paragraph (b)(2) and (b)(4) of this section, or an individual under the supervision of an authorized nuclear pharmacist as specified in 10 CFR 35.27.

(2) May allow a pharmacist to work as an authorized nuclear pharmacist if:

(i) This individual qualifies as an authorized nuclear pharmacist as defined in 10 CFR 35.2,

(ii) This individual meets the requirements specified in § 35.55(b) and 35.59 of this chapter, and the licensee has received an approved license amendment identifying this individual as an authorized nuclear pharmacist; or

(iii) This individual is designated as an authorized nuclear pharmacist in accordance with paragraph (b)(4) of this section.

(3) The actions authorized in paragraphs (b)(1) and (b)(2) of this section are permitted in spite of more restrictive language in license conditions.

(4) May designate a pharmacist (as defined in § 35.2 of this chapter) as an authorized nuclear pharmacist if:

(i) The individual was a nuclear pharmacist preparing only radioactive drugs containing accelerator-produced radioactive material, and

(ii) The individual practiced at a pharmacy at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other pharmacies before August 8, 2009, or an earlier date as noticed by the NRC.

(5) Shall provide to the Commission:

(i) A copy of each individual's certification by a specialty board whose certification process has been recognized by the Commission or an Agreement State as specified in § 35.55(a) of this chapter with the written attestation signed by a preceptor as required by § 35.55(b)(2) of this chapter; or

(ii) The Commission or Agreement State license, or

(iii) Commission master materials licensee permit, or

(iv) The permit issued by a licensee or Commission master materials permittee of broad scope or the authorization from a commercial nuclear pharmacy authorized to list its own authorized nuclear pharmacist, or

(v) Documentation that only accelerator-produced radioactive materials were used in the practice of nuclear pharmacy at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC; and

(vi) A copy of the State pharmacy licensure or registration, no later than 30 days after the date that the licensee allows, under paragraphs (b)(2)(i) and (b)(2)(iii) of this section, the individual to work as an authorized nuclear pharmacist.

(c) A licensee shall possess and use instrumentation to measure the radioactivity of radioactive drugs. The licensee shall have procedures for use of the instrumentation. The licensee shall measure, by direct measurement or by combination of measurements and calculations, the amount of radioactivity in dosages of alpha-, beta-, or photon-emitting radioactive drugs prior to transfer for commercial distribution. In addition, the licensee shall:

(1) Perform tests before initial use, periodically, and following repair, on each instrument for accuracy, linearity, and geometry dependence, as appropriate for the use of the instrument; and make adjustments when necessary; and

(2) Check each instrument for constancy and proper operation at the beginning of each day of use.

(d) Nothing in this section relieves the licensee from complying with applicable FDA, other Federal, and State requirements governing radioactive drugs.

[59 FR 61780, Dec. 2, 1994; 59 FR 65244, Dec. 19, 1994, as amended at 60 FR 324, Jan. 4, 1995; 67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002; 67 FR 77652, Dec. 19, 2002; 71 FR 15007, Mar. 27, 2006; 72 FR 45150, Aug. 13, 2007; 72 FR 55929 Oct. 1, 2007]

§ 32.74 Manufacture and distribution of sources or devices containing byproduct material for medical use.

[Top of File]

(a) An application for a specific license to manufacture and distribute sources and devices containing byproduct material to persons licensed under part 35 of this chapter for use as a calibration, transmission, or reference source or for the uses listed in §§ 35.400, 35.500, 35.600, and 35.1000 of this chapter will be approved if:

(1) The applicant satisfies the general requirements in § 30.33 of this chapter;

(2) The applicant submits sufficient information regarding each type of source or device pertinent to an evaluation of its radiation safety, including:

(i) The byproduct material contained, its chemical and physical form, and amount;

(ii) Details of design and construction of the source or device;

(iii) Procedures for, and results of, prototype tests to demonstrate that the source or device will maintain its integrity under stresses likely to be encountered in normal use and accidents;

(iv) For devices containing byproduct material, the radiation profile of a prototype device;

(v) Details of quality control procedures to assure that production sources and devices meet the standards of the design and prototype tests;

(vi) Procedures and standards for calibrating sources and devices;

(vii) Legend and methods for labeling sources and devices as to their radioactive content;

(viii) Instructions for handling and storing the source or device from the radiation safety standpoint; these instructions are to be included on a durable label attached to the source or device or attached to a permanent storage container for the source or device: Provided, That instructions which are too lengthy for such label may be summarized on the label and printed in detail on a brochure which is referenced on the label;

(3) The label affixed to the source or device, or to the permanent storage container for the source or device, contains information on the radionuclide, quantity and date of assay, and a statement that the U.S. Nuclear Regulatory Commission has approved distribution of the (name of source or device) to persons licensed to use byproduct material identified in §§ 35.65, 35.400, 35.500, and 35.600 as appropriate, and to persons who hold an equivalent license issued by an Agreement State. However, labels worded in accordance with requirements that were in place on March 30, 1987 may be used until March 30, 1989.

(b)(1) In the event the applicant desires that the source or device be required to be tested for leakage of radioactive material at intervals longer than six months, he shall include in his application sufficient information to demonstrate that such longer interval is justified by performance characteristics of the source or device or similar sources or devices and by design features that have a significant bearing on the probability or consequences of leakage of radioactive material from the source.

(2) In determining the acceptable interval for test of leakage of radioactive material, the Commission will consider information that includes, but is not limited to:

(i) Primary containment (source capsule);

(ii) Protection of primary containment;

(iii) Method of sealing containment;

(iv) Containment construction materials;

(v) Form of contained radioactive material;

(vi) Maximum temperature withstood during prototype tests;

(vii) Maximum pressure withstood during prototype tests;

(viii) Maximum quantity of contained radioactive material;

(ix) Radiotoxicity of contained radioactive material;

(x) Operating experience with identical sources or devices or similarly designed and constructed sources or devices.

(c) If an application is filed pursuant to paragraph (a) of this section on or before October 15, 1974, for a license to manufacture and distribute a source or device that was distributed commercially on or before August 16, 1974, the applicant may continue the distribution of such source or device to group licensees until the Commission issues the license or notifies the applicant otherwise.

[39 FR 26149, July 17, 1974, as amended at 51 FR 36967, Oct. 16, 1986; 62 FR 59276, Nov. 3, 1997; 67 FR 20370, Apr. 24, 2002; 71 FR 15008, Mar. 27, 2006; 72 FR 45150, Aug. 13, 2007]

§ 32.101 Schedule B--prototype tests for luminous safety devices for use in aircraft.

[Top of File]

An applicant for a license pursuant to § 32.53 shall conduct prototype tests on each of five prototype luminous safety devices for use in aircraft as follows:

(a) *Temperature-altitude test*. The device shall be placed in a test chamber as it would be used in service. A temperature-altitude condition schedule shall be followed as outlined in the following steps:

Step 1. The internal temperature of the test chamber shall be reduced to -62° C. (-80° F.) and the device shall be maintained for at least 1 hour at this temperature at atmospheric pressure.

Step 2. The internal temperature of the test chamber shall be raised to -54° C. (-65° F.) and maintained until the temperature of the device has stabilized at -54° C. at atmospheric pressure.

Step 3. The atmospheric pressure of the chamber shall be reduced to 83 millimeters of mercury absolute pressure while the chamber temperature is maintained at -54° C.

Step 4. The internal temperature of the chamber shall be raised to -10° C. (+14° F.) and maintained until the temperature of the device has stabilized at -10° C., and the internal pressure of the chamber shall then be adjusted to atmospheric pressure. The test chamber door shall then be opened in order that frost will form on the device, and shall remain open until the frost has melted but not long enough to allow the moisture to evaporate. The door shall then be closed.

Step 5. The internal temperature of the chamber shall be raised to +85° C. (185° F.) at atmospheric pressure. The temperature of the device shall be stabilized at +85° C. and maintained for 2 hours. The device shall then be visually inspected to determine the extent of any deterioration.

Step 6. The chamber temperature shall be reduced to +71° C. (160° F.) at atmospheric pressure. The temperature of the device shall be stabilized at +71° C. for a period of 30 minutes.

Step 7. The chamber temperature shall be reduced to +55° C. (130° F.) at atmospheric pressure. The temperature of the device shall be stabilized at this temperature for a period of 4 hours.

Step 8. The internal temperature of the chamber shall be reduced to +30° C. (86° F.) and the pressure to 138 millimeters of mercury absolute pressure and stabilized. The device shall be maintained under these conditions for a period of 4 hours.

Step 9. The temperature of the test chamber shall be raised to +35° C. (95° F.) and the pressure reduced to 83 millimeters of mercury absolute pressure and stabilized. The device shall be maintained under these conditions for a period of 30 minutes.

Step 10. The internal pressure of the chamber shall be maintained at 83 millimeters of mercury absolute pressure and the temperature reduced to +20° C. (68° F.) and stabilized. The device shall be maintained under these conditions for a period of 4 hours.

(b) *Vibration tests*. This procedure applies to items of equipment (including vibration isolating assemblies) intended to be mounted directly on the structure of aircraft powered by reciprocating, turbojet, or turbo-propeller engines or to be mounted directly on gas-turbine engines. The device shall be mounted on an apparatus dynamically similar to the most severe conditions likely to be encountered in normal use. At the end of the test period, the device shall be inspected thoroughly for possible damage. Vibration tests shall be conducted under both resonant and cycling conditions.

Vibration Test Schedule-Table I
[Times shown refer to one axis of vibration]

Type	Vibration at room temperature (minutes)	Vibration at 160° F. (71C.) (minutes)	Vibration at -65° F. (-54C.)(minutes)
Resonance	60	15	15
Cycling	60	15	15

(1) *Determination of resonance frequency*. Individual resonance frequency surveys shall be conducted by applying vibration to each device along each of any set of three mutually perpendicular axes and varying the frequency of applied vibration slowly through a range of frequencies from 5 cycles per second to 500 cycles per second with the double amplitude of the vibration not exceeding that shown in Figure 1 for the related frequency.

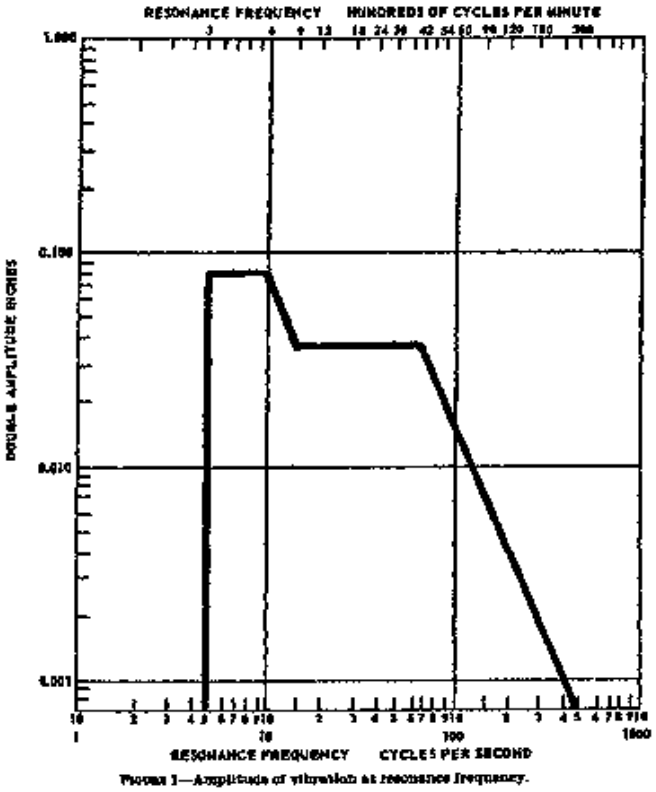


Figure 1—Amplitude of vibration at resonance frequency.

(2) *Resonance tests*. The device shall be vibrated at the determined resonance frequency for each axis of vibration for the periods and temperature conditions shown in Table I and with the applied double amplitude specified in Figure 1 for that resonance frequency. When more than one resonant frequency is encountered with vibration applied along any one axis, the test period may be accomplished at the most severe resonance or the period may be divided among the resonant frequencies, whichever is considered most likely to produce failure. When resonant frequencies are not apparent within the specified frequency range, the specimen shall be vibrated for periods twice as long as those shown for resonance in Table I at a frequency of 55 cycles per second and an applied double amplitude of 0.060 inch.

(3) *Cycling*. Devices to be mounted only on vibration isolators shall be tested by applying vibration along each of three mutually perpendicular axes of the device with an applied double amplitude of 0.060 inch and the frequency cycling between 10 and 55 cycles per second in 1-minute cycles for the periods and temperature conditions shown in Table I. Devices to be installed in aircraft without vibration isolators shall be tested by applying vibration along each of three mutually perpendicular axes of the device with an applied double amplitude of 0.036 inch or an applied acceleration of 10G, whichever is the limiting value, and the frequency cycling between 10 and 500 cycles per second in 15-minute cycles for the periods and temperature conditions shown in Table I.

(c) *Accelerated weathering tests*. The device shall be subjected to 100 hours of accelerated weathering in a suitable weathering machine. Panels of Corex D glass shall surround the arc to cut off the ultraviolet radiation below a wave-length of 2,700 angstroms. The light of the carbon arcs shall fall directly on the face of the device. The temperature at the sample shall be maintained at 50ºC. plus or minus 3ºC. Temperature measurements shall be made with a black panel thermometer.

(d) *Shock test*. The device shall be dropped upon a concrete or iron surface in a 3-foot free gravitational fall, or shall be subjected to equivalent treatment in a test device simulating such a free fall. The drop test shall be repeated 100 times from random orientations.

(e) *Hermetic seal and waterproof test*. On completion of all other tests prescribed by this section, the device shall be immersed in 30 inches of water for 24 hours and shall show no visible evidence of water entry. Absolute pressure of the air above the water shall then be reduced to 1 inch of mercury. Lowered pressure shall be maintained for 1 minute or until air bubbles cease to be given off by the water, whichever is the longer. Pressure shall then be increased to normal atmospheric pressure. Any evidence of bubbles emanating from within the device, or water entering the device, shall be considered leakage.

(f) *Observations*. After each of the tests prescribed by this section, each device shall be examined for evidence of physical damage and for loss of tritium or promethium-147. Any evidence of damage to or failure of any device which could affect containment of the tritium or promethium-147 shall be cause for rejection of the design if the damage or failure is attributable to a design defect. Loss of tritium or promethium-147 from each tested device shall be measured by wiping with filter paper an area of at least 100 square centimeters on the outside surface of the device, or by wiping the entire surface area if it is less than 100 square centimeters. The amount of tritium or promethium-147 in the water used in the hermetic seal and waterproof test prescribed by test paragraph (e) of this section shall also be measured. Measurements shall be made in an apparatus calibrated to measure tritium or promethium-147, as appropriate. The detection on the filter paper of more than 2,200 disintegrations per minute of tritium or promethium-147 per 100 square centimeters of surface wiped or in the water of more than 0.1 percent of the original amount of tritium or promethium-147 in any device shall be cause for rejection of the tested device.

[30 FR 8192, June 26, 1965]

§ 32.102 Schedule C—prototype tests for calibration or reference sources containing americium-241 or radium-226.

[Top of File]

An applicant for a license under § 32.57 shall, for any type of source which is designed to contain more than 0.185 kilobecquerel (0.005 microcurie) of americium-241 or radium-226, conduct prototype tests, in the order listed, on each of five prototypes of the source, which contains more than 0.185 kilobecquerel (0.005 microcurie) of americium-241 or radium-226, as follows:

(a) *Initial measurement*. The quantity of radioactive material deposited on the source shall be measured by direct counting of the source.

(b) *Dry wipe test*. The entire radioactive surface of the source shall be wiped with filter paper with the application of moderate finger pressure. Removal of radioactive material from the source shall be determined by measuring the radioactivity on the filter paper or by direct measurement of the radioactivity on the source following the dry wipe.

(c) *Wet wipe test*. The entire radioactive surface of the source shall be wiped with filter paper, moistened with water, with the application of moderate finger pressure. Removal of radioactive material from the source shall be determined by measuring the radioactivity on the filter paper after it has dried or by direct measurement of the radioactivity on the source following the wet wipe.

(d) *Water soak test*. The source shall be immersed in water at room temperature for a period of 24 consecutive hours. The source shall then be removed from the water. Removal of radioactive material from the source shall be determined by direct measurement of the radioactivity on the source after it has dried or by measuring the radioactivity in the residue obtained by evaporation of the water in which the source was immersed.

(e) *Dry wipe test*. On completion of the preceding test in this section, the dry wipe test described in paragraph (b) of this section shall be repeated.

(f) *Observations*. Removal of more than 0.005 microcurie of radioactivity in any test prescribed by this section shall be cause for rejection of the source design. Results of prototype tests submitted to the Commission shall be given in terms of radioactivity in microcuries and percent of removal from the total amount of radioactive material deposited on the source.

[30 FR 8192, June 26, 1965, as amended at 31 FR 15145, Dec. 2, 1966; 72 FR 55929 Oct. 1, 2007]

§ 32.103 Schedule D--prototype tests for ice detection devices containing strontium-90.

[Top of File]

An applicant for a license pursuant to § 32.61 shall conduct prototype tests on each of five prototype ice detection devices as follows:

(a) *Temperature-altitude test*. The device shall be placed in a test chamber as it would be used in service. A temperature-altitude condition schedule shall be followed as outlined in Step 1 through Step 10 of § 32.101(a).

(b) *Vibration tests*. The device shall be subjected to vibration tests as set forth in § 32.101(b).

(c) *Shock test*. The device shall be subjected to shock test as set forth in § 32.101(d).

(d) *Hermetic seal and waterproof test*. On completion of all other tests prescribed by this section, the device shall be immersed in 30 inches of water for 24 hours and shall show no visible evidence of physical contact between the water and the strontium-90. Absolute pressure of the air above the water shall then be reduced to 1 inch of mercury. Lowered pressure shall be maintained for 1 minute or until air bubbles cease to be given off by the water, whichever is the longer. Pressure shall then be increased to normal atmospheric pressure. Any visible evidence of physical contact between the water and the strontium-90 shall be considered leakage.

(e) *Observations*. After each of the tests prescribed by this section, each device shall be examined for evidence of physical damage and for loss of strontium-90. Any evidence of leakage or damage to or failure of any device which could affect containment of the strontium-90 shall be cause for rejection of the design if the damage or failure is attributable to a design defect. Loss of strontium-90 from each tested device shall be measured by wiping with filter paper an area of at least 100 square centimeters on the outside surface of the device, or by wiping the entire surface area if it is less than 100 square centimeters. The amount of strontium-90 in the water used in the hermetic seal and waterproof test prescribed in paragraph (d) of this section shall also be measured. The detection on the filter paper of more than 2,200 disintegrations per minute of strontium-90 per 100 square centimeters of surface wiped or in the water of more than 0.1 percent of the original amount of strontium-90 in any device, shall be cause for rejection of the tested device.

[30 FR 9906, Aug. 10, 1965]

Subpart C--Quality Control Sampling Procedures

[Top of File]

§ 32.110 Acceptance sampling procedures under certain specific licenses.

(a) A random sample shall be taken from each inspection lot of devices licensed under §§ 32.14, 32.53, or 32.61 of this part for which testing is required pursuant to §§ 32.15, 32.55, or 32.62 in accordance with the appropriate Sampling Table in this section determined by the designated Lot Tolerance Percent Defective. If the number of defectives in the sample does not exceed the acceptance number in the appropriate Sampling Table in this section, the lot shall be accepted. If the number of defectives in the sample exceeds the acceptance number in the appropriate Sampling Table in this section, the entire inspection lot shall be rejected.

(b) Single sampling tables for Lot Tolerance Percent Defective

(1) Lot Tolerance Percent Defective 0.5 percent:

Lot size	Sample Size	Acceptance No.
1 to 180	All	0
181 to 210	180	0
211 to 250	210	0
251 to 300	240	0
301 to 400	275	0
401 to 500	300	0
501 to 600	320	0
601 to 800	350	0
801 to 1,000	365	0
1,001 to 2,000	410	0
2,001 to 3,000	430	0
3,001 to 4,000	440	0
4,001 to 5,000	445	0
5,001 to 7,000	450	0
7,001 to 10,000	455	0
10,001 to 20,000	460	0
20,001 to 50,000	775	1
50,001 to 100,000	780	1

(2) Lot Tolerance Percent Defective 1.0 percent:

Lot size	Sample Size	Acceptance No.
1 to 120	All	0
121 to 150	120	0

151 to 200	140	0
201 to 300	165	0
300 to 400	175	0
401 to 500	180	0
501 to 600	190	0
601 to 800	200	0
801 to 1,000	205	0
1,000 to 3,000	220	0
3,001 to 5,000	225	0
5,001 to 10,000	230	0
10,001 to 100,000	390	1

(3) Lot Tolerance Percent Defective 2.0 percent:

Lot size	Sample Size	Acceptance No.
1 to 75	All	0
76 to 100	70	0
101 to 200	85	0
201 to 300	95	0
301 to 400	100	0
401 to 600	105	0
601 to 800	110	0
801 to 4,000	115	0
4,001 to 10,000	195	1
10,001 to 100,000	200	1

(4) Lot Tolerance Percent Defective 3.0 percent:

Lot size	Sample Size	Acceptance No.
1 to 40	All	0
41 to 55	40	0
56 to 100	55	0
101 to 200	65	0
201 to 500	70	0
501 to 3,000	75	0
3,001 to 100,000	130	1

(5) Lot Tolerance Percent Defective 4.0 percent:

Lot size	Sample Size	Acceptance No.
1 to 35	All	0
36 to 50	34	0
51 to 100	44	0
101 to 200	50	0
201 to 2,000	55	0
2,001 to 100,000	95	1

(6) Lot Tolerance Percent Defective 5.0 percent:

Lot size	Sample Size	Acceptance No.
1 to 30	All	0

31 to 50	30	0
51 to 100	37	0
101 to 200	40	0
201 to 300	43	0
301 to 400	44	0
401 to 2,000	45	0
2,001 to 100,000	75	1

(7) Lot Tolerance Percent Defective 7.0 percent:

Lot size	Sample Size	Acceptance No.
1 to 25	All	0
26 to 50	24	0
51 to 100	28	0
101 to 200	30	0
201 to 300	31	0
301 to 800	32	0
801 to 1,000	33	0
1,001 to 100,000	55	1

(8) Lot Tolerance Percent Defective 10.0 percent:

Lot size	Sample Size	Acceptance No.
1 to 20	All	0
21 to 50	17	0
51 to 100	20	0
101 to 200	22	0
201 to 800	23	0
801 to 100,00	39	0

[39 FR 22130, June 20, 1974]

Subpart D--Specifically Licensed Items

[Top of File]

§ 32.201 Serialization of nationally tracked sources.

Each licensee who manufactures a nationally tracked source after February 6, 2007 shall assign a unique serial number to each nationally tracked source. Serial numbers must be composed only of alpha-numeric characters.

[71 FR 65686, Nov. 8, 2006]

Subpart D--Specifically Licensed Items

[Top of File]

§ 32.210 Registration of product information.

(a) Any manufacturer or initial distributor of a sealed source or device containing a sealed source whose product is intended for use under a specific license may submit a request to NRC for evaluation of radiation safety information about its product and for its registration.

(b) The request for review must be sent to the Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 30.6(a) of this chapter.

(c) The request for review of a sealed source or a device must include sufficient information about the design, manufacture, prototype

testing, quality control program, labeling, proposed uses and leak testing and, for a device, the request must also include sufficient information about installation, service and maintenance, operating and safety instructions, and its potential hazards, to provide reasonable assurance that the radiation safety properties of the source or device are adequate to protect health and minimize danger to life and property.

(d) The NRC normally evaluates a sealed source or a device using radiation safety criteria in accepted industry standards. If these standards and criteria do not readily apply to a particular case, the NRC formulates reasonable standards and criteria with the help of the manufacturer or distributor. The NRC shall use criteria and standards sufficient to ensure that the radiation safety properties of the device or sealed source are adequate to protect health and minimize danger to life and property.

(e) After completion of the evaluation, the Commission issues a certificate of registration to the person making the request. The certificate of registration acknowledges the availability of the submitted information for inclusion in an application for a specific license proposing use of the product.

(f) The person submitting the request for evaluation and registration of safety information about the product shall manufacture and distribute the product in accordance with--

(1) The statements and representations, including quality control program, contained in the request; and

(2) The provisions of the registration certificate.

[52 FR 27786, July 24, 1987, as amended at 60 FR 24551, May 9, 1995; 68 FR 58805, Oct. 10, 2003; 73 FR 5719, Jan. 31, 2008]

Subpart E--Violations

[Top of File]

§ 32.301 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55073, Nov. 24, 1992]

§ 32.303 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 32 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 32 that are not issued under subsections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 32.1, 32.2, 32.8, 32.11, 32.14, 32.18, 32.22, 32.23, 32.24, 32.26, 32.27, 32.28, 32.51, 32.53, 32.57, 32.61, 32.71, 32.74, 32.301, and 32.303.

[57 FR 55073, Nov. 24, 1992, as amended at 59 FR 61781, Dec. 2, 1994; 73 FR 42674, July 23, 2008]

PART 33--SPECIFIC DOMESTIC LICENSES OF BROAD SCOPE FOR BYPRODUCT MATERIAL

[Top of File]

§ 33.1 Purpose and scope.

[Top of File]

This part prescribes requirements for the issuance of specific licenses of broad scope for byproduct material ("broad licenses") and certain regulations governing holders of such licenses. The provisions and requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In particular, the provisions of part 30 of this chapter apply to applications and licenses subject to this part.

§ 33.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0015.

(b) The approved information collection requirements contained in this part appear in §§ 33.12, 33.13, 33.14 and 33.15.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 33.12, NRC Form 313 is approved under control number 3150-0120.

(2) Reserved.

[49 FR 19625, May 9, 1984, as amended at 62 FR 52186, Oct. 6, 1997; 67 FR 67099, Nov. 4, 2002]

Specific Licenses of Broad Scope

[Top of File]

§ 33.11 Types of specific licenses of broad scope.

(a) A "Type A specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use, and transfer of any chemical or physical form of the byproduct material specified in the license, but not exceeding quantities specified in the license, for purposes authorized by the Act. The quantities specified are usually in the multicurie range.

(b) A "Type B specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use, and transfer of any chemical or physical form of byproduct material specified in § 33.100, Schedule A, of this part for purposes authorized by the Act. The possession limit for a Type B broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in § 33.100, Schedule A, Column I. If two or more radionuclides are possessed thereunder, the possession limit for each is determined as follows: For each radionuclide, determine the ratio of the quantity possessed to the applicable quantity specified in § 33.100, Schedule A, Column I, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

(c) A "Type C specific license of broad scope" is a specific license authorizing receipt, acquisition, ownership, possession, use, and transfer of any chemical or physical form of byproduct material specified in § 33.100, Schedule A, for purposes authorized by the Act. The possession limit for a Type C broad license, if only one radionuclide is possessed thereunder, is the quantity specified for that radionuclide in § 33.100, Schedule A, Column II. If two or more radionuclides are possessed thereunder, the possession limit is determined for each as follows: For each radionuclide determine the ratio of the quantity possessed to the applicable quantity specified in § 33.100, Schedule A, Column II, for that radionuclide. The sum of the ratios for all radionuclides possessed under the license shall not exceed unity.

(Sec. 161, as amended, Pub. L. 83-703, 68 Stat. 948 (42 U.S.C. 2201); sec. 201, as amended, Pub. L. 93-438, 88 Stat. 1243 (42 U.S.C. 5841))

[33 FR 14579, Sept. 28, 1968, as amended at 43 FR 6923, Feb. 17, 1978]

§ 33.12 Applications for specific licenses of broad scope.

[Top of File]

A person may file an application for specific license of broad scope on NRC Form 313, "Application for Material License," in accordance with the provisions of § 30.32 of this chapter.

[49 FR 27924, July 9, 1984; 68 FR 58805, Oct. 10, 2003]

§ 33.13 Requirements for the issuance of a Type A specific license of broad scope.

[Top of File]

An application for a Type A specific license of broad scope will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter;

(b) The applicant has engaged in a reasonable number of activities involving the use of byproduct material; and

(c) The applicant has established administrative controls and provisions relating to organization and management, procedures, record keeping, material control, and accounting and management review that are necessary to assure safe operations, including:

(1) The establishment of a radiation safety committee composed of such persons as a radiological safety officer, a representative of management, and persons trained and experienced in the safe use of radioactive materials;

(2) The appointment of a radiological safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiological safety matters; and

(3) The establishment of appropriate administrative procedures to assure:

(i) Control of procurement and use of byproduct material;

(ii) Completion of safety evaluations of proposed uses of byproduct material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and

(iii) Review, approval, and recording by the radiation safety committee of safety evaluations of proposed uses prepared in accordance with paragraph (c)(3)(ii) of this section prior to use of the byproduct material.

§ 33.14 Requirements for the issuance of a Type B specific license of broad scope.

[Top of File]

An application for a Type B specific license of broad scope will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter; and

(b) The applicant has established administrative controls and provisions relating to organization and management, procedures, record keeping, material control and accounting, and management review that are necessary to assure safe operations, including:

(1) The appointment of a radiological safety officer who is qualified by training and experience in radiation protection, and who is available for advice and assistance on radiological safety matters; and

(2) The establishment of appropriate administrative procedures to assure:

(i) Control of procurement and use of byproduct material;

(ii) Completion of safety evaluations of proposed uses of byproduct material which take into consideration such matters as the adequacy of facilities and equipment, training and experience of the user, and the operating or handling procedures; and

(iii) Review, approval, and recording by the radiological safety officer of safety evaluations of proposed uses prepared in accordance with paragraph (b)(2)(ii) of this section prior to use of the byproduct material.

§ 33.15 Requirements for the issuance of a Type C specific license of broad scope.

[Top of File]

An application for a Type C specific license of broad scope will be approved if:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter; and

(b) The applicant submits a statement that byproduct material will be used only by, or under the direct supervision of, individuals who have received:

(1) A college degree at the bachelor level, or equivalent training and experience, in the physical or biological sciences or in engineering; and

(2) At least 40 hours of training and experience in the safe handling of radioactive materials, and in the characteristics of ionizing radiation, units of radiation dose and quantities, radiation detection instrumentation, and biological hazards of exposure to radiation appropriate to the type and forms of byproduct material to be used; and

(c) The applicant has established administrative controls and provisions relating to procurement of byproduct material, procedures, record keeping, material control and accounting, and management review necessary to assure safe operations.

§ 33.16 Application for other specific licenses.

[Top of File]

An application filed pursuant to Part 30 of this chapter for a specific license other than one of broad scope will be considered by the Commission as an application for a specific license of broad scope under this part if the requirements of the applicable sections of this part are satisfied.

§ 33.17 Conditions of specific licenses of broad scope.

[Top of File]

(a) Unless specifically authorized pursuant to other parts of this chapter, persons licensed under this part shall not:

(1) Conduct tracer studies in the environment involving direct release of byproduct material;

(2) Receive, acquire, own, possess, use, transfer, or import devices containing 100,000 curies or more of byproduct material in sealed sources used for irradiation of materials;

(3) Conduct activities for which a specific license issued by the Commission under part 32, 34, or 35 of this chapter is required; or

(4) Add or cause the addition of byproduct material to any food, beverage, cosmetic, drug, or other product designed for ingestion or inhalation by, or application to, a human being.

(b) Each Type A specific license of broad scope issued under this part shall be subject to the condition that byproduct material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's radiation safety committee.

(c) Each Type B specific license of broad scope issued under this part shall be subject to the condition that byproduct material possessed under the license may only be used by, or under the direct supervision of, individuals approved by the licensee's radiological safety officer.

(d) Each Type C specific license of broad scope issued under this part shall be subject to the condition that byproduct material possessed under the license may only be used by, or under the direct supervision of, individuals who satisfy the requirements of § 33.15 of this part.

Violations

[Top of File]

§ 33.21 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55073, Nov. 24, 1992]

§ 33.23 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 33 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 33 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 33.1, 33.8, 33.11, 33.12, 33.13, 33.14, 33.15, 33.16, 33.21, 33.23 and 33.100.

[57 FR 55073, Nov. 24, 1992]

Schedules

[Top of File]

§ 33.100 Schedule A.

Byproduct material	Col. I curies	Col. II curies
Antimony-122	1	0.01
Antimony-124	1	.01
Antimony-125	1	.01
Arsenic-73	10	.1
Arsenic-74	1	.01
Arsenic-76	1	.01
Arsenic-77	10	.1
Barium-131	10	.1
Barium-140	1	.01
Beryllium-7	10	0.1
Bismuth-210	.1	.001
Bromine-82	10	.1
Cadmium-109	1	.01
Cadmium-115m	1	.01
Cadmium-115	10	.1
Calcium-45	1	.01
Calcium-47	10	.1
Carbon-14	100	1.
Cerium-141	10	.1
Cerium-143	10	.1
Cerium-144	.1	.001
Cesium-131	100	1.
Cesium-134m	100	1.
Cesium-134	.1	.001

Cesium-135	1	.01
Cesium-136	10	.1
Cesium-137	.1	.001
Chlorine-36	1	.01
Chlorine-38	100	1.
Chromium-51	100	1.
Cobalt-57	10	0.1
Cobalt-58m	100	1.
Cobalt-58	1	.01
Cobalt-60	.1	.001
Copper-64	10	.1
Dysprosium-165	100	1.
Dysprosium-166	10	.1
Erbium-169	10	.1
Erbium-171	10	.1
Europium-152 9.2 h	10	.1
Europium-152 13 y	.1	.001
Europium-154	.1	.001
Europium-155	1	.01
Fluorine-18	100	1.
Gadolinium-153	1	.01
Gadolinium-159	10	.1
Gallium-72	10	.1
Germanium-71	100	1
Gold-198	10	.1
Gold-199	10	.1
Hafnium-181	1	.01
Holmium-166	10	.1
Hydrogen-3	100	1
Indium-113m	100	1
Indium-114m	1	.01
Indium-115m	100	1
Indium-115	1	.01
Iodine-125	.1	.001
Iodine-126	.1	.001
Iodine-129	.1	.01
Iodine-131	.1	.001
Iodine-132	10	.1
Iodine-133	1	.01
Iodine-134	10	.1
Iodine-135	1	.01
Iridium-192	1	.01
Iridium-194	10	.1
Iron-55	10	.1
Irion-59	1	.01
Krypton-85	100	1
Krypton-87	10	.1
Lanthanum-140	1	.01

Lutelium-177	10	.1
Manganese-52	1	.01
Manganese-54	1	.01
Manganese-56	10	.1
Mercury-197m	10	.1
Mercury-197	10	.1
Mercury-203	1	.01
Molybdenum-99	10	.1
Neodymium-147	10	.1
Neodymium-149	10	.1
Nickel-59	10	.1
Nickel-63	1	.01
Nickel-65	10	.1
Niobium-93m	1	.01
Niobium-95	1	.01
Niobium-97	100	1.
Osmium-185	1	.01
Osmium-191m	100	1.
Osmium-191	10	.1
Osmium-193	10	.1
Palladium-103	10	.1
Palladium-109	10	.1
Phosphorus-32	1	.01
Platinum-191	10	.1
Platinum-193m	100	1.
Platinum-193	10	.1
Platinum-197m	100	1
Platinum-197	10	.1
Polonium-210	.01	.0001
Potassium-42	1	.01
Praseodymium-142	10	.1
Praseodymium-143	10	.1
Promethium-147	1	.01
Promethium-149	10	.1
Radium-226	0.01	0.0001
Rhenium-186	10	.1
Rhenium-188	10	.1
Rhodium-103m	1,000	10.
Rhodium-105	10	.1
Rubidium-86	1	.01
Rubidium-87	1	.01
Ruthenium-97	100	1.
Ruthenium-103	1	.01
Ruthenium-105	10	.1
Ruthenium-106	.1	.001
Samarium-151	1	.01
Samarium-153	10	.1
Scandium-46	1	.01

Scandium-47	10	.1
Scandium-48	1	.01
Selenium-75	1	.01
Silicon-31	10	.1
Silver-105	1	.01
Silver-110m	.1	.001
Silver-111	10	.1
Sodium-22	0.1	0.001
Sodium-24	1	.01
Strontium-85m	1,000	10.
Strontium-85	1	.01
Strontium-89	1	.01
Strontium-90	.01	.0001
Strontium-91	10	.1
Strontium-92	10	.1
Sulphur-35	10	.1
Tantalum-182	1	.01
Technetium-96	10	.1
Technetium-97m	10	.1
Technetium-97	10	.1
Technetium-99m	100	1.
Technetium-99	1	.01
Tellurium-125m	1	.01
Tellurium-127m	1	.01
Tellurium-127	10	.1
Tellurium-129m	1	.01
Tellurim-129	100	1
Tellurium-131m	10	.1
Tellurium-132	1	.01
Terbium-160	1	.01
Thallium-200	10	.1
Thallium-201	10	.1
Thallium-202	10	.1
Thallium-204	1	.01
Thulium-170	1	.01
Thulium-171	1	.01
Tin-113	1	.01
Tin-125	1	.01
Tungsten-181	1	.01
Tungsten-185	1	.01
Tungsten-187	10	.1
Vandadium-48	1	.01
Xenon-131m	1,000	10.
Xenon-133	100	1.
Xenon-135	100	1.
Ytterbium-175	10	.1
Yttrium-90	1	.01
Yttrium-91	1	.01

Yttrium-92	10	.1
Yttrium-93	1	.01
Zinc-65	1	.01
Zinc-69m	10	.1
Zinc-69	100	1.
Zirconium-93	1	.01
Zirconium-95	1	.01
Zirconium-97	1	.01
Any byproduct material other than alpha emitting byproduct material not listed above	.1	.001

(Sec. 201, Pub. L. 93-438; 88 Stat. 1242 (42 U.S.C. 5841))

[33 FR 14579, Sept. 28, 1968; 72 FR 55930 Oct. 1, 2007]

PART 34--LICENSES FOR INDUSTRIAL RADIOGRAPHY AND RADIATION SAFETY REQUIREMENTS FOR INDUSTRIAL RADIOGRAPHIC OPERATIONS

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 34.1 Purpose and scope.

This part prescribes requirements for the issuance of licenses for the use of sealed sources containing byproduct material and radiation safety requirements for persons using these sealed sources in industrial radiography. The provisions and requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In particular, the requirements and provisions of 10 Parts 19, 20, 21, 30, 71, 150, 170, and 171 of this chapter apply to applications and licenses subject to this part. This rule does not apply to medical uses of byproduct material.

§ 34.3 Definitions.

[Top of File]

ALARA (acronym for "as low as is reasonably achievable") means making every reasonable effort to maintain exposures to radiation as far below the dose limits specified in 10 CFR Part 20 as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest.

Annual refresher safety training means a review conducted or provided by the licensee for its employees on radiation safety aspects of industrial radiography. The review may include, as appropriate, the results of internal inspections, new procedures or equipment, new or revised regulations, accidents or errors that have been observed, and should also provide opportunities for employees to ask safety questions.

Associated equipment means equipment that is used in conjunction with a radiographic exposure device to make radiographic exposures that drives, guides, or comes in contact with the source, (e.g., guide tube, control tube, control (drive) cable, removable source stop, "J" tube and collimator when it is used as an exposure head.

Becquerel (Bq) means one disintegration per second.

Certifying Entity means an independent certifying organization meeting the requirements in appendix A of this part or an Agreement State meeting the requirements in appendix A, Parts II and III of this part.

Collimator means a radiation shield that is placed on the end of the guide tube or directly onto a radiographic exposure device to restrict the size of the radiation beam when the sealed source is cranked into position to make a radiographic exposure.

Control (drive) cable means the cable that is connected to the source assembly and used to drive the source to and from the exposure location.

Control drive mechanism means a device that enables the source assembly to be moved to and from the exposure device.

Control tube means a protective sheath for guiding the control cable. The control tube connects the control drive mechanism to the radiographic exposure device.

Exposure head means a device that locates the gamma radiography sealed source in the selected working position. (An exposure head is also known as a source stop.)

Field station means a facility where licensed material may be stored or used and from which equipment is dispatched.

Gray means the SI unit of absorbed dose. One gray is equal to an absorbed dose of 1 Joule/kilogram. It is also equal to 100 rads.

Guide tube (Projection sheath) means a flexible or rigid tube (i.e., "J" tube) for guiding the source assembly and the attached control cable from the exposure device to the exposure head. The guide tube may also include the connections necessary for attachment to the exposure device and to the exposure head.

Hands-on experience means experience in all of those areas considered to be directly involved in the radiography process.

Independent certifying organization means an independent organization that meets all of the criteria of Appendix A to this part.

Industrial radiography (radiography) means an examination of the structure of materials by nondestructive methods, utilizing ionizing radiation to make radiographic images.

Lay-barge radiography means industrial radiography performed on any water vessel used for laying pipe.

Offshore platform radiography means industrial radiography conducted from a platform over a body of water.

Permanent radiographic installation means an enclosed shielded room, cell, or vault, not located at a temporary jobsite, in which radiography is performed.

Practical Examination means a demonstration through practical application of the safety rules and principles in industrial radiography including use of all appropriate equipment and procedures.

Radiation Safety Officer for industrial radiography means an individual with the responsibility for the overall radiation safety program on behalf of the licensee and who meets the requirements of § 34.42.

Radiographer means any individual who performs or who, in attendance at the site where the sealed source or sources are being used, personally supervises industrial radiographic operations and who is responsible to the licensee for assuring compliance with the requirements of the Commission's regulations and the conditions of the license.

Radiographer certification means written approval received from a certifying entity stating that an individual has satisfactorily met certain established radiation safety, testing, and experience criteria.

Radiographer's assistant means any individual who under the direct supervision of a radiographer, uses radiographic exposure devices, sealed sources or related handling tools, or radiation survey instruments in industrial radiography.

Radiographic exposure device (also called a camera, or a projector) means any instrument containing a sealed source fastened or contained therein, in which the sealed source or shielding thereof may be moved, or otherwise changed, from a shielded to unshielded position for purposes of making a radiographic exposure.

Radiographic operations means all activities associated with the presence of radioactive sources in a radiographic exposure device during use of the device or transport (except when being transported by a common or contract transport), to include surveys to confirm the adequacy of boundaries, setting up equipment and any activity inside restricted area boundaries.

S-tube means a tube through which the radioactive source travels when inside a radiographic exposure device.

Sealed source means any byproduct material that is encased in a capsule designed to prevent leakage or escape of the byproduct material.

Shielded position means the location within the radiographic exposure device or source changer where the sealed source is secured and restricted from movement.

Sievert means the SI unit of any of the quantities expressed as dose equivalent. The dose equivalent in sieverts is equal to the absorbed dose in grays multiplied by the quality factor (1 Sv = 100 rems).

Source assembly means an assembly that consists of the sealed source and a connector that attaches the source to the control cable. The source assembly may also include a stop ball used to secure the source in the shielded position.

Source changer means a device designed and used for replacement of sealed sources in radiographic exposure devices, including those also used for transporting and storage of sealed sources.

Storage area means any location, facility, or vehicle which is used to store or to secure a radiographic exposure device, a storage container, or a sealed source when it is not in use and which is locked or has a physical barrier to prevent accidental exposure, tampering with, or unauthorized removal of the device, container, or source.

Storage container means a container in which sealed sources are secured and stored.

Temporary jobsite means a location where radiographic operations are conducted and where licensed material may be stored other than those location(s) of use authorized on the license.

Underwater radiography means industrial radiography performed when the radiographic exposure device and/or related equipment are beneath the surface of the water.

§ 34.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

§ 34.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0007.

(b) The approved information collection requirements contained in this part appear in §§ 34.13, 34.20, 34.25, 34.27, 34.29, 34.31, 34.33, 34.35, 34.41, 34.42, 34.43, 34.45, 34.47, 34.49, 34.53, 34.61, 34.63, 34.65, 34.67, 34.69, 34.71, 34.73, 34.75, 34.79, 34.81, 34.83, 34.85, 34.87, 34.89, 34.101 and appendix A.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 34.11, NRC Form 313 is approved under control number 3150-0120.

(2) [Reserved]

[62 FR 52186, Oct. 6, 1997]

Subpart B--Specific Licensing Provisions

[Top of File]

§ 34.11 Application for a specific license.

A person may file an application for specific license for use of sealed sources in industrial radiography on NRC Form 313, "Application for Material License," in accordance with the provisions of § 30.32 of this chapter.

[68 FR 58805, Oct. 10, 2003]

§ 34.13 Specific license for industrial radiography.

[Top of File]

An application for a specific license for the use of licensed material in industrial radiography will be approved if the applicant meets the following requirements:

(a) The applicant satisfies the general requirements specified in § 30.33 of this chapter for byproduct material, as appropriate, and any special requirements contained in this part.

(b) The applicant submits an adequate program for training radiographers and radiographers' assistants that meets the requirements of § 34.43.

(1) After May 28, 1999, a license applicant need not describe its initial training and examination program for radiographers in the subjects outlined in § 34.43(g).

(2) From June 27, 1997 to May 28, 1999 a license applicant may affirm that all individuals acting as industrial radiographers will be certified in radiation safety by a certifying entity before commencing duty as radiographers. This affirmation substitutes for a description of its initial training and examination program for radiographers in the subjects outlined in § 34.43(g).

(c) The applicant submits procedures for verifying and documenting the certification status of radiographers and for ensuring that the certification of individuals acting as radiographers remains valid.

(d) The applicant submits written operating and emergency procedures as described in § 34.45.

(e) The applicant submits a description of a program for inspections of the job performance of each radiographer and radiographers' assistant at intervals not to exceed 6 months as described in § 34.43(e).

(f) The applicant submits a description of the applicant's overall organizational structure as it applies to the radiation safety responsibilities

in industrial radiography, including specified delegation of authority and responsibility.

(g) The applicant identifies and lists the qualifications of the individual(s) designated as the RSO (§ 34.42) and potential designees responsible for ensuring that the licensee's radiation safety program is implemented in accordance with approved procedures.

(h) If an applicant intends to perform leak testing of sealed sources or exposure devices containing depleted uranium (DU) shielding, the applicant must describe the procedures for performing and the qualifications of the person(s) authorized to do the leak testing. If the applicant intends to analyze its own wipe samples, the application must include a description of the procedures to be followed. The description must include the--

(1) Instruments to be used;

(2) Methods of performing the analysis; and

(3) Pertinent experience of the person who will analyze the wipe samples.

(i) If the applicant intends to perform "in-house" calibrations of survey instruments the applicant must describe methods to be used and the relevant experience of the person(s) who will perform the calibrations. All calibrations must be performed according to the procedures described and at the intervals prescribed in § 34.25.

(j) The applicant identifies and describes the location(s) of all field stations and permanent radiographic installations.

(k) The applicant identifies the locations where all records required by this part and other parts of this chapter will be maintained.

Subpart C--Equipment

[Top of File]

§ 34.20 Performance requirements for industrial radiography equipment.

Equipment used in industrial radiographic operations must meet the following minimum criteria:

(a)(1) Each radiographic exposure device, source assembly or sealed source, and all associated equipment must meet the requirements specified in American National Standards Institute, N432-1980 "Radiological Safety for the Design and Construction of Apparatus for Gamma Radiography," (published as NBS Handbook 136, issued January 1981). This publication has been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a)and 1 CFR part 51. This publication may be purchased from the American National Standards Institute, Inc., 1430 Broadway, New York, New York 10018 Telephone (212) 642-4900. Copies of the document are available for inspection at the Nuclear Regulatory Commission Library, 11545 Rockville Pike, Rockville, Maryland 20852. A copy of the document is also on file at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(2) Engineering analysis may be submitted by an applicant or licensee to demonstrate the applicability of previously performed testing on similar individual radiography equipment components. Upon review, the Commission may find this an acceptable alternative to actual testing of the component pursuant to the above referenced standard.

(b) In addition to the requirements specified in paragraph (a) of this section, the following requirements apply to radiographic exposure devices, source changers, source assemblies and sealed sources.

(1) The licensee shall ensure that each radiographic exposure device has attached to it a durable, legible, clearly visible label bearing the--

(i) Chemical symbol and mass number of the radionuclide in the device;

(ii) Activity and the date on which this activity was last measured;

(iii) Model (or product code) and serial number of the sealed source;

(iv) Manufacturer's identity of the sealed source; and

(v) Licensee's name, address, and telephone number.

(2) Radiographic exposure devices intended for use as Type B transport containers must meet the applicable requirements of 10 CFR part 71.

(3) Modification of radiographic exposure devices, source changers, and source assemblies and associated equipment is prohibited, unless the design of any replacement component,including source holder, source assembly, controls or guide tubes would not compromise the design safety features of the system.

(c) In addition to the requirements specified in paragraphs (a) and (b) of this section, the following requirements apply to radiographic exposure devices, source assemblies, and associated equipment that allow the source to be moved out of the device for radiographic operations or to source changers.

(1) The coupling between the source assembly and the control cable must be designed in such a manner that the source assembly will not become disconnected if cranked outside the guide tube. The coupling must be such that it cannot be unintentionally disconnected under normal and reasonably foreseeable abnormal conditions.

(2) The device must automatically secure the source assembly when it is cranked back into the fully shielded position within the device. This securing system may only be released by means of a deliberate operation on the exposure device.

(3) The outlet fittings, lock box, and drive cable fittings on each radiographic exposure device must be equipped with safety plugs or covers which must be installed during storage and transportation to protect the source assembly from water, mud, sand or other foreign matter.

(4)(i) Each sealed source or source assembly must have attached to it or engraved on it, a durable, legible, visible label with the words: "DANGER--RADIOACTIVE."

(ii) The label may not interfere with the safe operation of the exposure device or associated equipment.

(5) The guide tube must be able to withstand a crushing test that closely approximates the crushing forces that are likely to be encountered during use, and be able to withstand a kinking resistance test that closely approximates the kinking forces that are likely to be encountered during use.

(6) Guide tubes must be used when moving the source out of the device.

(7) An exposure head or similar device designed to prevent the source assembly from passing out of the end of the guide tube must be attached to the outermost end of the guide tube during industrial radiography operations.

(8) The guide tube exposure head connection must be able to withstand the tensile test for control units specified in ANSI N432-1980.

(9) Source changers must provide a system for ensuring that the source will not be accidentally withdrawn from the changer when connecting or disconnecting the drive cable to or from a source assembly.

(d) All radiographic exposure devices and associated equipment in use after January 10, 1996, must comply with the requirements of this section.

(e) Notwithstanding paragraph (a)(1) of this section, equipment used in industrial radiographic operations need not comply with § 8.9.2(c) of the Endurance Test in American National Standards Institute N432-1980, if the prototype equipment has been tested using a torque value representative of the torque that an individual using the radiography equipment can realistically exert on the lever or crankshaft of the drive mechanism.

[62 FR 28963, May 28, 1997, as amended at 69 FR 18803, Apr. 9, 2004]

§ 34.21 Limits on external radiation levels from storage containers and source changers.

[Top of File]

The maximum exposure rate limits for storage containers and source changers are 2 millisieverts (200 millirem) per hour at any exterior surface, and 0.1 millisieverts (10 millirem) per hour at 1 meter from any exterior surface with the sealed source in the shielded position.

§ 34.23 Locking of radiographic exposure devices, storage containers and source changers.

[Top of File]

(a) Each radiographic exposure device must have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. The exposure device and/or its container must be kept locked (and if a keyed-lock, with the key removed at all times) when not under the direct surveillance of a radiographer or a radiographer's assistant except at permanent radiographic installations as stated in § 34.51. In addition, during radiographic operations the sealed source assembly must be secured in the shielded position each time the source is returned to that position.

(b) Each sealed source storage container and source changer must have a lock or outer locked container designed to prevent unauthorized or accidental removal of the sealed source from its shielded position. Storage containers and source changers must be kept locked (and if a keyed-lock, with the key removed at all times) when containing sealed sources except when under the direct surveillance of a radiographer or a radiographer's assistant.

§ 34.25 Radiation survey instruments.

[Top of File]

(a) The licensee shall keep sufficient calibrated and operable radiation survey instruments at each location where radioactive material is present to make the radiation surveys required by this part and by 10 CFR part 20 of this chapter. Instrumentation required by this section must be capable of measuring a range from 0.02 millisieverts (2 millirems) per hour through 0.01 sievert (1 rem) per hour.

(b) The licensee shall have each radiation survey instrument required under paragraph (a) of this section calibrated--

(1) At intervals not to exceed 6 months and after instrument servicing, except for battery changes;

(2) For linear scale instruments, at two points located approximately one-third and two-thirds of full-scale on each scale; for logarithmic scale instruments, at mid-range of each decade, and at two points of at least one decade; and for digital instruments, at 3 points between 0.02 and 10 millisieverts (2 and 1000 millirems) per hour; and

(3) So that an accuracy within plus or minus 20 percent of the calibration source can be demonstrated at each point checked.

(c) The licensee shall maintain records of the results of the instrument calibrations in accordance with § 34.65.

§ 34.27 Leak testing and replacement of sealed sources.

[Top of File]

(a) The replacement of any sealed source fastened to or contained in a radiographic exposure device and leak testing of any sealed source must be performed by persons authorized to do so by the NRC or an Agreement State.

(b) The opening, repair, or modification of any sealed source must be performed by persons specifically authorized to do so by the Commission or an Agreement State.

(c) Testing and recordkeeping requirements.

(1) Each licensee who uses a sealed source shall have the source tested for leakage at intervals not to exceed 6 months. The leak testing of the source must be performed using a method approved by the Commission or by an Agreement State. The wipe sample should be taken from the nearest accessible point to the sealed source where contamination might accumulate. The wipe sample must be analyzed for radioactive contamination. The analysis must be capable of detecting the presence of 185 Bq (0.005 microcurie) of radioactive material on the test sample and must be performed by a person specifically authorized by the Commission or an Agreement State to perform the analysis.

(2) The licensee shall maintain records of the leak tests in accordance with § 34.67.

(3) Unless a sealed source is accompanied by a certificate from the transferor that shows that it has been leak tested within 6 months before the transfer, it may not be used by the licensee until tested for leakage. Sealed sources that are in storage and not in use do not require leak testing, but must be tested before use or transfer to another person if the interval of storage exceeds 6 months.

(d) Any test conducted pursuant to paragraph (c) of this section which reveals the presence of 185 Bq (0.005 microcurie) or more of removable radioactive material must be considered evidence that the sealed source is leaking. The licensee shall immediately withdraw the equipment involved from use and shall have it decontaminated and repaired or disposed of in accordance with Commission regulations. A report must be filed with the Director, Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 30.6(a) of
this chapter, the report to be filed within 5 days of any test with results that exceed the threshold in this paragraph (d), and to describe the equipment involved, the test results, and the corrective action taken. A copy of the report must be sent to the Administrator of the appropriate Nuclear Regulatory Commission's Regional Office listed in appendix D of 10 CFR part 20 of this chapter "Standards for Protection Against Radiation."

(e) Each exposure device using depleted uranium (DU) shielding and an "S" tube configuration must be tested for DU contamination at intervals not to exceed 12 months. The analysis must be capable of detecting the presence of 185 Bq (0.005 microcuries) of radioactive material on the test sample and must be performed by a person specifically authorized by the Commission or an Agreement State to perform the analysis. Should such testing reveal the presence of 185 Bq (0.005 microcuries) or more of removable DU contamination, the exposure device must be removed from use until an evaluation of the wear on the S-tube has been made. Should the evaluation reveal that the S-tube is worn through, the device may not be used again. DU shielded devices do not have to be tested for DU contamination while in storage and not in use. Before using or transferring such a device however, the device must be tested for DU contamination if the interval of storage exceeded 12 months. A record of the DU leak-test must be made in accordance with § 34.67. Licensees will have until June 27, 1998, to comply with the DU leak-testing requirements of this paragraph.

[62 FR 28963, May 28, 1997, as amended at 63 FR 37061, July 9, 1998; 67 FR 77652, Dec. 19, 2002; 68 FR 58805, Oct. 10, 2003; 73 FR 5719, Jan. 31, 2008]

§ 34.29 Quarterly inventory.

[Top of File]

(a) Each licensee shall conduct a quarterly physical inventory to account for all sealed sources and for devices containing depleted uranium received and possessed under this license.

(b) The licensee shall maintain records of the quarterly inventory in accordance with § 34.69.

§ 34.31 Inspection and maintenance of radiographic exposure devices, transport and storage containers, associated equipment, source changers, and survey instruments.

[Top of File]

(a) The licensee shall perform visual and operability checks on survey meters, radiographic exposure devices, transport and storage containers, associated equipment and source changers before use on each day the equipment is to be used to ensure that the equipment is in good working condition, that the sources are adequately shielded, and that required labeling is present. Survey instrument operability must be performed using check sources or other appropriate means. If equipment problems are found, the equipment must be removed from service until repaired.

(b) Each licensee shall have written procedures for:

(1) Inspection and routine maintenance of radiographic exposure devices, source changers, associated equipment, transport and storage containers, and survey instruments at intervals not to exceed 3 months or before the first use thereafter to ensure the proper functioning of components important to safety. Replacement components shall meet design specifications. If equipment problems are found, the equipment must be removed from service until repaired.

(2) Inspection and maintenance necessary to maintain the Type B packaging used to transport radioactive materials. The inspection and maintenance program must include procedures to assure that Type B packages are shipped and maintained in accordance with the certificate of compliance or other approval.

(c) Records of equipment problems and of any maintenance performed under paragraphs (a) and (b) of this section must be made in accordance with § 34.73.

§ 34.33 Permanent radiographic installations.

[Top of File]

(a) Each entrance that is used for personnel access to the high radiation area in a permanent radiographic installation must have either:

(1) An entrance control of the type described in § 20.1601(a)(1) of this chapter that reduces the radiation level upon entry into the area, or

(2) Both conspicuous visible and audible warning signals to warn of the presence of radiation. The visible signal must be actuated by radiation whenever the source is exposed. The audible signal must be actuated when an attempt is made to enter the installation while the source is exposed.

(b) The alarm system must be tested for proper operation with a radiation source each day before the installation is used for radiographic operations. The test must include a check of both the visible and audible signals. Entrance control devices that reduce the radiation level upon entry (designated in paragraph (a)(1) of this section) must be tested monthly. If an entrance control device or an alarm is operating improperly, it must be immediately labeled as defective and repaired within 7 calendar days. The facility may continue to be used during this 7-day period, provided the licensee implements the continuous surveillance requirements of § 34.51 and uses an alarming ratemeter. Test records for entrance controls and audible and visual alarm must be maintained in accordance with § 34.75.

§ 34.35 Labeling, storage, and transportation.

[Top of File]

(a) The licensee may not use a source changer or a container to store licensed material unless the source changer or the storage container has securely attached to it a durable, legible, and clearly visible label bearing the standard trefoil radiation caution symbol conventional colors, i.e., magenta, purple or black on a yellow background, having a minimum diameter of 25 mm, and the wording

CAUTION*
RADIOACTIVE MATERIAL
NOTIFY CIVIL AUTHORITIES (or "NAME OF COMPANY")
*_____ or "DANGER"

(b) The licensee may not transport licensed material unless the material is packaged, and the package is labeled, marked, and accompanied with appropriate shipping papers in accordance with regulations set out in 10 CFR part 71.

(c) Locked radiographic exposure devices and storage containers must be physically secured to prevent tampering or removal by unauthorized personnel. The licensee shall store licensed material in a manner which will minimize danger from explosion or fire.

(d) The licensee shall lock and physically secure the transport package containing licensed material in the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal of the licensed material from the vehicle.

Subpart D--Radiation Safety Requirements

[Top of File]

§ 34.41 Conducting industrial radiographic operations.

(a) Whenever radiography is performed at a location other than a permanent radiographic installation, the radiographer must be accompanied by at least one other qualified radiographer or an individual who has at a minimum met the requirements of § 34.43(c). The additional qualified individual shall observe the operations and be capable of providing immediate assistance to prevent unauthorized entry. Radiography may not be performed if only one qualified individual is present.

(b) All radiographic operations conducted at locations of use authorized on the license must be conducted in a permanent radiographic installation, unless specifically authorized by the Commission.

(c) A licensee may conduct lay-barge, offshore platform, or underwater radiography only if procedures have been approved by the Commission or by an Agreement State.

(d) Licensees will have until June 27, 1998, to meet the requirements for having two qualified individuals present at locations other than a permanent radiographic installation as specified in paragraph (a) of this section.

[62 FR 28963, May 28, 1997, as amended at 63 FR 37061, July 9, 1998]

§ 34.42 Radiation Safety Officer for industrial radiography.

[Top of File]

The RSO shall ensure that radiation safety activities are being performed in accordance with approved procedures and regulatory requirements in the daily operation of the licensee's program.

(a) The minimum qualifications, training, and experience for RSOs for industrial radiography are as follows:

(1) Completion of the training and testing requirements of § 34.43(a);

(2) 2000 hours of hands-on experience as a qualified radiographer in industrial radiographic operations; and

(3) Formal training in the establishment and maintenance of a radiation protection program.

(b) The Commission will consider alternatives when the RSO has appropriate training and/or experience in the field of ionizing radiation, and in addition, has adequate formal training with respect to the establishment and maintenance of a radiation safety protection program.

(c) The specific duties and authorities of the RSO include, but are not limited to:

(1) Establishing and overseeing all operating, emergency, and ALARA procedures as required by 10 CFR part 20 of this chapter, and reviewing them regularly to ensure that the procedures in use conform to current 10 CFR part 20 procedures, conform to other NRC regulations and to the license conditions.

(2) Overseeing and approving all phases of the training program for radiographic personnel, ensuring that appropriate and effective radiation protection practices are taught;

(3) Ensuring that required radiation surveys and leak tests are performed and documented in accordance with the regulations, including any corrective measures when levels of radiation exceed established limits;

(4) Ensuring that personnel monitoring devices are calibrated and used properly by occupationally-exposed personnel, that records are kept of the monitoring results, and that timely notifications are made as required by § 20.2203 of this chapter; and

(5) Ensuring that operations are conducted safely and to assume control for instituting corrective actions including stopping of operations when necessary.

(d) Licensees will have until June 27, 1999, to meet the requirements of paragraph (a) or (b) of this section.

[62 FR 28963, May 28, 1997, as amended at 63 FR 37061, July 9, 1998]

§ 34.43 Training.

(a) The licensee may not permit any individual to act as a radiographer until the individual--

(1) Has received training in the subjects in paragraph (g) of this section, in addition to a minimum of 2 months of on-the-job training, and is certified through a radiographer certification program by a certifying entity in accordance with the criteria specified in appendix A of this part. (An independent organization that would like to be recognized as a certifying entity shall submit its request to the Director, Office of Federal and State Materials and Environmental
Management Programs, by an appropriate method listed in § 30.6(a) of this chapter.); or

(2) The licensee may, until June 27, 1999, allow an individual who has not met the requirements of paragraph (a)(1) of this section, to act as a radiographer after the individual has received training in the subjects outlined in paragraph (g) of this section and demonstrated an understanding of these subjects by successful completion of a written examination that was previously submitted to and approved by the Commission.

(b) In addition, the licensee may not permit any individual to act as a radiographer until the individual--

(1) Has received copies of and instruction in the requirements described in NRC regulations contained in this part; in §§ 30.7, 30.9, and 30.10 of this chapter; in the applicable sections of 10 CFR parts 19 and 20, of this chapter, in applicable DOT regulations as referenced in 10 CFR part 71, in the NRC license(s) under which the radiographer will perform industrial radiography, and the licensee's operating and emergency procedures;

(2) Has demonstrated understanding of the licensee's license and operating and emergency procedures by successful completion of a written or oral examination covering this material.

(3) Has received training in the use of the licensee's radiographic exposure devices, sealed sources, in the daily inspection of devices and associated equipment, and in the use of radiation survey instruments.

(4) Has demonstrated understanding of the use of radiographic exposure devices, sources, survey instruments and associated equipment described in paragraphs (b)(1) and (b)(3) of this section by successful completion of a practical examination covering this material.

(c) The licensee may not permit any individual to act as a radiographer's assistant until the individual--

(1) Has received copies of and instruction in the requirements described in NRC regulations contained in this part, in §§ 30.7, 30.9, and 30.10 of this chapter, in the applicable sections of 10 CFR parts 19 and 20 of this chapter, in applicable DOT regulations as referenced in 10 CFR part 71, in the NRC license(s) under which the radiographer's assistant will perform industrial radiography, and the licensee's operating and emergency procedures;

(2) Has developed competence to use, under the personal supervision of the radiographer, the radiographic exposure devices, sealed sources, associated equipment, and radiation survey instruments that the assistant will use; and

(3) Has demonstrated understanding of the instructions provided under (c)(1) of this section by successfully completing a written test on the subjects covered and has demonstrated competence in the use of hardware described in (c)(2) of this section by successful completion of a practical examination on the use of such hardware.

(d) The licensee shall provide annual refresher safety training for each radiographer and radiographer's assistant at intervals not to exceed 12 months.

(e) Except as provided in paragraph (e)(4), the RSO or designee shall conduct an inspection program of the job performance of each radiographer and radiographer's assistant to ensure that the Commission's regulations, license requirements, and the applicant's operating and emergency procedures are followed. The inspection program must:

(1) Include observation of the performance of each radiographer and radiographer's assistant during an actual industrial radiographic operation, at intervals not to exceed 6 months; and

(2) Provide that, if a radiographer or a radiographer's assistant has not participated in an industrial radiographic operation for more than 6 months since the last inspection, the radiographer must demonstrate knowledge of the training requirements of § 34.43(b)(3) and the radiographer's assistant must re-demonstrate knowledge of the training requirements of § 34.43(c)(2) by a practical examination before these individuals can next participate in a radiographic operation.

(3) The Commission may consider alternatives in those situations where the individual serves as both radiographer and RSO.

(4) In those operations where a single individual serves as both radiographer and RSO, and performs all radiography operations, an inspection program is not required.

(f) The licensee shall maintain records of the above training to include certification documents, written and practical examinations, refresher safety training and inspections of job performance in accordance with § 34.79.

(g) The licensee shall include the following subjects required in paragraph (a) of this section:

(1) Fundamentals of radiation safety including--

(i) Characteristics of gamma radiation;

(ii) Units of radiation dose and quantity of radioactivity;

(iii) Hazards of exposure to radiation;

(iv) Levels of radiation from licensed material; and

(v) Methods of controlling radiation dose (time, distance, and shielding);

(2) Radiation detection instruments including--

(i) Use, operation, calibration, and limitations of radiation survey instruments;

(ii) Survey techniques; and

(iii) Use of personnel monitoring equipment;

(3) Equipment to be used including--

(i) Operation and control of radiographic exposure equipment, remote handling equipment, and storage containers, including pictures or models of source assemblies (pigtails).

(ii) Storage, control, and disposal of licensed material; and

(iii) Inspection and maintenance of equipment.

(4) The requirements of pertinent Federal regulations; and

(5) Case histories of accidents in radiography.

(h) Licensees will have until June 27, 1998, to comply with the additional training requirements specified in paragraphs (b)(1) and (c)(1) of this section.

(i) Licensees will have until June 27, 1999 to comply with the certification requirements specified in paragraph (a)(1) of this section. Records of radiographer certification maintained in accordance with § 34.79(a) provide appropriate affirmation of certification requirements specified in paragraph (a)(1) of this section.

[62 FR 28963, May 28, 1997, as amended at 63 FR 37061, July 9, 1998; 68 FR 58805, Oct. 10, 2003; 73 FR 5720, Jan. 31, 2008]

§ 34.45 Operating and emergency procedures.

[Top of File]

(a) Operating and emergency procedures must include, as a minimum, instructions in the following:

(1) Appropriate handling and use of licensed sealed sources and radiographic exposure devices so that no person is likely to be exposed to radiation doses in excess of the limits established in 10 CFR part 20 of this chapter "Standards for Protection Against Radiation";

(2) Methods and occasions for conducting radiation surveys;

(3) Methods for controlling access to radiographic areas;

(4) Methods and occasions for locking and securing radiographic exposure devices, transport and storage containers and sealed sources;

(5) Personnel monitoring and the use of personnel monitoring equipment;

(6) Transporting sealed sources to field locations, including packing of radiographic exposure devices and storage containers in the vehicles, placarding of vehicles when needed, and control of the sealed sources during transportation (refer to 49 CFR parts 171-173);

(7) The inspection, maintenance, and operability checks of radiographic exposure devices, survey instruments, transport containers, and storage containers;

(8) Steps that must be taken immediately by radiography personnel in the event a pocket dosimeter is found to be off-scale or an alarm ratemeter alarms unexpectedly.

(9) The procedure(s) for identifying and reporting defects and noncompliance, as required by 10 CFR part 21 of this chapter;

(10) The procedure for notifying proper persons in the event of an accident;

(11) Minimizing exposure of persons in the event of an accident;

(12) Source recovery procedure if licensee will perform source recovery;

(13) Maintenance of records.

(b) The licensee shall maintain copies of current operating and emergency procedures in accordance with §§ 34.81 and 34.89.

§ 34.46 Supervision of radiographers' assistants.

[Top of File]

Whenever a radiographer's assistant uses radiographic exposure devices, associated equipment or sealed sources or conducts radiation surveys required by § 34.49(b) to determine that the sealed source has returned to the shielded position after an exposure, the assistant shall be under the personal supervision of a radiographer. The personal supervision must include:

(a) The radiographer's physical presence at the site where the sealed sources are being used;

(b) The availability of the radiographer to give immediate assistance if required; and

(c) The radiographer's direct observation of the assistant's performance of the operations referred to in this section.

§ 34.47 Personnel monitoring.

[Top of File]

(a) The licensee may not permit any individual to act as a radiographer or a radiographer's assistant unless, at all times during radiographic operations, each individual wears, on the trunk of the body, a direct reading dosimeter, an operating alarm ratemeter, and a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. At permanent radiography installations where other appropriate alarming or warning devices are in routine use, the wearing of an alarming ratemeter is not required.

(1) Pocket dosimeters must have a range from zero to 2 millisieverts (200 millirems) and must be recharged at the start of each shift. Electronic personal dosimeters may only be used in place of ion-chamber pocket dosimeters.

(2) Each personnel dosimeter must be assigned to and worn only by one individual.

(3) Film badges must be replaced at periods not to exceed one month and other personnel dosimeters processed and evaluated by an accredited NVLAP processor must be replaced at periods not to exceed three months.

(4) After replacement, each personnel dosimeter must be processed as soon as possible.

(b) Direct reading dosimeters such as pocket dosimeters or electronic personal dosimeters, must be read and the exposures recorded at the beginning and end of each shift, and records must be maintained in accordance with § 34.83.

(c) Pocket dosimeters, or electronic personal dosimeters, must be checked at periods not to exceed 12 months for correct response to radiation, and records must be maintained in accordance with § 34.83. Acceptable dosimeters must read within plus or minus 20 percent of the true radiation exposure.

(d) If an individual's pocket chamber is found to be off-scale, or if his or her electronic personal dosimeter reads greater than 2 millisieverts (200 millirems), and the possibility of radiation exposure cannot be ruled out as the cause, the individual's personnel dosimeter must be sent for processing within 24 hours. In addition, the individual may not resume work associated with licensed material use until a determination of the individual's radiation exposure has been made. This determination must be made by the RSO or the RSO's designee. The results of this determination must be included in the records maintained in accordance with § 34.83.

(e) If the personnel dosimeter that is required by paragraph (a) of this section is lost or damaged, the worker shall cease work immediately until a replacement personnel dosimeter meeting the requirements in paragraph (a) is provided and the exposure is calculated for the time period from issuance to loss or damage of the personnel dosimeter. The results of the calculated exposure and the time period for which the personnel dosimeter was lost or damaged must be included in the records maintained in accordance with § 34.83.

(f) Dosimetry reports received from the accredited NVLAP personnel dosimeter processor must be retained in accordance with § 34.83.

(g) Each alarm ratemeter must--

(1) Be checked to ensure that the alarm functions properly (sounds) before using at the start of each shift;

(2) Be set to give an alarm signal at a preset dose rate of 5 mSv/hr (500 mrem/hr); with an accuracy of plus or minus 20 percent of the true radiation dose rate;

(3) Require special means to change the preset alarm function; and

(4) Be calibrated at periods not to exceed 12 months for correct response to radiation. The licensee shall maintain records of alarm ratemeter calibrations in accordance with § 34.83.

[62 FR 28963, May 28, 1997, as amended at 65 FR 63751, Oct. 24, 2000]

§ 34.49 Radiation surveys.

[Top of File]

The licensee shall:

(a) Conduct surveys with a calibrated and operable radiation survey instrument that meets the requirements of § 34.25.

(b) Using a survey instrument meeting the requirements of paragraph (a) of this section, conduct a survey of the radiographic exposure device and the guide tube after each exposure when approaching the device or the guide tube. The survey must determine that the sealed source has returned to its shielded position before exchanging films, repositioning the exposure head, or dismantling equipment.

(c) Conduct a survey of the radiographic exposure device with a calibrated radiation survey instrument any time the source is exchanged and whenever a radiographic exposure device is placed in a storage area (as defined in § 34.3), to ensure that the sealed source is in its shielded position.

(d) Maintain records in accordance with § 34.85.

§ 34.51 Surveillance.

[Top of File]

During each radiographic operation the radiographer, or the other individual present, as required by § 34.41, shall maintain continuous direct visual surveillance of the operation to protect against unauthorized entry into a high radiation area, as defined in 10 CFR part 20 of this chapter, except at permanent radiographic installations where all entryways are locked and the requirements of § 34.33 are met.

§ 34.53 Posting.

[Top of File]

All areas in which industrial radiography is being performed must be conspicuously posted as required by § 20.1902 of this chapter. Exceptions listed in § 20.1903 of this chapter do not apply to industrial radiographic operations.

[62 FR 28963, May 28, 1997, as amended at 66 FR 64738, Dec. 14, 2001]

Subpart E--Recordkeeping Requirements

[Top of File]

§ 34.61 Records of the specific license for industrial radiography.

Each licensee shall maintain a copy of its license, license conditions, documents incorporated by reference, and amendments to each of these items until superseded by new documents approved by the Commission, or until the Commission terminates the license.

§ 34.63 Records of receipt and transfer of sealed sources.

[Top of File]

(a) Each licensee shall maintain records showing the receipts and transfers of sealed sources and devices using DU for shielding and retain each record for 3 years after it is made.

(b) These records must include the date, the name of the individual making the record, radionuclide, number of becquerels (curies) or mass (for DU), and manufacturer, model, and serial number of each sealed source and/or device, as appropriate.

§ 34.65 Records of radiation survey instruments.

[Top of File]

Each licensee shall maintain records of the calibrations of its radiation survey instruments that are required under § 34.25 and retain each record for 3 years after it is made.

§ 34.67 Records of leak testing of sealed sources and devices containing depleted uranium.

[Top of File]

Each licensee shall maintain records of leak test results for sealed sources and for devices containing DU. The results must be stated in units of becquerels (microcuries). The licensee shall retain each record for 3 years after it is made or until the source in storage is removed.

§ 34.69 Records of quarterly inventory.

[Top of File]

(a) Each licensee shall maintain records of the quarterly inventory of sealed sources and of devices containing depleted uranium as required by § 34.29 and retain each record for 3 years after it is made.

(b) The record must include the date of the inventory, name of the individual conducting the inventory, radionuclide, number of becquerels (curies) or mass (for DU) in each device, location of sealed source and/or devices, and manufacturer, model, and serial number of each sealed source and/or device, as appropriate.

§ 34.71 Utilization logs.

[Top of File]

(a) Each licensee shall maintain utilization logs showing for each sealed source the following information:

(1) A description, including the make, model, and serial number of the radiographic exposure device or transport or storage container in which the sealed source is located;

(2) The identity and signature of the radiographer to whom assigned; and

(3) The plant or site where used and dates of use, including the dates removed and returned to storage.

(b) The licensee shall retain the logs required by paragraph (a) of this section for 3 years after the log is made.

§ 34.73 Records of inspection and maintenance of radiographic exposure devices, transport and storage containers, associated equipment, source changers, and survey instruments.

[Top of File]

(a) Each licensee shall maintain records specified in § 34.31 of equipment problems found in daily checks and quarterly inspections of radiographic exposure devices, transport and storage containers, associated equipment, source changers, and survey instruments; and retain each record for 3 years after it is made.

(b) The record must include the date of check or inspection, name of inspector, equipment involved, any problems found, and what repair and/or maintenance, if any, was done.

§ 34.75 Records of alarm system and entrance control checks at permanent radiographic installations.

[Top of File]

Each licensee shall maintain records of alarm system and entrance control device tests required under § 34.33 and retain each record for 3 years after it is made.

§ 34.79 Records of training and certification.

[Top of File]

Each licensee shall maintain the following records (of training and certification) for 3 years after the record is made:

(a) Records of training of each radiographer and each radiographer's assistant. The record must include radiographer certification documents and verification of certification status, copies of written tests, dates of oral and practical examinations, and names of individuals conducting and receiving the oral and practical examinations; and

(b) Records of annual refresher safety training and semi-annual inspections of job performance for each radiographer and each radiographer's assistant. The records must list the topics discussed during the refresher safety training, the dates the annual refresher safety training was conducted, and names of the instructors and attendees. For inspections of job performance, the records must also include a list showing the items checked and any non-compliances observed by the RSO.

§ 34.81 Copies of operating and emergency procedures.

[Top of File]

Each licensee shall maintain a copy of current operating and emergency procedures until the Commission terminates the license. Superseded material must be retained for 3 years after the change is made.

§ 34.83 Records of personnel monitoring Procedures.

[Top of File]

Each licensee shall maintain the following exposure records specified in § 34.47:

(a) Direct reading dosimeter readings and yearly operability checks required by § 34.47(b) and (c) for 3 years after the record is made.

(b) Records of alarm ratemeter calibrations for 3 years after the record is made.

(c) Personnel dosimeter results received from the accredited NVLAP processor until the Commission terminates the license.

(d) Records of estimates of exposures as a result of: off-scale personal direct reading dosimeters, or lost or damaged personnel dosimeters until the Commission terminates the license.

[62 FR 28963, May 28, 1997, as amended at 65 FR 63752, Oct. 24, 2000]

§ 34.85 Records of radiation surveys.

[Top of File]

Each licensee shall maintain a record of each exposure device survey conducted before the device is placed in storage as specified in § 34.49 (c), if that survey is the last one performed in the workday. Each record must be maintained for 3 years after it is made.

§ 34.87 Form of records.

[Top of File]

Each record required by this part must be legible throughout the specified retention period. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of reproducing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records, such as letters, drawings, and specifications, must include all pertinent information, such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

§ 34.89 Location of documents and records.

[Top of File]

(a) Each licensee shall maintain copies of records required by this part and other applicable parts of this chapter at the location specified in § 34.13(k).

(b) Each licensee shall also maintain copies of the following documents and records sufficient to demonstrate compliance at each applicable

field station and each temporary jobsite;

(1) The license authorizing the use of licensed material;

(2) A copy of 10 CFR parts 19, 20, and 34 of NRC regulations;

(3) Utilization records for each radiographic exposure device dispatched from that location as required by § 34.71.

(4) Records of equipment problems identified in daily checks of equipment as required by § 34.73(a);

(5) Records of alarm system and entrance control checks required by § 34.75, if applicable;

(6) Records of direct reading dosimeters such as pocket dosimeter and/or electronic personal dosimeters readings as required by § 34.83;

(7) Operating and emergency procedures required by § 34.81;

(8) Evidence of the latest calibration of the radiation survey instruments in use at the site, as required by § 34.65;

(9) Evidence of the latest calibrations of alarm ratemeters and operability checks of pocket dosimeters and/or electronic personal dosimeters as required by § 34.83;

(10) Latest survey records required by § 34.85;

(11) The shipping papers for the transportation of radioactive materials required by § 71.5 of this chapter; and

(12) When operating under reciprocity pursuant to § 150.20 of this chapter, a copy of the Agreement State license authorizing the use of licensed materials.

Subpart F--Notifications

[Top of File]

§ 34.101 Notifications.

(a) In addition to the reporting requirements specified in § 30.50 and under other sections of this chapter, such as § 21.21, each licensee shall send a written report to the NRC's Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 30.6(a) of this chapter, within 30 days of the occurrence of any of the following incidents involving radiographic equipment:

(1) Unintentional disconnection of the source assembly from the control cable;

(2) Inability to retract the source assembly to its fully shielded position and secure it in this position; or

(3) Failure of any component (critical to safe operation of the device) to properly perform its intended function;

(b) The licensee shall include the following information in each report submitted under paragraph (a) of this section, and in each report of overexposure submitted under 10 CFR 20.2203 which involves failure of safety components of radiography equipment:

(1) A description of the equipment problem;

(2) Cause of each incident, if known;

(3) Name of the manufacturer and model number of equipment involved in the incident;

(4) Place, date, and time of the incident;

(5) Actions taken to establish normal operations;

(6) Corrective actions taken or planned to prevent recurrence; and

(7) Qualifications of personnel involved in the incident.

(c) Any licensee conducting radiographic operations or storing radioactive material at any location not listed on the license for a period in excess of 180 days in a calendar year, shall notify the appropriate NRC regional office listed in § 30.6(a)(2) of this chapter prior to exceeding the 180 days.

[62 FR 28963, May 28, 1997, as amended at 67 FR 3585, Jan. 25, 2002; 68 FR 58805, Oct. 10, 2003; 73 FR 5720, Jan. 31, 2008]

Subpart G--Exemptions

[Top of File]

§ 34.111 Applications for exemptions.

The Commission may, upon application of any interested person or upon its own initiative, grant an exemption from the requirements of the regulations in this part if it determines the exemption is authorized by law and would not endanger life or property or the common defense and security and is otherwise in the public interest.

Subpart H--Violations

[Top of File]

§ 34.121 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to these Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under Section 234 of the Atomic Energy Act;

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section.

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

§ 34.123 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1952, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under one or more of §§ 161b, 161i, or 161o of the Act. For purposes of Section 223, all the regulations in 10 CFR part 34 are issued under one or more of §§ 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in 10 CFR part 34 that are not issued under sections 161b, 161i, or 161o for the purposes of Section 223 are as follows: §§ 34.1, 34.3, 34.5, 34.8, 34.11, 34.13, 34.111, 34.121, 34.123.

Appendix A to 10 CFR Part 34--Radiographer Certification

[Top of File]

I. Requirements for an Independent Certifying Organization

An independent certifying organization shall:

1. Be an organization such as a society or association, whose members participate in, or have an interest in, the fields of industrial radiography;

2. Make its membership available to the general public nationwide that is not restricted because of race, color, religion, sex, age, national

origin or disability;

3. Have a certification program open to nonmembers, as well as members;

4. Be an incorporated, nationally recognized organization, that is involved in setting national standards of practice within its fields of expertise;

5. Have an adequate staff, a viable system for financing its operations, and a policy-and decision-making review board;

6. Have a set of written organizational by-laws and policies that provide adequate assurance of lack of conflict of interest and a system for monitoring and enforcing those by-laws and policies;

7. Have a committee, whose members can carry out their responsibilities impartially, to review and approve the certification guidelines and procedures, and to advise the organization's staff in implementing the certification program;

8. Have a committee, whose members can carry out their responsibilities impartially, to review complaints against certified individuals and to determine appropriate sanctions;

9. Have written procedures describing all aspects of its certification program, maintain records of the current status of each individual's certification and the administration of its certification program;

10. Have procedures to ensure that certified individuals are provided due process with respect to the administration of its certification program, including the process of becoming certified and any sanctions imposed against certified individuals;

11. Have procedures for proctoring examinations, including qualifications for proctors. These procedures must ensure that the individuals proctoring each examination are not employed by the same company or corporation (or a wholly-owned subsidiary of such company or corporation) as any of the examinees;

12. Exchange information about certified individuals with the Commission and other independent certifying organizations and/or Agreement States and allow periodic review of its certification program and related records; and

13. Provide a description to the Commission of its procedures for choosing examination sites and for providing an appropriate examination environment.

II. Requirements for Certification Programs

All certification programs must:

1. Require applicants for certification to (a) receive training in the topics set forth in § 34.43(g) or equivalent Agreement State regulations, and (b) satisfactorily complete a written examination covering these topics;

2. Require applicants for certification to provide documentation that demonstrates that the applicant has: (a) received training in the topics set forth in § 34.43(g) or equivalent Agreement State regulations; (b) satisfactorily completed a minimum period of on-the-job training; and (c) has received verification by an Agreement State or a NRC licensee that the applicant has demonstrated the capability of independently working as a radiographer;

3. Include procedures to ensure that all examination questions are protected from disclosure;

4. Include procedures for denying an application, revoking, suspending, and reinstating a certificate;

5. Provide a certification period of not less than 3 years nor more than 5 years;

6. Include procedures for renewing certifications and, if the procedures allow renewals without examination, require evidence of recent full-time employment and annual refresher training.

7. Provide a timely response to inquiries, by telephone or letter, from members of the public, about an individual's certification status.

III. Requirements for Written Examinations

All examinations must be:

1. Designed to test an individual's knowledge and understanding of the topics listed in § 34.43(g) or equivalent Agreement State requirements;

2. Written in a multiple-choice format;

3. Have test items drawn from a question bank containing psychometrically valid questions based on the material in § 34.43(g).

PART 35--MEDICAL USE OF BYPRODUCT MATERIAL

[Top of File]

Subpart A--General Information

[Top of File]

§ 35.1 Purpose and scope.

This part contains the requirements and provisions for the medical use of byproduct material and for issuance of specific licenses authorizing the medical use of this material. These requirements and provisions provide for the radiation safety of workers, the general public, patients, and human research subjects. The requirements and provisions of this part are in addition to, and not in substitution for, others in this chapter. The requirements and provisions of parts 19, 20, 21, 30, 71, 170, and 171 of this chapter apply to applicants and licensees subject to this part unless specifically exempted.

§ 35.2 Definitions.

[Top of File]

Address of use means the building or buildings that are identified on the license and where byproduct material may be received, prepared, used, or stored .

Agreement State means any State with which the Commission or the Atomic Energy Commission has entered into an effective agreement under subsection 274b of the Atomic Energy Act of 1954, as amended.

Area of use means a portion of an address of use that has been set aside for the purpose of receiving, preparing, using, or storing byproduct material.

Authorized medical physicist means an individual who--

Meets the requirements in §§ 35.51(a) and 35.59; or

(2) Is identified as an authorized medical physicist or teletherapy physicist on--

(i) A specific medical use license issued by the Commission or Agreement State;

(ii) A medical use permit issued by a Commission master material licensee;

(iii) A permit issued by a Commission or Agreement State broad scope medical use licensee; or

(iv) A permit issued by a Commission master material license broad scope medical use permittee.

Authorized nuclear pharmacist means a pharmacist who--

(1) Meets the requirements in §§ 35.55(a) and 35.59; or

(2) Is identified as an authorized nuclear pharmacist on--

(i) A specific license issued by the Commission or Agreement State that authorizes medical use or the practice of nuclear pharmacy;

(ii) A permit issued by a Commission master material licensee that authorizes medical use or the practice of nuclear pharmacy;

(iii) A permit issued by a Commission or Agreement State broad scope medical use licensee that authorizes medical use or the practice of nuclear pharmacy; or

(iv) A permit issued by a Commission master material license broad scope medical use permittee that authorizes medical use or the practice of nuclear pharmacy; or

(3) Is identified as an authorized nuclear pharmacist by a commercial nuclear pharmacy that has been authorized to identify authorized nuclear pharmacists; or

(4) Is designated as an authorized nuclear pharmacist in accordance with § 32.72(b)(4).

Authorized user means a physician, dentist, or podiatrist who--

(1) Meets the requirements in §§ 35.59 and 35.190(a), 35.290(a), 35.390(a), 35.392(a), 35.394(a), 35.490(a), 35.590(a), or 35.690(a); or

(2) Is identified as an authorized user on--

(i) A Commission or Agreement State license that authorizes the medical use of byproduct material;

(ii) A permit issued by a Commission master material licensee that is authorized to permit the medical use of byproduct material;

(iii) A permit issued by a Commission or Agreement State specific licensee of broad scope that is authorized to permit the medical use of byproduct material; or

(iv) A permit issued by a Commission master material license broad scope permittee that is authorized to permit the medical use of byproduct material.

Brachytherapy means a method of radiation therapy in which sources are used to deliver a radiation dose at a distance of up to a few centimeters by surface, intracavitary, intraluminal, or interstitial application.

Brachytherapy source means a radioactive source or a manufacturer-assembled source train or a combination of these sources that is designed to deliver a therapeutic dose within a distance of a few centimeters.

Client's address means the area of use or a temporary job site for the purpose of providing mobile medical service in accordance with § 35.80.

Cyclotron means a particle accelerator in which the charged particles travel in an outward spiral or circular path. A cyclotron accelerates charged particles at energies usually in excess of 10 megaelectron volts and is commonly used for production of short half-life radionuclides for medical use.

Dedicated check source means a radioactive source that is used to assure the constant operation of a radiation detection or measurement device over several months or years.

Dentist means an individual licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to practice dentistry.

High dose-rate remote afterloader, as used in this part, means a brachytherapy device that remotely delivers a dose rate in excess of 12 gray (1200 rads) per hour at the point or surface where the dose is prescribed.

Low dose-rate remote afterloader, as used in this part, means a brachytherapy device that remotely delivers a dose rate of less than or equal to 2 gray (200 rads) per hour at the point or surface where the dose is prescribed.

Management means the chief executive officer or other individual having the authority to manage, direct, or administer the licensee's activities, or those persons' delegate or delegates.

Manual brachytherapy, as used in this part, means a type of brachytherapy in which the brachytherapy sources (e.g., seeds, ribbons) are manually placed topically on or inserted either into the body cavities that are in close proximity to a treatment site or directly into the tissue volume.

Medical event means an event that meets the criteria in § 35.3045(a) or (b).

Medical institution means an organization in which more than one medical discipline is practiced.

Medical use means the intentional internal or external administration of byproduct material or the radiation from byproduct material to patients or human research subjects under the supervision of an authorized user.

Medium dose-rate remote afterloader, as used in this part, means a brachytherapy device that remotely delivers a dose rate of greater than 2 gray (200 rads) per hour, but less than or equal to 12 gray (1200 rads) per hour at the point or surface where the dose is prescribed.

Mobile medical service means the transportation of byproduct material to and its medical use at the client's address.

Output means the exposure rate, dose rate, or a quantity related in a known manner to these rates from a brachytherapy source or a teletherapy, remote afterloader, or gamma stereotactic radiosurgery unit for a specified set of exposure conditions.

Patient intervention means actions by the patient or human research subject, whether intentional or unintentional, such as dislodging or removing treatment devices or prematurely terminating the administration.

Pharmacist means an individual licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of

Puerto Rico to practice pharmacy.

Physician means a medical doctor or doctor of osteopathy licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to prescribe drugs in the practice of medicine.

Podiatrist means an individual licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to practice podiatry.

Positron Emission Tomography (PET) radionuclide production facility is defined as a facility operating a cyclotron or accelerator for the purpose of producing PET radionuclides.

Preceptor means an individual who provides, directs, or verifies training and experience required for an individual to become an authorized user, an authorized medical physicist, an authorized nuclear pharmacist, or a Radiation Safety Officer.

Prescribed dosage means the specified activity or range of activity of unsealed byproduct material as documented--

(1) In a written directive; or

(2) In accordance with the directions of the authorized user for procedures performed pursuant to §§ 35.100 and 35.200.

Prescribed dose means--

(1) For gamma stereotactic radiosurgery, the total dose as documented in the written directive;

(2) For teletherapy, the total dose and dose per fraction as documented in the written directive;

(3) For manual brachytherapy, either the total source strength and exposure time or the total dose, as documented in the written directive; or

(4) For remote brachytherapy afterloaders, the total dose and dose per fraction as documented in the written directive.

Pulsed dose-rate remote afterloader, as used in this part, means a special type of remote afterloading brachytherapy device that uses a single source capable of delivering dose rates in the "high dose-rate" range, but--

(1) Is approximately one-tenth of the activity of typical high dose-rate remote afterloader sources; and

(2) Is used to simulate the radiobiology of a low dose-rate treatment by inserting the source for a given fraction of each hour.

Radiation Safety Officer means an individual who—

(1) Meets the requirements in §§ 35.50(a) or (c)(1) and 35.59; or

(2) Is identified as a Radiation Safety Officer on--

(i) A specific medical use license issued by the Commission or Agreement State; or

(ii) A medical use permit issued by a Commission master material licensee.

Sealed source means any byproduct material that is encased in a capsule designed to prevent leakage or escape of the byproduct material.

Sealed Source and Device Registry means the national registry that contains all the registration certificates, generated by both NRC and the Agreement States, that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for the product.

Stereotactic radiosurgery means the use of external radiation in conjunction with a stereotactic guidance device to very precisely deliver a therapeutic dose to a tissue volume.

Structured educational program means an educational program designed to impart particular knowledge and practical education through interrelated studies and supervised training.

Teletherapy, as used in this part, means a method of radiation therapy in which collimated gamma rays are delivered at a distance from the patient or human research subject.

Temporary job site means a location where mobile medical services are conducted other than those location(s) of use authorized on the license.

Therapeutic dosage means a dosage of unsealed byproduct material that is intended to deliver a radiation dose to a patient or human

research subject for palliative or curative treatment.

Therapeutic dose means a radiation dose delivered from a source containing byproduct material to a patient or human research subject for palliative or curative treatment.

Treatment site means the anatomical description of the tissue intended to receive a radiation dose, as described in a written directive.

Type of use means use of byproduct material under §§ 35.100, 35.200, 35.300, 35.400, 35.500, 35.600, or 35.1000.

Unit dosage means a dosage prepared for medical use for administration as a single dosage to a patient or human research subject without any further manipulation of the dosage after it is initially prepared.

Written directive means an authorized user's written order for the administration of byproduct material or radiation from byproduct material to a specific patient or human research subject, as specified in § 35.40.

[69 FR 55737, Sep. 16, 2004; 70 FR 16361, Mar. 30, 2005; 71 FR 15008, Mar. 27, 2006; 72 FR 45151, Aug. 13, 2007; 72 FR 55930 Oct. 1, 2007]

§ 35.5 Maintenance of records.

[Top of File]

Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

§ 35.6 Provisions for the protection of human research subjects.

[Top of File]

(a) A licensee may conduct research involving human research subjects only if it uses the byproduct materials specified on its license for the uses authorized on its license.

(b) If the research is conducted, funded, supported, or regulated by another Federal agency that has implemented the Federal Policy for the Protection of Human Subjects (Federal Policy), the licensee shall, before conducting research--

(1) Obtain review and approval of the research from an "Institutional Review Board," as defined and described in the Federal Policy; and

(2) Obtain "informed consent," as defined and described in the Federal Policy, from the human research subject.

(c) If the research will not be conducted, funded, supported, or regulated by another Federal agency that has implemented the Federal Policy, the licensee shall, before conducting research, apply for and receive a specific amendment to its NRC medical use license. The amendment request must include a written commitment that the licensee will, before conducting research--

(1) Obtain review and approval of the research from an "Institutional Review Board," as defined and described in the Federal Policy; and

(2) Obtain "informed consent", as defined and described in the Federal Policy, from the human research subject.

(d) Nothing in this section relieves licensees from complying with the other requirements in this part.

[67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002]

§ 35.7 FDA, other Federal, and State requirements.

[Top of File]

Nothing in this part relieves the licensee from complying with applicable FDA, other Federal, and State requirements governing radioactive drugs or devices.

§ 35.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0010.

(b) The approved information collection requirements contained in this part appear in §§ 35.6, 35.12, 35.13, 35.14, 35.19, 35.24, 35.26, 35.27, 35.40, 35.41, 35.50, 35.51, 35.55, 35.60, 35.61, 35.63, 35.67, 35.69, 35.70, 35.75, 35.80, 35.92, 35.190, 35.204, 35.290, 35.310, 35.315, 35.390, 35.392, 35.394, 35.396, 35.404, 35.406, 35.410, 35.415, 35.432, 35.433, 35.490, 35.491, 35.590, 35.604, 35.605, 35.610, 35.615, 35.630, 35.632, 35.633, 35.635, 35.642, 35.643, 35.645, 35.647, 35.652, 35.655, 35.690, 35.1000, 35.2024, 35.2026, 35.2040, 35.2041, 35.2060, 35.2061, 35.2063, 35.2067, 35.2070, 35.2075, 35.2080, 35.2092, 35.2204, 35.2310, 35.2404, 35.2406, 35.2432, 35.2433, 35.2605, 35.2610, 35.2630, 35.2632, 35.2642, 35.2643, 35.2645, 35.2647, 35.2652, 35.2655, 35.3045, 35.3047 and 35.3067.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved as follows:

(1) In § 35.12, NRC Form 313, including NRC Form 313A, which licensees may use to provide supplemental information, is approved under control number 3150-0120.

(2) [Reserved]

[67 FR 20370; Apr. 24, 2002, as amended at 70 FR 16361, Mar. 30, 2005]

§ 35.10 Implementation.

[Top of File]

(a) A Government agency or a Federally recognized Indian Tribe that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a specific medical use license is required by the Atomic Energy Act of 1954, as amended, must comply with the requirements of this part, including provisions that are specific to licensees, on November 30, 2007. All other persons who possess and use accelerator-produced radioactive material or discrete sources of radium-226 for which a specific medical use license is required, must comply with the requirements of this part, including provisions that are specific to licensees, on August 8, 2009, or earlier as noticed by the NRC.

(b) [Reserved]

(c) [Reserved]

(d) If a license condition exempted a licensee from a provision of Part 35 on October 24, 2002, then the license condition continues to exempt the licensee from the requirements in the corresponding provision of §§ 35.1-35.4002.

(e) When a requirement in this part differs from the requirement in an existing license condition, the requirement in this part shall govern.

(f) A licensee shall continue to comply with any license condition that requires it to implement procedures required by §§ 35.610, 35.642, 35.643, and 35.645 until there is a license amendment or renewal that modifies the license condition.

[69 FR 55737, Sep. 16, 2004; 70 FR 16361, Mar. 30, 2005; 71 FR 15008, Mar. 27, 2006; 72 FR 55930 Oct. 1, 2007]

§ 35.11 License required.

[Top of File]

(a) A person may manufacture, produce, acquire, receive, possess, prepare, use, or transfer byproduct material for medical use only in accordance with a specific license issued by the Commission or an Agreement State, or as allowed in paragraph (b) or (c) of this section.

(b) A specific license is not needed for an individual who--

(1) Receives, possesses, uses, or transfers byproduct material in accordance with the regulations in this chapter under the supervision of an authorized user as provided in § 35.27, unless prohibited by license condition; or

(2) Prepares unsealed byproduct material for medical use in accordance with the regulations in this chapter under the supervision of an authorized nuclear pharmacist or authorized user as provided in § 35.27, unless prohibited by license condition.

(c)(1) A Government agency or a Federally recognized Indian Tribe, that possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 for which a specific medical use license is required in paragraph (a) of this section, may continue to use such materials for medical uses until the date of the NRC's final licensing determination, provided that the person submits a medical use license application on or before December 1, 2008.

(2) Except as provided in paragraph (c)(1) of this section, all other persons, who possess and use accelerator-produced radioactive material or discrete sources of radium-226 for which a specific medical use license is required in paragraph (a) of this section, may continue to use this type of material for medical uses permitted under this part until the date of the NRC's final licensing determination, provided that the person submits a medical use license application within 12 months from the waiver expiration date of August 7, 2009 or within 12 months from the date of an earlier
termination of the waiver as noticed by the NRC, whichever date is earlier.

[72 FR 55930 Oct. 1, 2007]

§ 35.12 Application for license, amendment, or renewal.

[Top of File]

(a) An application must be signed by the applicant's or licensee's management.

(b) An application for a license for medical use of byproduct material as described in §§ 35.100, 35.200, 35.300, 35.400, 35.500, 35.600, and 35.1000 must be made by--

(1) Filing an original and one copy of NRC Form 313, "Application for Material License," that includes the facility diagram, equipment, and training and experience qualifications of the Radiation Safety Officer, authorized user(s), authorized medical physicist(s), and authorized nuclear pharmacist(s); and

(2) Submitting procedures required by §§ 35.610, 35.642, 35.643, and 35.645, as applicable.

(c) A request for a license amendment or renewal must be made by--

(1) Submitting an original and one copy of either--

(i) NRC Form 313, "Application for Material License"; or

(ii) A letter requesting the amendment or renewal; and

(2) Submitting procedures required by §§ 35.610, 35.642, 35.643, and 35.645, as applicable.

(d) In addition to the requirements in paragraphs (b) and (c) of this section, an application for a license or amendment for medical use of byproduct material as described in § 35.1000 must also include information regarding any radiation safety aspects of the medical use of the material that is not addressed in Subparts A through C of this part.

(1) The applicant shall also provide specific information on--

(i) Radiation safety precautions and instructions;

(ii) Methodology for measurement of dosages or doses to be administered to patients or human research subjects; and

(iii) Calibration, maintenance, and repair of instruments and equipment necessary for radiation safety.

(2) The applicant or licensee shall also provide any other information requested by the Commission in its review of the application.

(e) An applicant that satisfies the requirements specified in § 33.13 of this chapter may apply for a Type A specific license of broad scope.

[67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002]

§ 35.13 License amendments.

[Top of File]

A licensee shall apply for and must receive a license amendment--

(a) Before it receives, prepares, or uses byproduct material for a type of use that is permitted under this part, but is not authorized on the licensee's current license issued under this part; except that—

(1) A Government agency or a Federally recognized Indian Tribe licensee who possesses and uses accelerator-produced radioactive material or discrete sources of radium-226 may continue to use such material for medical uses permitted under this part until the date of the NRC's final licensing determination, provided that the licensee submits an amendment application on or before June 2, 2008.

(2) Except as provided in paragraph (a)(1) of this section, all other licensees who possess and use accelerator-produced radioactive

material or discrete sources of radium-226 may continue to use those materials for medical uses permitted under this part until the date of the NRC's final licensing determination, provided that the person submits a medical use license amendment request within 6 months from the waiver expiration date of August 7, 2009 or within 6 months from the date of an earlier termination of the waiver as noticed by the NRC, whichever date is earlier.

(b) Before it permits anyone to work as an authorized user, authorized nuclear pharmacist, or authorized medical physicist under the license, except--

(1) For an authorized user, an individual who meets the requirements in §§ 35.59 and 35.190(a), 35.290(a), 35.390(a), 35.392(a), 35.394 (a), 35.490(a), 35.590(a), and 35.690(a);

(2) For an authorized nuclear pharmacist, an individual who meets the requirements in §§ 35.55(a) and 35.59;

(3) For an authorized medical physicist, an individual who meets the requirements in §§ 35.51(a) and (c) and 35.59;

(4) An individual who is identified as an authorized user, an authorized nuclear pharmacist, or authorized medical physicist--

(i) On a Commission or Agreement State license or other equivalent permit or license recognized by NRC that authorizes the use of byproduct material in medical use or in the practice of nuclear pharmacy;

(ii) On a permit issued by a Commission or Agreement State specific license of broad scope that is authorized to permit the use of byproduct material in medical use or in the practice of nuclear pharmacy;

(iii) On a permit issued by a Commission master material licensee that is authorized to permit the use of byproduct material in medical use or in the practice of nuclear pharmacy; or

(iv) By a commercial nuclear pharmacy that has been authorized to identify authorized nuclear pharmacists.

(5) A physician, podiatrist, or dentist who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses or a nuclear pharmacist who used only accelerator-produced radioactive materials in the practice of nuclear pharmacy at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC, and for only those materials and uses performed before these dates.

(c) Before it changes Radiation Safety Officers, except as provided in § 35.24(c);

(d) Before it receives byproduct material in excess of the amount or in a different form, or receives a different radionuclide than is authorized on the license;

(e) Before it adds to or changes the areas of use identified in the application or on the license, including areas used in accordance with either § 35.100 or § 35.200 if the change includes addition or relocation of either an area where PET radionuclides are produced or a PET radioactive drug delivery line from the PET radionuclide/PET radioactive drug production area. Other areas of use where byproduct material is used only in accordance with either § 35.100 or § 35.200 are exempt;

(f) Before it changes the address(es) of use identified in the application or on the license; and

(g) Before it revises procedures required by §§ 35.610, 35.642, 35.643, and 35.645, as applicable, where such revision reduces radiation safety.

[70 FR 16361, Mar. 30, 2005; 71 FR 15008, Mar. 27, 2006; 72 FR 55930 Oct. 1, 2007]

§ 35.14 Notifications.

[Top of File]

(a) A licensee shall provide the Commission a copy of the board certification and the written attestation(s), signed by a preceptor, the Commission or Agreement State license, the permit issued by a Commission master material licensee, the permit issued by a Commission or Agreement State licensee of broad scope, the permit issued by a Commission master material license broad scope permittee, or documentation that only accelerator-produced radioactive materials, discrete sources of radium-226, or both, were used for medical use or in the practice of nuclear pharmacy at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC, and for each individual no later than 30 days after the date that the licensee permits the individual to work as an authorized user, an authorized nuclear pharmacist, or an authorized medical physicist, under § 35.13(b). For individuals permitted to work under § 35.13(b)(4), within the same 30-day time frame, the licensee shall also provide, as appropriate, verification of completion of;

(1) Any additional case experience required in § 35.390(b)(1)(ii)(G) for an authorized user under § 35.300;

(2) Any additional training required in § 35.690(c) for an authorized user under § 35.600; and

(3) Any additional training required in § 35.51(c) for an authorized medical physicist.

(b) A licensee shall notify the Commission no later than 30 days after:

(1) An authorized user, an authorized nuclear pharmacist, a Radiation Safety Officer, or an authorized medical physicist permanently discontinues performance of duties under the license or has a name change;

(2) The licensee permits an authorized user or an individual qualified to be a Radiation Safety Officer, under §§ 35.50 and 35.59, to function as a temporary Radiation Safety Officer and to perform the functions of a Radiation Safety Officer in accordance with § 35.24(c).

(3) The licensee's mailing address changes;

(4) The licensee's name changes, but the name change does not constitute a transfer of control of the license as described in § 30.34(b) of this chapter; or

(5) The licensee has added to or changed the areas of use identified in the application or on the license where byproduct material is used in accordance with either § 35.100 or § 35.200 if the change does not include addition or relocation of either an area where PET radionuclides are produced or a PET radioactive drug delivery line from the PET radionuclide/PET radioactive drug production area.

(c) The licensee shall send the documents required in this section to the appropriate address identified in § 30.6 of this chapter.

[68 FR 58805, Oct. 10, 2003; 70 FR 16361, Mar. 20, 2005; 71 FR 15008, Mar. 27, 2006; 72 FR 55930 Oct. 1, 2007]

§ 35.15 Exemptions regarding Type A specific licenses of broad scope.

[Top of File]

A licensee possessing a Type A specific license of broad scope for medical use, issued under Part 33 of this chapter, is exempt from--

(a) The provisions of § 35.12(d) regarding the need to file an amendment to the license for medical use of byproduct material, as described in § 35.1000;

(b) The provisions of § 35.13(b);

(c) The provisions of § 35.13(e) regarding additions to or changes in the areas of use at the addresses identified in the application or on the license;

(d) The provisions of § 35.14(a);

(e) The provisions of § 35.14(b)(1) for an authorized user, an authorized nuclear pharmacist, or an authorized medical physicist;

(f) The provisions of § 35.14(b)(5).

(g) The provisions of § 35.49(a).

[72 FR 55931 Oct. 1, 2007]

§ 35.18 License issuance.

[Top of File]

(a) The Commission shall issue a license for the medical use of byproduct material if--

(1) The applicant has filed NRC Form 313 "Application for Material License" in accordance with the instructions in § 35.12;

(2) The applicant has paid any applicable fee as provided in Part 170 of this chapter;

(3) The Commission finds the applicant equipped and committed to observe the safety standards established by the Commission in this Chapter for the protection of the public health and safety; and

(4) The applicant meets the requirements of Part 30 of this chapter.

(b) The Commission shall issue a license for mobile medical service if the applicant:

(1) Meets the requirements in paragraph (a) of this section; and

(2) Assures that individuals or human research subjects to whom unsealed byproduct material or radiation from implants containing byproduct material will be administered may be released following treatment in accordance with § 35.75.

§ 35.19 Specific exemptions

[Top of File]

The Commission may, upon application of any interested person or upon its own initiative, grant exemptions from the regulations in this part that it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

Subpart B--General Administrative Requirements

[Top of File]

§ 35.24 Authority and responsibilities for the radiation protection program.

(a) In addition to the radiation protection program requirements of § 20.1101 of this chapter, a licensee's management shall approve in writing--

(1) Requests for a license application, renewal, or amendment before submittal to the Commission;

(2) Any individual before allowing that individual to work as an authorized user, authorized nuclear pharmacist, or authorized medical physicist; and

(3) Radiation protection program changes that do not require a license amendment and are permitted under § 35.26;

(b) A licensee's management shall appoint a Radiation Safety Officer, who agrees, in writing, to be responsible for implementing the radiation protection program. The licensee, through the Radiation Safety Officer, shall ensure that radiation safety activities are being performed in accordance with licensee-approved procedures and regulatory requirements.

(c) For up to 60 days each year, a licensee may permit an authorized user or an individual qualified to be a Radiation Safety Officer, under §§ 35.50 and 35.59, to function as a temporary Radiation Safety Officer and to perform the functions of a Radiation Safety Officer, as provided in paragraph (g) of this section, if the licensee takes the actions required in paragraphs (b), (e), (g), and (h) of this section and notifies the Commission in accordance with § 35.14(b).

(d) A licensee may simultaneously appoint more than one temporary Radiation Safety Officer in accordance with paragraph (c) of this section, if needed to ensure that the licensee has a temporary Radiation Safety Officer that satisfies the requirements to be a Radiation Safety Officer for each of the different types of uses of byproduct material permitted by the license.

(e) A licensee shall establish the authority, duties, and responsibilities of the Radiation Safety Officer in writing.

(f) Licensees that are authorized for two or more different types of uses of byproduct material under Subparts E, F, and H of this part, or two or more types of units under Subpart H of this part, shall establish a Radiation Safety Committee to oversee all uses of byproduct material permitted by the license. The Committee must include an authorized user of each type of use permitted by the license, the Radiation Safety Officer, a representative of the nursing service, and a representative of management who is neither an authorized user nor a Radiation Safety Officer. The Committee may include other members the licensee considers appropriate.

(g) A licensee shall provide the Radiation Safety Officer sufficient authority, organizational freedom, time, resources, and management prerogative, to--

(1) Identify radiation safety problems;

(2) Initiate, recommend, or provide corrective actions;

(3) Stop unsafe operations; and,

(4) Verify implementation of corrective actions.

(h) A licensee shall retain a record of actions taken under paragraphs (a), (b), and (e) of this section in accordance with § 35.2024.

§ 35.26 Radiation protection program changes.

[Top of File]

(a) A licensee may revise its radiation protection program without Commission approval if--

(1) The revision does not require a license amendment under § 35.13;

(2) The revision is in compliance with the regulations and the license ;

(3) The revision has been reviewed and approved by the Radiation Safety Officer and licensee management; and

(4) The affected individuals are instructed on the revised program before the changes are implemented.

(b) A licensee shall retain a record of each change in accordance with § 35.2026.

§ 35.27 Supervision.

[Top of File]

(a) A licensee that permits the receipt, possession, use, or transfer of byproduct material by an individual under the supervision of an authorized user, as allowed by § 35.11(b)(1), shall--

(1) In addition to the requirements in § 19.12 of this chapter, instruct the supervised individual in the licensee's written radiation protection procedures, written directive procedures, regulations of this chapter, and license conditions with respect to the use of byproduct material; and

(2) Require the supervised individual to follow the instructions of the supervising authorized user for medical uses of byproduct material, written radiation protection procedures established by the licensee, written directive procedures, regulations of this chapter, and license conditions with respect to the medical use of byproduct material.

(b) A licensee that permits the preparation of byproduct material for medical use by an individual under the supervision of an authorized nuclear pharmacist or physician who is an authorized user, as allowed by § 35.11(b)(2), shall--

(1) In addition to the requirements in § 19.12 of this chapter, instruct the supervised individual in the preparation of byproduct material for medical use, as appropriate to that individual's involvement with byproduct material; and

(2) Require the supervised individual to follow the instructions of the supervising authorized user or authorized nuclear pharmacist regarding the preparation of byproduct material for medical use, written radiation protection procedures established by the licensee, the regulations of this chapter, and license conditions.

(c) A licensee that permits supervised activities under paragraphs (a) and (b) of this section is responsible for the acts and omissions of the supervised individual.

§ 35.40 Written directives.

[Top of File]

(a) A written directive must be dated and signed by an authorized user before the administration of I-131 sodium iodide greater than 1.11 megabecquerels (MBq) (30 microcuries (µCi)), any therapeutic dosage of unsealed byproduct material or any therapeutic dose of radiation from byproduct material.

(1) If, because of the emergent nature of the patient's condition, a delay in order to provide a written directive would jeopardize the patient's health, an oral directive is acceptable. The information contained in the oral directive must be documented as soon as possible in writing in the patient's record. A written directive must be prepared within 48 hours of the oral directive.

(b) The written directive must contain the patient or human research subject's name and the following information--

(1) For any administration of quantities greater than 1.11 MBq (30 µCi) of sodium iodide I-131: the dosage;

(2) For an administration of a therapeutic dosage of unsealed byproduct material other than sodium iodide I-131: the radioactive drug, dosage, and route of administration;

(3) For gamma stereotactic radiosurgery: the total dose, treatment site, and values for the target coordinate settings per treatment for each anatomically distinct treatment site;

(4) For teletherapy: the total dose, dose per fraction, number of fractions, and treatment site;

(5) For high dose-rate remote afterloading brachytherapy: the radionuclide, treatment site, dose per fraction, number of fractions, and total dose; or

(6) For all other brachytherapy, including low, medium, and pulsed dose rate remote afterloaders:

(i) Before implantation: treatment site, the radionuclide, and dose; and

(ii) After implantation but before completion of the procedure: the radionuclide, treatment site, number of sources, and total source strength and exposure time (or the total dose).

(c) A written revision to an existing written directive may be made if the revision is dated and signed by an authorized user before the administration of the dosage of unsealed byproduct material, the brachytherapy dose, the gamma stereotactic radiosurgery dose, the teletherapy dose, or the next fractional dose.

(1) If, because of the patient's condition, a delay in order to provide a written revision to an existing written directive would jeopardize the patient's health, an oral revision to an existing written directive is acceptable. The oral revision must be documented as soon as possible in the patient's record. A revised written directive must be signed by the authorized user within 48 hours of the oral revision.

(d) The licensee shall retain a copy of the written directive in accordance with § 35.2040.

[67 FR 20370, Apr. 24, 2002 as amended at 68 FR 75389, Dec. 31, 2003]

§ 35.41 Procedures for administrations requiring a written directive.

[Top of File]

(a) For any administration requiring a written directive, the licensee shall develop, implement, and maintain written procedures to provide high confidence that:

(1) The patient's or human research subject's identity is verified before each administration; and

(2) Each administration is in accordance with the written directive.

(b) At a minimum, the procedures required by paragraph (a) of this section must address the following items that are applicable to the licensee's use of byproduct material--

(1) Verifying the identity of the patient or human research subject;

(2) Verifying that the administration is in accordance with the treatment plan, if applicable, and the written directive;

(3) Checking both manual and computer-generated dose calculations; and

(4) Verifying that any computer-generated dose calculations are correctly transferred into the consoles of therapeutic medical units authorized by §§ 35.600 or 35.1000.

(c) A licensee shall retain a copy of the procedures required under paragraph (a) in accordance with § 35.2041.

[72 FR 45151, Aug. 13, 2007]

§ 35.49 Suppliers for sealed sources or devices for medical use.

[Top of File]

For medical use, a licensee may only use--

(a) Sealed sources or devices manufactured, labeled, packaged, and distributed in accordance with a license issued under 10 CFR Part 30 and 10 CFR 32.74 of this chapter or equivalent requirements of an Agreement State;

(b) Sealed sources or devices non-commercially transferred from a Part 35 licensee or an Agreement State medical use licensee.

(c) Teletherapy sources manufactured and distributed in accordance with a license issued under 10 CFR Part 30 or the equivalent requirements of an Agreement State.

[71 FR 15008, Mar. 27, 2006]

§ 35.50 Training for Radiation Safety Officer.

Except as provided in § 35.57, the licensee shall require an individual fulfilling the responsibilities of the Radiation Safety Officer as provided in § 35.24 to be an individual who--

(a) Is certified by a specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraphs (d) and (e) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1)(i) Hold a bachelor's or graduate degree from an accredited college or university in physical science or engineering or biological science with a minimum of 20 college credits in physical science;

(ii) Have 5 or more years of professional experience in health physics (graduate training may be substituted for no more than 2 years of the required experience) including at least 3 years in applied health physics; and

(iii) Pass an examination administered by diplomates of the specialty board, which evaluates knowledge and competence in radiation physics and instrumentation, radiation protection, mathematics pertaining to the use and measurement of radioactivity, radiation biology, and radiation dosimetry; or

(2)(i) Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;

(ii) Have 2 years of full-time practical training and/or supervised experience in medical physics—

(A) Under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized by the Commission or an Agreement State; or

(B) In clinical nuclear medicine facilities providing diagnostic and/or therapeutic services under the direction of physicians who meet the requirements for authorized users in §§ 35.290 or 35.390;

(iii) Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical diagnostic radiological or nuclear medicine physics and in radiation safety; or

(b)(1) Has completed a structured educational program consisting of both:

(i) 200 hours of classroom and laboratory training in the following areas--

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity;

(D) Radiation biology; and

(E) Radiation dosimetry; and

(ii) One year of full-time radiation safety experience under the supervision of the individual identified as the Radiation Safety Officer on a Commission or Agreement State license or permit issued by a Commission master material licensee that authorizes similar type(s) of use(s) of byproduct material involving the following--

(A) Shipping, receiving, and performing related radiation surveys;

(B) Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and instruments used to measure radionuclides;

(C) Securing and controlling byproduct material;

(D) Using administrative controls to avoid mistakes in the administration of byproduct material;

(E) Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures;

(F) Using emergency procedures to control byproduct material; and

(G) Disposing of byproduct material; or

(2) [Reserved]

(c)(1) Is a medical physicist who has been certified by a specialty board whose certification process has been recognized by the Commission or an Agreement State under § 35.51(a) and has experience in radiation safety for similar types of use of byproduct material for which the licensee is seeking the approval of the individual as Radiation Safety Officer and who meets the requirements in paragraphs (d) and (e) of this section; or

(2) Is an authorized user, authorized medical physicist, or authorized nuclear pharmacist identified on the licensee's license and has experience with the radiation safety aspects of similar types of use of byproduct material for which the individual has Radiation Safety Officer responsibilities; and,

(d) Has obtained written attestation, signed by a preceptor Radiation Safety Officer, that the individual has satisfactorily completed the requirements in paragraph (e) and in paragraphs (a)(1)(i) and (a)(1)(ii) or (a)(2)(i) and (a)(2)(ii) or (b)(1) or (c)(1) or (c)(2) of this section, and has achieved a level of radiation safety knowledge sufficient to function independently as a Radiation Safety Officer for a medical use licensee; and

(e) Has training in the radiation safety, regulatory issues, and emergency procedures for the types of use for which a licensee seeks approval. This training requirement may be satisfied by completing training that is supervised by a Radiation Safety Officer, authorized medical physicist, authorized nuclear pharmacist, or authorized user, as appropriate, who is authorized for the type(s) of use for which the licensee is seeking approval.

[70 FR 16361, Mar. 30, 2005; 71 FR 1926, Jan. 12, 2006; 71 FR 15008, Mar. 27, 2006]

§ 35.51 Training for an authorized medical physicist.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized medical physicist to be an individual who—

(a) Is certified by a specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraphs (b)(2) and (c) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1) Hold a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university;

(2) Have 2 years of full-time practical training and/or supervised experience in medical physics—

(i) Under the supervision of a medical physicist who is certified in medical physics by a specialty board recognized by the Commission or an Agreement State; or

(ii) In clinical radiation facilities providing high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services under the direction of physicians who meet the requirements for authorized users in §§ 35.490 or 35.690; and

(3) Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in clinical radiation therapy, radiation safety, calibration, quality assurance, and treatment planning for external beam therapy, brachytherapy, and stereotactic radiosurgery; or

(b)(1) Holds a master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university; and has completed 1 year of full-time training in medical physics and an additional year of full-time work experience under the supervision of an individual who meets the requirements for an authorized medical physicist for the type(s) of use for which the individual is seeking authorization. This training and work experience must be conducted in clinical radiation facilities that provide high-energy, external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services and must include:

(i) Performing sealed source leak tests and inventories;

(ii) Performing decay corrections;

(iii) Performing full calibration and periodic spot checks of external beam treatment units, stereotactic radiosurgery units, and remote afterloading units as applicable; and

(iv) Conducting radiation surveys around external beam treatment units, stereotactic radiosurgery units, and remote afterloading units as applicable; and

(2) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (c) and (a)(1) and (2), or (b)(1) and (c) of this section, and has achieved a level of competency sufficient to function independently as an authorized medical

physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status. The written attestation must be signed by a preceptor authorized medical physicist who meets the requirements in § 35.51, or equivalent Agreement State requirements for an authorized medical physicist for each type of therapeutic medical unit for which the individual is requesting authorized medical physicist status; and

(c) Has training for the type(s) of use for which authorization is sought that includes hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system. This training requirement may be satisfied by satisfactorily completing either a training program provided by the vendor or by training supervised by an authorized medical physicist authorized for the type(s) of use for which the individual is seeking authorization.

[67 FR 20370, Apr. 24, 2002; 67 FR 62872, Oct. 9, 2002, as amended at 68 FR 19324, Apr. 21, 2003; 69 FR 55737, Sep. 16, 2004; 70 FR 16362, Mar. 30, 2005; 71 FR 15008, Mar. 27, 2006]

§ 35.55 Training for an authorized nuclear pharmacist.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized nuclear pharmacist to be a pharmacist who--

(a) Is certified by a specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraph (b)(2) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1) Have graduated from a pharmacy program accredited by the American Council on Pharmaceutical Education (ACPE) or have passed the Foreign Pharmacy Graduate Examination Committee (FPGEC) examination;

(2) Hold a current, active license to practice pharmacy;

(3) Provide evidence of having acquired at least 4000 hours of training/experience in nuclear pharmacy practice. Academic training may be substituted for no more than 2000 hours of the required training and experience; and

(4) Pass an examination in nuclear pharmacy administered by diplomates of the specialty board, that assesses knowledge and competency in procurement, compounding, quality assurance, dispensing, distribution, health and safety, radiation safety, provision of information and consultation, monitoring patient outcomes, research and development; or

(b)(1) Has completed 700 hours in a structured educational program consisting of both:

(i) 200 hours of classroom and laboratory training in the following areas—

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity;

(D) Chemistry of byproduct material for medical use; and

(E) Radiation biology; and

(ii) Supervised practical experience in a nuclear pharmacy involving--

(A) Shipping, receiving, and performing related radiation surveys;

(B) Using and performing checks for proper operation of instruments used to determine the activity of dosages, survey meters, and, if appropriate, instruments used to measure alpha- or beta-emitting radionuclides;

(C) Calculating, assaying, and safely preparing dosages for patients or human research subjects;

(D) Using administrative controls to avoid medical events in the administration of byproduct material; and

(E) Using procedures to prevent or minimize radioactive contamination and using proper decontamination procedures; and

(2) Has obtained written attestation, signed by a preceptor authorized nuclear pharmacist, that the individual has satisfactorily completed the requirements in paragraphs (a)(1), (a)(2), and (a)(3) or (b)(1) of this section and has achieved a level of competency sufficient to function independently as an authorized nuclear pharmacist.

[70 FR 16362, Mar. 30, 2005]

§ 35.57 Training for experienced Radiation Safety Officer, teletherapy or medical physicist, authorized medical physicist, authorized user, nuclear pharmacist, and authorized nuclear pharmacist.

[Top of File]

(a)(1) An individual identified as a Radiation Safety Officer, a teletherapy or medical physicist, or a nuclear pharmacist on a Commission or Agreement State license or a permit issued by a Commission or Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope before October 24, 2002, need not comply with the training requirements of §§ 35.50, 35.51, or 35.55, respectively.

(2) An individual identified as a Radiation Safety Officer, an authorized medical physicist, or an authorized nuclear pharmacist on a Commission or Agreement State license or a permit issued by a Commission or Agreement State broad scope licensee or master material license permit or by a master material license permittee of broad scope between October 24, 2002 and April 29, 2005 need not comply with the training requirements of §§ 35.50, 35.51, or 35.55, respectively.

(3) A Radiation Safety Officer, a medical physicist, or a nuclear pharmacist, who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses or in the practice of nuclear pharmacy at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC, need not comply with the training requirements of § 35.50, § 35.51 or § 35.55, respectively, when performing the same uses. A nuclear pharmacist, who prepared only radioactive drugs containing accelerator-produced radioactive materials, or a medical physicist, who used only accelerator-produced radioactive materials, at the locations and time period identified in this paragraph, qualifies as an authorized nuclear pharmacist or an authorized medical physicist, respectively, for those materials and uses performed before these dates, for purposes of this chapter.

(b)(1) Physicians, dentists, or podiatrists identified as authorized users for the medical use of byproduct material on a license issued by the Commission or Agreement State, a permit issued by a Commission master material licensee, a permit issued by a Commission or Agreement State broad scope licensee, or a permit issued by a Commission master material license broad scope permittee before October 24, 2002, who perform only those medical uses for which they were authorized on that date need not comply with the training requirements of Subparts D through H of this part.

(2) Physicians, dentists, or podiatrists identified as authorized users for the medical use of byproduct material on a license issued by the Commission or Agreement State, a permit issued by a Commission master material licensee, a permit issued by a Commission or Agreement State broad scope licensee, or a permit issued by a Commission master material license broad scope permittee who perform only those medical uses for which they were authorized between October 24, 2002 and April 29, 2005, need not comply with the training requirements of Subparts D through H of this part.

(3) Physicians, dentists, or podiatrists who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses performed at a Government agency or Federally recognized Indian Tribe before November 30, 2007 or at all other locations of use before August 8, 2009, or an earlier date as noticed by the NRC, need not comply with the training requirements of subparts D through H of this part when performing the same medical uses. A physician, dentist, or podiatrist, who used only accelerator-produced radioactive materials, discrete sources of radium-226, or both, for medical uses at the locations and time period identified in this paragraph, qualifies as an authorized user for those materials and uses performed before these dates, for purposes of this chapter.

[70 FR 16363, Mar. 30, 2005; 72 FR 55931 Oct. 1, 2007]

§ 35.59 Recentness of training.

[Top of File]

The training and experience specified in Subparts B, D, E, F, G, and H of this part must have been obtained within the 7 years preceding the date of application or the individual must have had related continuing education and experience since the required training and experience was completed.

[71 FR 15008, Mar. 27, 2006]

Subpart C--General Technical Requirements

[Top of File]

§ 35.60 Possession, use, and calibration of instruments used to measure the activity of unsealed byproduct material

(a) For direct measurements performed in accordance with § 35.63, a licensee shall possess and use instrumentation to measure the activity of unsealed byproduct material before it is administered to each patient or human research subject.

(b) A licensee shall calibrate the instrumentation required in paragraph (a) of this section in accordance with nationally recognized

standards or the manufacturer's instructions.

(c) A licensee shall retain a record of each instrument calibration required by this section in accordance with § 35.2060.

§ 35.61 Calibration of survey instruments.

[Top of File]

(a) A licensee shall calibrate the survey instruments used to show compliance with this part and 10 CFR Part 20 before first use, annually, and following a repair that affects the calibration. A licensee shall--

(1) Calibrate all scales with readings up to 10 mSv (1000 mrem) per hour with a radiation source;

(2) Calibrate two separated readings on each scale or decade that will be used to show compliance; and

(3) Conspicuously note on the instrument the date of calibration.

(b) A licensee may not use survey instruments if the difference between the indicated exposure rate and the calculated exposure rate is more than 20 percent.

(c) A licensee shall retain a record of each survey instrument calibration in accordance with § 35.2061.

§ 35.63 Determination of dosages of unsealed byproduct material for medical use.

[Top of File]

(a) A licensee shall determine and record the activity of each dosage before medical use.

(b) For a unit dosage, this determination must be made by--

(1) Direct measurement of radioactivity; or

(2) A decay correction, based on the activity or activity concentration determined by--

(i) A manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or

(ii) An NRC or Agreement State licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or

(iii) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State requirements.

(c) For other than unit dosages, this determination must be made by--

(1) Direct measurement of radioactivity;

(2) Combination of measurement of radioactivity and mathematical calculations; or

(3) Combination of volumetric measurements and mathematical calculations, based on the measurement made by:

(i) A manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or

(ii) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State requirements.

(d) Unless otherwise directed by the authorized user, a licensee may not use a dosage if the dosage does not fall within the prescribed dosage range or if the dosage differs from the prescribed dosage by more than 20 percent.

(e) A licensee shall retain a record of the dosage determination required by this section in accordance with § 35.2063.

[72 FR 55931 Oct. 1, 2007]

§ 35.65 Authorization for calibration, transmission, and reference sources.

[Top of File]

Any person authorized by § 35.11 for medical use of byproduct material may receive, possess, and use any of the following byproduct material for check, calibration, transmission, and reference use.

(a) Sealed sources, not exceeding 1.11 GBq (30 mCi) each, manufactured and distributed by a person licensed under § 32.74 of this chapter or equivalent Agreement State regulations.

(b) Sealed sources, not exceeding 1.11 GBq (30 mCi) each, redistributed by a licensee authorized to redistribute the sealed sources manufactured and distributed by a person licensed under § 32.74 of this chapter or equivalent Agreement State regulations, providing the redistributed sealed sources are in the original packaging and shielding and are accompanied by the manufacturer's approved instructions.

(c) Any byproduct material with a half-life not longer than 120 days in individual amounts not to exceed 0.56 GBq (15 mCi).

(d) Any byproduct material with a half-life longer than 120 days in individual amounts not to exceed the smaller of 7.4 MBq (200 µCi) or 1000 times the quantities in Appendix B of Part 30 of this chapter.

(e) Technetium-99m in amounts as needed.

[71 FR 15009, Mar. 27, 2006]

§ 35.67 Requirements for possession of sealed sources and brachytherapy sources.

[Top of File]

(a) A licensee in possession of any sealed source or brachytherapy source shall follow the radiation safety and handling instructions supplied by the manufacturer.

(b) A licensee in possession of a sealed source shall--

(1) Test the source for leakage before its first use unless the licensee has a certificate from the supplier indicating that the source was tested within 6 months before transfer to the licensee; and

(2) Test the source for leakage at intervals not to exceed 6 months or at other intervals approved by the Commission or an Agreement State in the Sealed Source and Device Registry.

(c) To satisfy the leak test requirements of this section, the licensee shall measure the sample so that the leak test can detect the presence of 185 Bq (0.005 µCi) of radioactive material in the sample.

(d) A licensee shall retain leak test records in accordance with § 35.2067(a).

(e) If the leak test reveals the presence of 185 Bq (0.005 µCi) or more of removable contamination, the licensee shall--

(1) Immediately withdraw the sealed source from use and store, dispose, or cause it to be repaired in accordance with the requirements in parts 20 and 30 of this chapter; and

(2) File a report within 5 days of the leak test in accordance with § 35.3067.

(f) A licensee need not perform a leak test on the following sources:

(1) Sources containing only byproduct material with a half-life of less than 30 days;

(2) Sources containing only byproduct material as a gas;

(3) Sources containing 3.7 MBq (100 µCi) or less of beta or gamma-emitting material or 0.37 MBq (10 µCi) or less of alpha-emitting material;

(4) Seeds of iridium-192 encased in nylon ribbon; and

(5) Sources stored and not being used. However, the licensee shall test each such source for leakage before any use or transfer unless it has been leak tested within 6 months before the date of use or transfer.

(g) A licensee in possession of sealed sources or brachytherapy sources, except for gamma stereotactic radiosurgery sources, shall conduct a semi-annual physical inventory of all such sources in its possession. The licensee shall retain each inventory record in accordance with § 35.2067(b).

§ 35.69 Labeling of vials and syringes.

[Top of File]

Each syringe and vial that contains unsealed byproduct material must be labeled to identify the radioactive drug. Each syringe shield and vial shield must also be labeled unless the label on the syringe or vial is visible when shielded.

§ 35.70 Surveys of ambient radiation exposure rate.

[Top of File]

(a) In addition to the surveys required by Part 20 of this chapter, a licensee shall survey with a radiation detection survey instrument at the end of each day of use. A licensee shall survey all areas where unsealed byproduct material requiring a written directive was prepared for use or administered.

(b) A licensee does not need to perform the surveys required by paragraph (a) of this section in an area(s) where patients or human research subjects are confined when they cannot be released under § 35.75.

(c) A licensee shall retain a record of each survey in accordance with § 35.2070.

§ 35.75 Release of individuals containing unsealed byproduct material or implants containing byproduct material.

[Top of File]

(a) A licensee may authorize the release from its control of any individual who has been administered unsealed byproduct material or implants containing byproduct material if the total effective dose equivalent to any other individual from exposure to the released individual is not likely to exceed 5 mSv (0.5 rem).[1]

(b) A licensee shall provide the released individual, or the individual's parent or guardian, with instructions, including written instructions, on actions recommended to maintain doses to other individuals as low as is reasonably achievable if the total effective dose equivalent to any other individual is likely to exceed 1 mSv (0.1 rem). If the total effective dose equivalent to a nursing infant or child could exceed 1 mSv (0.1 rem) assuming there were no interruption of breast-feeding, the instructions must also include--

(1) Guidance on the interruption or discontinuation of breast-feeding; and

(2) Information on the potential consequences, if any, of failure to follow the guidance.

(c) A licensee shall maintain a record of the basis for authorizing the release of an individual in accordance with § 35.2075(a).

(d) The licensee shall maintain a record of instructions provided to a breast-feeding female in accordance with § 35.2075(b).

[67 FR 20370, Apr. 24, 2002 as amended at 70 FR 16363, Mar. 30, 2005; 72 FR 45151, Aug. 13, 2007]

[1] The current revision of NUREG–1556, Vol. 9, "Consolidated Guidance About Materials Licenses: Program-Specific Guidance About Medical Licenses" describes methods for calculating doses to other individuals and contains tables of activities not likely to cause doses exceeding 5 mSv (0.5 rem).

§ 35.80 Provision of mobile medical service.

[Top of File]

(a) A licensee providing mobile medical service shall--

(1) Obtain a letter signed by the management of each client for which services are rendered that permits the use of byproduct material at the client's address and clearly delineates the authority and responsibility of the licensee and the client;

(2) Check instruments used to measure the activity of unsealed byproduct material for proper function before medical use at each client's address or on each day of use, whichever is more frequent. At a minimum, the check for proper function required by this paragraph must include a constancy check;

(3) Check survey instruments for proper operation with a dedicated check source before use at each client's address; and

(4) Before leaving a client's address, survey all areas of use to ensure compliance with the requirements in Part 20 of this chapter.

(b) A mobile medical service may not have byproduct material delivered from the manufacturer or the distributor to the client unless the client has a license allowing possession of the byproduct material. Byproduct material delivered to the client must be received and handled

in conformance with the client's license.

(c) A licensee providing mobile medical services shall retain the letter required in paragraph (a)(1) and the record of each survey required in paragraph (a)(4) of this section in accordance with § 35.2080(a) and (b), respectively.

§ 35.92 Decay-in-storage.

[Top of File]

(a) A licensee may hold byproduct material with a physical half-life of less than or equal to 120 days for decay-in-storage before disposal without regard to its radioactivity if it—

(1) Monitors byproduct material at the surface before disposal and determines that its radioactivity cannot be distinguished from the background radiation level with an appropriate radiation detection survey meter set on its most sensitive scale and with no interposed shielding; and

(2) Removes or obliterates all radiation labels, except for radiation labels on materials that are within containers and that will be managed as biomedical waste after they have been released from the licensee.

(b) A licensee shall retain a record of each disposal permitted under paragraph (a) of this section in accordance with § 35.2092.

[72 FR 45151, Aug. 13, 2007]

Subpart D--Unsealed Byproduct Material--Written Directive Not Required

[Top of File]

§ 35.100 Use of unsealed byproduct material for uptake, dilution, and excretion studies for which a written directive is not required.

Except for quantities that require a written directive under § 35.40(b), a licensee may use any unsealed byproduct material prepared for medical use for uptake, dilution, or excretion studies that is—

(a) Obtained from:

(1) A manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or

(2) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State requirements; or

(b) Excluding production of PET radionuclides, prepared by:

(1) An authorized nuclear pharmacist;

(2) A physician who is an authorized user and who meets the requirements specified in §§ 35.290, or 35.390 and 35.290(c)(1)(ii)(G); or

(3) An individual under the supervision, as specified in § 35.27, of the authorized nuclear pharmacist in paragraph (b)(1) of this section or the physician who is an authorized user in paragraph (b)(2) of this section; or

(c) Obtained from and prepared by an NRC or Agreement State licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or

(d) Prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19324, Apr. 21, 2003; 69 FR 55738, Sep. 16, 2004; 70 FR 16363, Mar. 30, 2005; 71 FR 15009, Mar. 27, 2006; 72 FR 55931 Oct. 1, 2007]

§ 35.190 Training for uptake, dilution, and excretion studies.

[Top of File]

Except as provided in § 35.57, the licensee shall require an authorized user of unsealed byproduct material for the uses authorized under § 35.100 to be a physician who—

(a) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraph (c)(2) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1) Complete 60 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed byproduct material for uptake, dilution, and excretion studies as described in paragraphs (c)(1)(i) through (c)(1)(ii)(F) of this section; and

(2) Pass an examination, administered by diplomates of the specialty board, that assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or

(b) Is an authorized user under §§ 35.290, 35.390, or equivalent Agreement State requirements; or (c)(1)*

(c)(1) Has completed 60 hours of training and experience, including a minimum of 8 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed byproduct material for uptake, dilution, and excretion studies. The training and experience must include—

(i) Classroom and laboratory training in the following areas—

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity;

(D) Chemistry of byproduct material for medical use; and

(E) Radiation biology; and

(ii) Work experience, under the supervision of an authorized user who meets the requirements in §§ 35.190, 35.290, 35.390, or equivalent Agreement State requirements, involving--

(A) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

(B) Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;

(C) Calculating, measuring, and safely preparing patient or human research subject dosages;

(D) Using administrative controls to prevent a medical event involving the use of unsealed byproduct material;

(E) Using procedures to contain spilled byproduct material safely and using proper decontamination procedures; and

(F) Administering dosages of radioactive drugs to patients or human research subjects; and

(2) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in §§ 35.190, 35.290, or 35.390, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraph (a)(1) or (c)(1) of this section and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under § 35.100.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19324, Apr. 21, 2003; 69 FR 55738, Sep. 16, 2004; 70 FR 16363, Mar. 30, 2005; 71 FR 15009, Mar. 27, 2006; 72 FR 45151, Aug. 13, 2007]

§ 35.200 Use of unsealed byproduct material for imaging and localization studies for which a written directive is not required.

[Top of File]

Except for quantities that require a written directive under § 35.40(b), a licensee may use any unsealed byproduct material prepared for medical use for imaging and localization studies that is—

(a) Obtained from:

(1) A manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or

(2) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State

requirements; or

(b) Excluding production of PET radionuclides, prepared by:

(1) An authorized nuclear pharmacist;

(2) A physician who is an authorized user and who meets the requirements specified in § 35.290, or 35.390 and 35.290(c)(1)(ii)(G); or

(3) An individual under the supervision, as specified in § 35.27, of the authorized nuclear pharmacist in paragraph (b)(1) of this section or the physician who is an authorized user in paragraph (b)(2) of this section;

(c) Obtained from and prepared by an NRC or Agreement State licensee for use in research in accordance with a Radioactive Drug Research Committee-approved protocol or an Investigational New Drug (IND) protocol accepted by FDA; or

(d) Prepared by the licensee for use in research in accordance with a Radioactive Drug Research Committee-approved application or an Investigational New Drug (IND) protocol accepted by FDA.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19324, Apr. 21, 2003; 69 FR 55738, Sep. 16, 2004; 70 FR 16363, Mar. 30, 2005; 71 FR 15009, Mar. 27, 2006; 72 FR 55932 Oct. 1, 2007]

§ 35.204 Permissible molybdenum-99, strontium-82, and strontium-85 concentrations.

[Top of File]

(a) A licensee may not administer to humans a radiopharmaceutical that contains:

(1) More than 0.15 kilobecquerel of molybdenum-99 per megabecquerel of technetium-99m (0.15 microcurie of molybdenum-99 per millicurie of technetium-99m); or

(2) More than 0.02 kilobecquerel of strontium-82 per megabecquerel of rubidium-82 chloride injection (0.02 microcurie of strontium-82 per millicurie of rubidium-82 chloride); or more than 0.2 kilobecquerel of strontium-85 per megabecquerel of rubidium-82 chloride injection (0.2 microcurie of strontium-85 per millicurie of rubidium-82).

(b) A licensee that uses molybdenum-99/technetium-99m generators for preparing a technetium-99m radiopharmaceutical shall measure the molybdenum-99 concentration of the first eluate after receipt of a generator to demonstrate compliance with paragraph (a) of this section.

(c) A licensee that uses a strontium-82/rubidium-82 generator for preparing a rubidium-82 radiopharmaceutical shall, before the first patient use of the day, measure the concentration of radionuclides strontium-82 and strontium-85 to demonstrate compliance with paragraph (a) of this section.

(d) If a licensee is required to measure the molybdenum-99 concentration or strontium-82 and strontium-85 concentrations, the licensee shall retain a record of each measurement in accordance with § 35.2204.

[72 FR 55932 Oct. 1, 2007]

§ 35.290 Training for imaging and localization studies.

[Top of File]

Except as provided in § 35.57, the licensee shall require an authorized user of unsealed byproduct material for the uses authorized under § 35.200 to be a physician who—

(a) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraph (c)(2) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1) Complete 700 hours of training and experience in basic radionuclide handling techniques and radiation safety applicable to the medical use of unsealed byproduct material for imaging and localization studies as described in paragraphs (c)(1)(i) through (c)(1)(ii)(G) of this section; and

(2) Pass an examination, administered by diplomates of the specialty board, which assesses knowledge and competence in radiation safety, radionuclide handling, and quality control; or

(b) Is an authorized user under § 35.390 and meets the requirements in § 35.290(c)(1)(ii)(G), or equivalent Agreement State requirements; or

(c)(1) Has completed 700 hours of training and experience, including a minimum of 80 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed byproduct material for imaging and localization studies. The training and experience must include, at a minimum—

(i) Classroom and laboratory training in the following areas—

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity;

(D) Chemistry of byproduct material for medical use;

(E) Radiation biology; and

(ii) Work experience, under the supervision of an authorized user, who meets the requirements in §§ 35.290, or 35.290(c)(1)(ii)(G), and 35.390, or equivalent Agreement State requirements, involving--

(A) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

(B) Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;

(C) Calculating, measuring, and safely preparing patient or human research subject dosages;

(D) Using administrative controls to prevent a medical event involving the use of unsealed byproduct material;

(E) Using procedures to safely contain spilled radioactive material and using proper decontamination procedures;

(F) Administering dosages of radioactive drugs to patients or human research subjects; and

(G) Eluting generator systems appropriate for preparation of radioactive drugs for imaging and localization studies, measuring and testing the eluate for radionuclidic purity, and processing the eluate with reagent kits to prepare labeled radioactive drugs; and

(2) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in §§ 35.290, or 35.390 and 35.290(c)(1)(ii)(G), or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraph (a)(1) or (c)(1) of this section and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under §§ 35.100 and 35.200.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19324, Apr. 21, 2003; 69 FR 55738, Sep. 16, 2004; 70 FR 16364, Mar. 30, 2005; 71 FR 15009, Mar. 27, 2006; 72 FR 45151, Aug. 13, 2007]

Subpart E--Unsealed Byproduct Material--Written Directive Required

[Top of File]

§ 35.300 Use of unsealed byproduct material for which a written directive is required.

A licensee may use any unsealed byproduct material prepared for medical use and for which a written directive is required that is—

(a) Obtained from:

(1) A manufacturer or preparer licensed under § 32.72 of this chapter or equivalent Agreement State requirements; or

(2) A PET radioactive drug producer licensed under § 30.32(j) of this chapter or equivalent Agreement State requirements; or

(b) Excluding production of PET radionuclides, prepared by:

(1) An authorized nuclear pharmacist;

(2) A physician who is an authorized user and who meets the requirements specified in §§ 35.290, 35.390, or

(3) An individual under the supervision, as specified in § 35.27, of the authorized nuclear pharmacist in paragraph (b)(1) of this section or

the physician who is an authorized user in paragraph (b)(2) of this section; or

(c) Obtained from and prepared by an NRC or Agreement State licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA; or

(d) Prepared by the licensee for use in research in accordance with an Investigational New Drug (IND) protocol accepted by FDA.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19324, Apr. 21, 2003; 69 FR 55738, Sep. 16, 2004; 71 FR 15009, Mar. 27, 2006; 72 FR 55932 Oct. 1, 2007]

§ 35.310 Safety instruction.

[Top of File]

In addition to the requirements of § 19.12 of this chapter,

(a) A licensee shall provide radiation safety instruction, initially and at least annually, to personnel caring for patients or human research subjects who cannot be released under § 35.75. To satisfy this requirement, the instruction must be commensurate with the duties of the personnel and include—

(1) Patient or human research subject control;

(2) Visitor control, including—

(i) Routine visitation to hospitalized individuals in accordance with § 20.1301(a)(1) of this chapter; and

(ii) Visitation authorized in accordance with § 20.1301(c) of this chapter;

(3) Contamination control;

(4) Waste control; and

(5) Notification of the Radiation Safety Officer, or his or her designee, and an authorized user if the patient or the human research subject has a medical emergency or dies.

(b) A licensee shall retain a record of individuals receiving instruction in accordance with § 35.2310.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19324, Apr. 21, 2003]

§ 35.315 Safety precautions.

[Top of File]

(a) For each patient or human research subject who cannot be released under § 35.75, a licensee shall—

(1) Quarter the patient or the human research subject either in—

(i) A private room with a private sanitary facility; or

(ii) A room, with a private sanitary facility, with another individual who also has received therapy with unsealed byproduct material and who also cannot be released under § 35.75;

(2) Visibly post the patient's or the human research subject's room with a “Radioactive Materials” sign.

(3) Note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or the human research subject's room; and

(4) Either monitor material and items removed from the patient's or the human research subject's room to determine that their radioactivity cannot be distinguished from the natural background radiation level with a radiation detection survey instrument set on its most sensitive scale and with no interposed shielding, or handle the material and items as radioactive waste.

(b) A licensee shall notify the Radiation Safety Officer, or his or her designee, and an authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19325, Apr. 21, 2003]

§ 35.390 Training for use of unsealed byproduct material for which a written directive is required.

[Top of File]

Except as provided in § 35.57, the licensee shall require an authorized user of unsealed byproduct material for the uses authorized under § 35.300 to be a physician who—

(a) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraphs (b)(1)(ii)(G) and (b)(2) of this section. (Specialty boards whose certification processes have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.) To be recognized, a specialty board shall require all candidates for certification to:

(1) Successfully complete residency training in a radiation therapy or nuclear medicine training program or a program in a related medical specialty. These residency training programs must include 700 hours of training and experience as described in paragraphs (b)(1)(i) through (b)(1)(ii)(E) of this section. Eligible training programs must be approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education, the Royal College of Physicians and Surgeons of Canada, or the Committee on Post-Graduate Training of the American Osteopathic Association; and

(2) Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety, radionuclide handling, quality assurance, and clinical use of unsealed byproduct material for which a written directive is required; or

(b)(1) Has completed 700 hours of training and experience, including a minimum of 200 hours of classroom and laboratory training, in basic radionuclide handling techniques applicable to the medical use of unsealed byproduct material requiring a written directive. The training and experience must include—

(i) Classroom and laboratory training in the following areas—

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity;

(D) Chemistry of byproduct material for medical use; and

(E) Radiation biology; and

(ii) Work experience, under the supervision of an authorized user who meets the requirements in § 35.390, or equivalent Agreement State requirements. A supervising authorized user, who meets the requirements in § 35.390(b), must also have experience in administering dosages in the same dosage category or categories (i.e., § 35.390(b)(1)(ii)(G)) as the individual requesting authorized user status. The work experience must involve--

(A) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

(B) Performing quality control procedures on instruments used to determine the activity of dosages, and performing checks for proper operation of survey meters;

(C) Calculating, measuring, and safely preparing patient or human research subject dosages;

(D) Using administrative controls to prevent a medical event involving the use of unsealed byproduct material;

(E) Using procedures to contain spilled byproduct material safely and using proper decontamination procedures;

(F) [Reserved]

(G) Administering dosages of radioactive drugs to patients or human research subjects involving a minimum of three cases in each of the following categories for which the individual is requesting authorized user status—

(*1*) Oral administration of less than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide I–131, for which a written directive is required;

(*2*) Oral administration of greater than 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131[2];

(*3*) Parenteral administration of any beta emitter, or a photon- emitting radionuclide with a photon energy less than 150 keV, for which a written directive is required; and/or

(*4*) Parenteral administration of any other radionuclide, for which a written directive is required; and

(2) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (a)(1) and (b)(1)(ii)(G) or (b)(1) of this section, and has achieved a level of competency sufficient to function independently as an authorized user for the medical uses authorized under § 35.300. The written attestation must be signed by a preceptor authorized user who meets the requirements in § 35.390 or equivalent Agreement State requirements. The preceptor authorized user, who meets the requirements in § 35.390(b) must have experience in administering dosages in the same dosage category or categories (i.e., § 35.390(b)(1)(ii)(G)) as the individual requesting authorized user status.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19325, Apr. 21, 2003; 68 FR 75389, Dec. 31, 2003; 69 FR 55738, Sep. 16, 2004; 70 FR 16364, Mar. 30, 2005; 71 FR 15009, Mar. 27, 2006]

[2] Experience with at least 3 cases in Category (G)(*2*) also satisfies the requirement in Category (G)(*1*)

§ 35.392 Training for the oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 1.22 gigabecquerels (33 millicuries).

[Top of File]

Except as provided in § 35.57, the licensee shall require an authorized user for the oral administration of sodium iodide I-131 requiring a written directive in quantities less than or equal to 1.22 Gigabecquerels (33 millicuries), to be a physician who—

(a) Is certified by a medical specialty board whose certification process includes all of the requirements in paragraphs (c)(1) and (c)(2) of this section and whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraph (c)(3) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.); or

(b) Is an authorized user under § 35.390 for uses listed in § 35.390(b)(1)(ii)(G)(1) or (2), § 35.394, or equivalent Agreement State requirements; or

(c)(1) Has successfully completed 80 hours of classroom and laboratory training, applicable to the medical use of sodium iodide I-131 for procedures requiring a written directive. The training must include—

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity;

(iv) Chemistry of byproduct material for medical use; and

(v) Radiation biology; and

(2) Has work experience, under the supervision of an authorized user who meets the requirements in §§ 35.390, 35.392, 35.394, or equivalent Agreement State requirements. A supervising authorized user who meets the requirements in § 35.390(b) must also have experience in administering dosages as specified in § 35.390(b)(1)(ii)(G)(1) or (2). The work experience must involve--

(i) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

(ii) Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;

(iii) Calculating, measuring, and safely preparing patient or human research subject dosages;

(iv) Using administrative controls to prevent a medical event involving the use of byproduct material;

(v) Using procedures to contain spilled byproduct material safely and using proper decontamination procedures; and

(vi) Administering dosages to patients or human research subjects, that includes at least 3 cases involving the oral administration of less than or equal to 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (c)(1) and (c)(2) of this section, and has achieved a level of competency sufficient to function independently as an authorized user for medical uses authorized under § 35.300. The written attestation must be signed by a preceptor authorized user who meets the requirements in §§ 35.390, 35.392, 35.394, or equivalent Agreement State requirements. A preceptor authorized user, who meets the requirement in § 35.390(b), must also have experience in administering dosages as specified in § 35.390(b)(1)(ii)(G)(1) or (2).

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19325, Apr. 21, 2003; 68 FR 75389, Dec. 31, 2003; 69 FR 55738, Sep. 16, 2004; 70 FR 16364, Mar. 30, 2005; 71 FR 15009, Mar. 27, 2006]

§ 35.394 Training for the oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 1.22 gigabecquerels (33 millicuries).

[Top of File]

Except as provided in 35.57, the licensee shall require an authorized user for the oral administration of sodium iodide I-131 requiring a written directive in quantities greater than 1.22 Gigabecquerels (33 millicuries), to be a physician who—

(a) Is certified by a medical specialty board whose certification process includes all of the requirements in paragraphs (c)(1) and (c)(2) of this section, and whose certification has been recognized by the Commission or an Agreement State, and who meets the requirements in paragraph (c)(3) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.); or

(b) Is an authorized user under § 35.390 for uses listed in § 35.390(b)(1)(ii)(G)(2) or equivalent Agreement State requirements; or

(c)(1) Has successfully completed 80 hours of classroom and laboratory training, applicable to the medical use of sodium iodide I-131 for procedures requiring a written directive. The training must include—

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity;

(iv) Chemistry of byproduct material for medical use; and

(v) Radiation biology; and

(2) Has work experience, under the supervision of an authorized user who meets the requirements in §§ 35.390, 35.394, or equivalent Agreement State requirements. A supervising authorized user, who meets the requirements in § 35.390(b), must also have experience in administering dosages as specified in § 35.390(b)(1)(ii)(G)(2). The work experience must involve--

(i) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

(ii) Performing quality control procedures on instruments used to determine the activity of dosages and performing checks for proper operation of survey meters;

(iii) Calculating, measuring, and safely preparing patient or human research subject dosages;

(iv) Using administrative controls to prevent a medical event involving the use of byproduct material;

(v) Using procedures to contain spilled byproduct material safely and using proper decontamination procedures; and

(vi) Administering dosages to patients or human research subjects, that includes at least 3 cases involving the oral administration of greater than 1.22 gigabecquerels (33 millicuries) of sodium iodide I-131; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (c)(1) and (c)(2) of this section, and has achieved a level of competency sufficient to function independently as an authorized user for medical uses authorized under § 35.300. The written attestation must be signed by a preceptor authorized user who meets the requirements in §§ 35.390, 35.394, or equivalent Agreement State requirements. A preceptor authorized user, who meets the requirements in § 35.390(b), must also have experience in administering dosages as specified in § 35.390(b)(1)(ii)(G)(2).

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19325, Apr. 21, 2003; 68 FR 75389, Dec. 31, 2003; 69 FR 55739, Sep. 16, 2004; 70 FR 16365, Mar. 30, 2005; 71 FR 15010. Mar. 27, 2006]

§ 35.396 Training for the parenteral administration of unsealed byproduct material requiring a written directive.

[Top of File]

Except as provided in § 35.57, the licensee shall require an authorized user for the parenteral administration requiring a written directive, to be a physician who--

(a) Is an authorized user under § 35.390 for uses listed in §§ 35.390(b)(1)(ii)(G)(3) or 35.390(b)(1)(ii)(G)(4), or equivalent Agreement State requirements; or

(b) Is an authorized user under §§ 35.490, 35.690, or equivalent Agreement State requirements and who meets the requirements in paragraph (d) of this section; or

c) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State under §§ 35.490 or 35.690, and who meets the requirements in paragraph (d) of this section.

(d)(1) Has successfully completed 80 hours of classroom and laboratory training, applicable to parenteral administrations, for which a written directive is required, of any beta emitter, or any photon-emitting radionuclide with a photon energy less than 150 keV, and/or parenteral administration of any other radionuclide for which a written directive is required. The training must include--

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity;

(iv) Chemistry of byproduct material for medical use; and

(v) Radiation biology; and

(2) Has work experience, under the supervision of an authorized user who meets the requirements in §§ 35.390, 35.396, or equivalent Agreement State requirements, in the parenteral administration, for which a written directive is required, of any beta emitter, or any photon-emitting radionuclide with a photon energy less than 150 keV, and/or parenteral administration of any other radionuclide for which a written directive is required. A supervising authorized user who meets the requirements in § 35.390 must have experience in administering dosages as specified in §§ 35.390(b)(1)(ii)(G)(3) and/or 35.390(b)(1)(ii)(G)(4). The work experience must involve--

(i) Ordering, receiving, and unpacking radioactive materials safely, and performing the related radiation surveys;

(ii) Performing quality control procedures on instruments used to determine the activity of dosages, and performing checks for proper operation of survey meters;

(iii) Calculating, measuring, and safely preparing patient or human research subject dosages;

(iv) Using administrative controls to prevent a medical event involving the use of unsealed byproduct material;

(v) Using procedures to contain spilled byproduct material safely, and using proper decontamination procedures; and

(vi) Administering dosages to patients or human research subjects, that include at least 3 cases involving the parenteral administration, for which a written directive is required, of any beta emitter, or any photon-emitting radionuclide with a photon energy less than 150 keV and/or at least 3 cases involving the parenteral administration of any other radionuclide, for which a written directive is required; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraph (b) or (c) of this section, and has achieved a level of competency sufficient to function independently as an authorized user for the parenteral administration of unsealed byproduct material requiring a written directive. The written attestation must be signed by a preceptor authorized user who meets the requirements in §§ 35.390, 35.396, or equivalent Agreement State requirements. A preceptor authorized user, who meets the requirements in § 35.390, must have experience in administering dosages as specified in §§ 35.390(b)(1)(ii)(G)(3) and/or 35.390(b)(1)(ii)(G)(4).

[70 FR 16365, Mar. 30, 2005; 71 FR 15010. Mar. 27, 2006]

Subpart F--Manual Brachytherapy

[Top of File]

§ 35.400 Use of sources for manual brachytherapy.

A licensee shall use only brachytherapy sources for therapeutic medical uses:

(a) As approved in the Sealed Source and Device Registry; or

(b) In research in accordance with an active Investigational Device Exemption (IDE) application accepted by the FDA provided the requirements of § 35.49(a) are met.

§ 35.404 Surveys after source implant and removal.

[Top of File]

(a) Immediately after implanting sources in a patient or a human research subject, the licensee shall make a survey to locate and account for all sources that have not been implanted.

(b) Immediately after removing the last temporary implant source from a patient or a human research subject, the licensee shall make a survey of the patient or the human research subject with a radiation detection survey instrument to confirm that all sources have been removed.

(c) A licensee shall retain a record of the surveys required by paragraphs (a) and (b) of this section in accordance with § 35.2404.

§ 35.406 Brachytherapy sources accountability.

[Top of File]

(a) A licensee shall maintain accountability at all times for all brachytherapy sources in storage or use.

(b) As soon as possible after removing sources from a patient or a human research subject, a licensee shall return brachytherapy sources to a secure storage area.

(c) A licensee shall maintain a record of the brachytherapy source accountability in accordance with § 35.2406.

§ 35.410 Safety instruction.

[Top of File]

In addition to the requirements of § 19.12 of this chapter,

(a) The licensee shall provide radiation safety instruction, initially and at least annually, to personnel caring for patients or human research subjects who are receiving brachytherapy and cannot be released under § 35.75. To satisfy this requirement, the instruction must be commensurate with the duties of the personnel and include the--

(1) Size and appearance of the brachytherapy sources;

(2) Safe handling and shielding instructions;

(3) Patient or human research subject control;

(4) Visitor control, including both:

(i) Routine visitation of hospitalized individuals in accordance with § 20.1301(a)(1) of this chapter; and

(ii) Visitation authorized in accordance with § 20.1301(c) of this chapter; and

(5) Notification of the Radiation Safety Officer, or his or her designee, and an authorized user if the patient or the human research subject has a medical emergency or dies.

(b) A licensee shall retain a record of individuals receiving instruction in accordance with § 35.2310.

§ 35.415 Safety precautions.

[Top of File]

(a) For each patient or human research subject who is receiving brachytherapy and cannot be released under § 35.75, a licensee shall--

(1) Not quarter the patient or the human research subject in the same room as an individual who is not receiving brachytherapy;

(2) Visibly post the patient's or human research subject's room with a "Radioactive Materials" sign; and

(3) Note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or human research subject's room.

(b) A licensee shall have applicable emergency response equipment available near each treatment room to respond to a source--

(1) Dislodged from the patient; and

(2) Lodged within the patient following removal of the source applicators.

(c) A licensee shall notify the Radiation Safety Officer, or his or her designee, and an authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.

§ 35.432 Calibration measurements of brachytherapy sources.

[Top of File]

(a) Before the first medical use of a brachytherapy source on or after October 24, 2002, a licensee shall have—

(1) Determined the source output or activity using a dosimetry system that meets the requirements of § 35.630(a);

(2) Determined source positioning accuracy within applicators; and

(3) Used published protocols currently accepted by nationally recognized bodies to meet the requirements of paragraphs (a)(1) and (a)(2) of this section.

(b) Instead of a licensee making its own measurements as required in paragraph (a) of this section, the licensee may use measurements provided by the source manufacturer or by a calibration laboratory accredited by the American Association of Physicists in Medicine that are made in accordance with paragraph (a) of this section.

(c) A licensee shall mathematically correct the outputs or activities determined in paragraph (a) of this section for physical decay at intervals consistent with 1 percent physical decay.

(d) A licensee shall retain a record of each calibration in accordance with § 35.2432.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19325, Apr. 21, 2003]

§ 35.433 Decay of strontium-90 sources for ophthalmic treatments.

[Top of File]

(a) Only an authorized medical physicist shall calculate the activity of each strontium-90 source that is used to determine the treatment times for ophthalmic treatments. The decay must be based on the activity determined under § 35.432.

(b) A licensee shall retain a record of the activity of each strontium-90 source in accordance with § 35.2433.

§ 35.457 Therapy-related computer systems.

[Top of File]

The licensee shall perform acceptance testing on the treatment planning system of therapy-related computer systems in accordance with published protocols accepted by nationally recognized bodies. At a minimum, the acceptance testing must include, as applicable, verification of:

(a) The source-specific input parameters required by the dose calculation algorithm;

(b) The accuracy of dose, dwell time, and treatment time calculations at representative points;

(c) The accuracy of isodose plots and graphic displays; and

(d) The accuracy of the software used to determine sealed source positions from radiographic images.

§ 35.490 Training for use of manual brachytherapy sources.

[Top of File]

Except as provided in § 35.57, the licensee shall require an authorized user of a manual brachytherapy source for the uses authorized under § 35.400 to be a physician who—

(a) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State, and who meets the requirements in paragraph (b)(3) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1) Successfully complete a minimum of 3 years of residency training in a radiation oncology program approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-Graduate Training of the American Osteopathic Association; and

(2) Pass an examination, administered by diplomates of the specialty board, that tests knowledge and competence in radiation safety, radionuclide handling, treatment planning, quality assurance, and clinical use of manual brachytherapy; or

(b)(1) Has completed a structured educational program in basic radionuclide handling techniques applicable to the use of manual brachytherapy sources that includes—

(i) 200 hours of classroom and laboratory training in the following areas—

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity; and

(D) Radiation biology; and

(ii) 500 hours of work experience, under the supervision of an authorized user who meets the requirements in § 35.490 or equivalent Agreement State requirements at a medical institution, involving--

(A) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

(B) Checking survey meters for proper operation;

(C) Preparing, implanting, and removing brachytherapy sources;

(D) Maintaining running inventories of material on hand;

(E) Using administrative controls to prevent a medical event involving the use of byproduct material;

(F) Using emergency procedures to control byproduct material; and

(2) Has completed 3 years of supervised clinical experience in radiation oncology, under an authorized user who meets the requirements in § 35.490 or equivalent Agreement State requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Postdoctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by paragraph (b)(1)(ii) of this section; and

(3) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in § 35.490 or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraphs (a)(1), or (b)(1) and (b)(2) of this section and has achieved a level of competency sufficient to function independently as an authorized user of manual brachytherapy sources for the medical uses authorized under § 35.400.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19325, Apr. 21, 2003; 69 FR 55739, Sep. 16, 2004; 70 FR 16366, Mar. 30, 2005; 71 FR 15010. Mar. 27, 2006]

§ 35.491 Training for ophthalmic use of strontium-90.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of strontium-90 for ophthalmic radiotherapy to be a physician who—

(a) Is an authorized user under § 35.490 or equivalent Agreement State requirements; or

(b)(1) Has completed 24 hours of classroom and laboratory training applicable to the medical use of strontium-90 for ophthalmic radiotherapy. The training must include—

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity; and

(iv) Radiation biology; and

(2) Supervised clinical training in ophthalmic radiotherapy under the supervision of an authorized user at a medical institution, clinic, or private practice that includes the use of strontium-90 for the ophthalmic treatment of five individuals. This supervised clinical training must involve—

(i) Examination of each individual to be treated;

(ii) Calculation of the dose to be administered;

(iii) Administration of the dose; and

(iv) Follow up and review of each individual's case history; and

(3) Has obtained written attestation, signed by a preceptor authorized user who meets the requirements in §§ 35.490, 35.491, or equivalent Agreement State requirements, that the individual has satisfactorily completed the requirements in paragraphs (a) and (b) of this section and has achieved a level of competency sufficient to function independently as an authorized user of strontium-90 for ophthalmic use.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19326, Apr. 21, 2003; 69 FR 55739, Sep. 16, 2004; 70 FR 16366, Mar. 30, 2005; 71 FR 15011, Mar. 27, 2006]

Subpart G--Sealed Sources for Diagnosis

[Top of File]

§ 35.500 Use of sealed sources for diagnosis.

A licensee shall use only sealed sources for diagnostic medical uses as approved in the Sealed Source and Device Registry.

§ 35.590 Training for use of sealed sources for diagnosis.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of a diagnostic sealed source for use in a device authorized under § 35.500 to be a physician, dentist, or podiatrist who--

(a) Is certified by a specialty board whose certification process includes all of the requirements in paragraphs (b) and (c) of this section and whose certification has been recognized by the Commission or an Agreement State. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's Web page.); or

(b) Has completed 8 hours of classroom and laboratory training in basic radionuclide handling techniques specifically applicable to the use of the device. The training must include—

(1) Radiation physics and instrumentation;

(2) Radiation protection;

(3) Mathematics pertaining to the use and measurement of radioactivity; and

(4) Radiation biology; and

(c) Has completed training in the use of the device for the uses requested.

[70 FR 16366, Mar. 30, 2005]

Subpart H--Photon Emitting Remote Afterloader Units, Teletherapy Units, and Gamma Stereotactic Radiosurgery Units

[Top of File]

§ 35.600 Use of a sealed source in a remote afterloader unit, teletherapy unit, or gamma stereotactic radiosurgery unit.

A licensee shall use sealed sources in photon emitting remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units

for therapeutic medical uses:

(a) As approved in the Sealed Source and Device Registry; or

(b) In research in accordance with an active Investigational Device Exemption (IDE) application accepted by the FDA provided the requirements of § 35.49(a) are met.

§ 35.604 Surveys of patients and human research subjects treated with a remote afterloader unit.

[Top of File]

(a) Before releasing a patient or a human research subject from licensee control, a licensee shall survey the patient or the human research subject and the remote afterloader unit with a portable radiation detection survey instrument to confirm that the source(s) has been removed from the patient or human research subject and returned to the safe shielded position.

(b) A licensee shall retain a record of these surveys in accordance with § 35.2404.

§ 35.605 Installation, maintenance, adjustment, and repair.

[Top of File]

(a) Only a person specifically licensed by the Commission or an Agreement State shall install, maintain, adjust, or repair a remote afterloader unit, teletherapy unit, or gamma stereotactic radiosurgery unit that involves work on the source(s) shielding, the source(s) driving unit, or other electronic or mechanical component that could expose the source(s), reduce the shielding around the source(s), or compromise the radiation safety of the unit or the source(s).

(b) Except for low dose-rate remote afterloader units, only a person specifically licensed by the Commission or an Agreement State shall install, replace, relocate, or remove a sealed source or source contained in other remote afterloader units, teletherapy units, or gamma stereotactic radiosurgery units.

(c) For a low dose-rate remote afterloader unit, only a person specifically licensed by the Commission or an Agreement State or an authorized medical physicist shall install, replace, relocate, or remove a sealed source(s) contained in the unit.

(d) A licensee shall retain a record of the installation, maintenance, adjustment, and repair of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units in accordance with § 35.2605.

§ 35.610 Safety procedures and instructions for remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units.

[Top of File]

(a) A licensee shall--

(1) Secure the unit, the console, the console keys, and the treatment room when not in use or unattended;

(2) Permit only individuals approved by the authorized user, Radiation Safety Officer, or authorized medical physicist to be present in the treatment room during treatment with the source(s);

(3) Prevent dual operation of more than one radiation producing device in a treatment room if applicable; and

(4) Develop, implement, and maintain written procedures for responding to an abnormal situation when the operator is unable to place the source(s) in the shielded position, or remove the patient or human research subject from the radiation field with controls from outside the treatment room. These procedures must include--

(i) Instructions for responding to equipment failures and the names of the individuals responsible for implementing corrective actions;

(ii) The process for restricting access to and posting of the treatment area to minimize the risk of inadvertent exposure; and

(iii) The names and telephone numbers of the authorized users, the authorized medical physicist, and the Radiation Safety Officer to be contacted if the unit or console operates abnormally.

(b) A copy of the procedures required by paragraph (a)(4) of this section must be physically located at the unit console.

(c) A licensee shall post instructions at the unit console to inform the operator of--

(1) The location of the procedures required by paragraph (a)(4) of this section; and

(2) The names and telephone numbers of the authorized users, the authorized medical physicist, and the Radiation Safety Officer to be contacted if the unit or console operates abnormally.

(d) A licensee shall provide instruction, initially and at least annually, to all individuals who operate the unit, as appropriate to the individual's assigned duties, in--

(1) The procedures identified in paragraph (a)(4) of this section; and

(2) The operating procedures for the unit.

(e) A licensee shall ensure that operators, authorized medical physicists, and authorized users participate in drills of the emergency procedures, initially and at least annually.

(f) A licensee shall retain a record of individuals receiving instruction required by paragraph (d) of this section, in accordance with § 35.2310.

(g) A licensee shall retain a copy of the procedures required by §§ 35.610(a)(4) and (d)(2) in accordance with § 35.2610.

§ 35.615 Safety precautions for remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units.

[Top of File]

(a) A licensee shall control access to the treatment room by a door at each entrance.

(b) A licensee shall equip each entrance to the treatment room with an electrical interlock system that will--

(1) Prevent the operator from initiating the treatment cycle unless each treatment room entrance door is closed;

(2) Cause the source(s) to be shielded when an entrance door is opened; and

(3) Prevent the source(s) from being exposed following an interlock interruption until all treatment room entrance doors are closed and the source(s) on-off control is reset at the console.

(c) A licensee shall require any individual entering the treatment room to assure, through the use of appropriate radiation monitors, that radiation levels have returned to ambient levels.

(d) Except for low-dose remote afterloader units, a licensee shall construct or equip each treatment room with viewing and intercom systems to permit continuous observation of the patient or the human research subject from the treatment console during irradiation.

(e) For licensed activities where sources are placed within the patient's or human research subject's body, a licensee shall only conduct treatments which allow for expeditious removal of a decoupled or jammed source.

(f) In addition to the requirements specified in paragraphs (a) through (e) of this section, a licensee shall--

(1) For medium dose-rate and pulsed dose-rate remote afterloader units, require--

(i) An authorized medical physicist and either an authorized user or a physician, under the supervision of an authorized user, who has been trained in the operation and emergency response for the unit to be physically present during the initiation of all patient treatments involving the unit; and

(ii) An authorized medical physicist and either an authorized user or an individual, under the supervision of an authorized user, who has been trained to remove the source applicator(s) in the event of an emergency involving the unit, to be immediately available during continuation of all patient treatments involving the unit.

(2) For high dose-rate remote afterloader units, require--

(i) An authorized user and an authorized medical physicist to be physically present during the initiation of all patient treatments involving the unit; and

(ii) An authorized medical physicist and either an authorized user or a physician, under the supervision of an authorized user, who has been trained in the operation and emergency response for the unit, to be physically present during continuation of all patient treatments involving the unit.

(3) For gamma stereotactic radiosurgery units, require an authorized user and an authorized medical physicist to be physically present throughout all patient treatments involving the unit.

(4) Notify the Radiation Safety Officer, or his/her designee, and an authorized user as soon as possible if the patient or human research subject has a medical emergency or dies.

(g) A licensee shall have applicable emergency response equipment available near each treatment room to respond to a source--

(1) Remaining in the unshielded position; or

(2) Lodged within the patient following completion of the treatment.

§ 35.630 Dosimetry equipment.

[Top of File]

(a) Except for low dose-rate remote afterloader sources where the source output or activity is determined by the manufacturer, a licensee shall have a calibrated dosimetry system available for use. To satisfy this requirement, one of the following two conditions must be met.

(1) The system must have been calibrated using a system or source traceable to the National Institute of Standards and Technology (NIST) and published protocols accepted by nationally recognized bodies; or by a calibration laboratory accredited by the American Association of Physicists in Medicine (AAPM). The calibration must have been performed within the previous 2 years and after any servicing that may have affected system calibration; or

(2) The system must have been calibrated within the previous 4 years. Eighteen to thirty months after that calibration, the system must have been intercompared with another dosimetry system that was calibrated within the past 24 months by NIST or by a calibration laboratory accredited by the AAPM. The results of the intercomparison must indicate that the calibration factor of the licensee's system had not changed by more than 2 percent. The licensee may not use the intercomparison result to change the calibration factor. When intercomparing dosimetry systems to be used for calibrating sealed sources for therapeutic units, the licensee shall use a comparable unit with beam attenuators or collimators, as applicable, and sources of the same radionuclide as the source used at the licensee's facility.

(b) The licensee shall have a dosimetry system available for use for spot-check output measurements, if applicable. To satisfy this requirement, the system may be compared with a system that has been calibrated in accordance with paragraph (a) of this section. This comparison must have been performed within the previous year and after each servicing that may have affected system calibration. The spot-check system may be the same system used to meet the requirement in paragraph (a) of this section.

(c) The licensee shall retain a record of each calibration, intercomparison, and comparison in accordance with § 35.2630.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19326, Apr. 21, 2003]

§ 35.632 Full calibration measurements on teletherapy units.

[Top of File]

(a) A licensee authorized to use a teletherapy unit for medical use shall perform full calibration measurements on each teletherapy unit--

(1) Before the first medical use of the unit; and

(2) Before medical use under the following conditions:

(i) Whenever spot-check measurements indicate that the output differs by more than 5 percent from the output obtained at the last full calibration corrected mathematically for radioactive decay;

(ii) Following replacement of the source or following reinstallation of the teletherapy unit in a new location;

(iii) Following any repair of the teletherapy unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and

(3) At intervals not exceeding 1 year.

(b) To satisfy the requirement of paragraph (a) of this section, full calibration measurements must include determination of--

(1) The output within +/-3 percent for the range of field sizes and for the distance or range of distances used for medical use;

(2) The coincidence of the radiation field and the field indicated by the light beam localizing device;

(3) The uniformity of the radiation field and its dependence on the orientation of the useful beam;

(4) Timer accuracy and linearity over the range of use;

(5) On-off error; and

(6) The accuracy of all distance measuring and localization devices in medical use.

(c) A licensee shall use the dosimetry system described in § 35.630(a) to measure the output for one set of exposure conditions. The remaining radiation measurements required in paragraph (b)(1) of this section may be made using a dosimetry system that indicates relative dose rates.

(d) A licensee shall make full calibration measurements required by paragraph (a) of this section in accordance with published protocols accepted by nationally recognized bodies.

(e) A licensee shall mathematically correct the outputs determined in paragraph (b)(1) of this section for physical decay for intervals not exceeding 1 month for cobalt-60, 6 months for cesium-137, or at intervals consistent with 1 percent decay for all other nuclides.

(f) Full calibration measurements required by paragraph (a) of this section and physical decay corrections required by paragraph (e) of this section must be performed by the authorized medical physicist.

(g) A licensee shall retain a record of each calibration in accordance with § 35.2632.

§ 35.633 Full calibration measurements on remote afterloader units.

[Top of File]

(a) A licensee authorized to use a remote afterloader unit for medical use shall perform full calibration measurements on each unit--

(1) Before the first medical use of the unit;

(2) Before medical use under the following conditions:

(i) Following replacement of the source or following reinstallation of the unit in a new location outside the facility; and

(ii) Following any repair of the unit that includes removal of the source or major repair of the components associated with the source exposure assembly; and

(3) At intervals not exceeding 1 quarter for high dose-rate, medium dose-rate, and pulsed dose-rate remote afterloader units with sources whose half-life exceeds 75 days; and

(4) At intervals not exceeding 1 year for low dose-rate remote afterloader units.

(b) To satisfy the requirement of paragraph (a) of this section, full calibration measurements must include, as applicable, determination of:

(1) The output within ± 5 percent;

(2) Source positioning accuracy to within ±1 millimeter;

(3) Source retraction with backup battery upon power failure;

(4) Length of the source transfer tubes;

(5) Timer accuracy and linearity over the typical range of use;

(6) Length of the applicators; and

(7) Function of the source transfer tubes, applicators, and transfer tube-applicator interfaces.

(c) A licensee shall use the dosimetry system described in § 35.630(a) to measure the output.

(d) A licensee shall make full calibration measurements required by paragraph (a) of this section in accordance with published protocols accepted by nationally recognized bodies.

(e) In addition to the requirements for full calibrations for low dose-rate remote afterloader units in paragraph (b) of this section, a licensee shall perform an autoradiograph of the source(s) to verify inventory and source(s) arrangement at intervals not exceeding 1 quarter.

(f) For low dose-rate remote afterloader units, a licensee may use measurements provided by the source manufacturer that are made in accordance with paragraphs (a) through (e) of this section.

(g) A licensee shall mathematically correct the outputs determined in paragraph (b)(1) of this section for physical decay at intervals consistent with 1 percent physical decay.

(h) Full calibration measurements required by paragraph (a) of this section and physical decay corrections required by paragraph (g) of this section must be performed by the authorized medical physicist.

(i) A licensee shall retain a record of each calibration in accordance with § 35.2632.

§ 35.635 Full calibration measurements on gamma stereotactic radiosurgery units.

[Top of File]

(a) A licensee authorized to use a gamma stereotactic radiosurgery unit for medical use shall perform full calibration measurements on each unit--

(1) Before the first medical use of the unit;

(2) Before medical use under the following conditions--

(i) Whenever spot-check measurements indicate that the output differs by more than 5 percent from the output obtained at the last full calibration corrected mathematically for radioactive decay;

(ii) Following replacement of the sources or following reinstallation of the gamma stereotactic radiosurgery unit in a new location; and

(iii) Following any repair of the gamma stereotactic radiosurgery unit that includes removal of the sources or major repair of the components associated with the source assembly; and

(3) At intervals not exceeding 1 year, with the exception that relative helmet factors need only be determined before the first medical use of a helmet and following any damage to a helmet.

(b) To satisfy the requirement of paragraph (a) of this section, full calibration measurements must include determination of--

(1) The output within ±3 percent;

(2) Relative helmet factors;

(3) Isocenter coincidence;

(4) Timer accuracy and linearity over the range of use;

(5) On-off error;

(6) Trunnion centricity;

(7) Treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off;

(8) Helmet microswitches;

(9) Emergency timing circuits; and

(10) Stereotactic frames and localizing devices (trunnions).

(c) A licensee shall use the dosimetry system described in § 35.630(a) to measure the output for one set of exposure conditions. The remaining radiation measurements required in paragraph (b)(1) of this section may be made using a dosimetry system that indicates relative dose rates.

(d) A licensee shall make full calibration measurements required by paragraph (a) of this section in accordance with published protocols accepted by nationally recognized bodies.

(e) A licensee shall mathematically correct the outputs determined in paragraph (b)(1) of this section at intervals not exceeding 1 month for cobalt-60 and at intervals consistent with 1 percent physical decay for all other radionuclides.

(f) Full calibration measurements required by paragraph (a) of this section and physical decay corrections required by paragraph (e) of this section must be performed by the authorized medical physicist.

(g) A licensee shall retain a record of each calibration in accordance with § 35.2632.

§ 35.642 Periodic spot-checks for teletherapy units.

[Top of File]

(a) A licensee authorized to use teletherapy units for medical use shall perform output spot-checks on each teletherapy unit once in each calendar month that include determination of--

(1) Timer accuracy, and timer linearity over the range of use;

(2) On-off error;

(3) The coincidence of the radiation field and the field indicated by the light beam localizing device;

(4) The accuracy of all distance measuring and localization devices used for medical use;

(5) The output for one typical set of operating conditions measured with the dosimetry system described in § 35.630(b); and

(6) The difference between the measurement made in paragraph (a)(5) of this section and the anticipated output, expressed as a percentage of the anticipated output (i.e., the value obtained at last full calibration corrected mathematically for physical decay).

(b) A licensee shall perform measurements required by paragraph (a) of this section in accordance with written procedures established by the authorized medical physicist. That individual need not actually perform the spot-check measurements.

(c) A licensee shall have the authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.

(d) A licensee authorized to use a teletherapy unit for medical use shall perform safety spot-checks of each teletherapy facility once in each calendar month and after each source installation to assure proper operation of--

(1) Electrical interlocks at each teletherapy room entrance;

(2) Electrical or mechanical stops installed for the purpose of limiting use of the primary beam of radiation (restriction of source housing angulation or elevation, carriage or stand travel and operation of the beam on-off mechanism);

(3) Source exposure indicator lights on the teletherapy unit, on the control console, and in the facility;

(4) Viewing and intercom systems;

(5) Treatment room doors from inside and outside the treatment room; and

(6) Electrically assisted treatment room doors with the teletherapy unit electrical power turned off.

(e) If the results of the checks required in paragraph (d) of this section indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.

(f) A licensee shall retain a record of each spot-check required by paragraphs (a) and (d) of this section, and a copy of the procedures required by paragraph (b), in accordance with § 35.2642.

§ 35.643 Periodic spot-checks for remote afterloader units.

[Top of File]

(a) A licensee authorized to use a remote afterloader unit for medical use shall perform spot-checks of each remote afterloader facility and on each unit--

(1) Before the first use of a high dose-rate, medium dose-rate, or pulsed dose-rate remote afterloader unit on a given day;

(2) Before each patient treatment with a low dose-rate remote afterloader unit; and

(3) After each source installation.

(b) A licensee shall perform the measurements required by paragraph (a) of this section in accordance with written procedures established by the authorized medical physicist. That individual need not actually perform the spot check measurements.

(c) A licensee shall have the authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.

(d) To satisfy the requirements of paragraph (a) of this section, spot-checks must, at a minimum, assure proper operation of--

(1) Electrical interlocks at each remote afterloader unit room entrance;

(2) Source exposure indicator lights on the remote afterloader unit, on the control console, and in the facility;

(3) Viewing and intercom systems in each high dose-rate, medium dose-rate, and pulsed dose-rate remote afterloader facility;

(4) Emergency response equipment;

(5) Radiation monitors used to indicate the source position;

(6) Timer accuracy;

(7) Clock (date and time) in the unit's computer; and

(8) Decayed source(s) activity in the unit's computer.

(e) If the results of the checks required in paragraph (d) of this section indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.

(f) A licensee shall retain a record of each check required by paragraph (d) of this section and a copy of the procedures required by paragraph (b) of this section in accordance with § 35.2643.

§ 35.645 Periodic spot-checks for gamma stereotactic radiosurgery units.

[Top of File]

(a) A licensee authorized to use a gamma stereotactic radiosurgery unit for medical use shall perform spot-checks of each gamma stereotactic radiosurgery facility and on each unit--

(1) Monthly;

(2) Before the first use of the unit on a given day; and

(3) After each source installation.

(b) A licensee shall--

(1) Perform the measurements required by paragraph (a) of this section in accordance with written procedures established by the authorized medical physicist. That individual need not actually perform the spot check measurements.

(2) Have the authorized medical physicist review the results of each spot-check within 15 days. The authorized medical physicist shall notify the licensee as soon as possible in writing of the results of each spot-check.

(c) To satisfy the requirements of paragraph (a)(1) of this section, spot-checks must, at a minimum--

(1) Assure proper operation of--

(i) Treatment table retraction mechanism, using backup battery power or hydraulic backups with the unit off;

(ii) Helmet microswitches;

(iii) Emergency timing circuits; and

(iv) Stereotactic frames and localizing devices (trunnions).

(2) Determine--

(i) The output for one typical set of operating conditions measured with the dosimetry system described in § 35.630(b);

(ii) The difference between the measurement made in paragraph (c)(2)(i) of this section and the anticipated output, expressed as a

percentage of the anticipated output (i.e., the value obtained at last full calibration corrected mathematically for physical decay);

(iii) Source output against computer calculation;

(iv) Timer accuracy and linearity over the range of use;

(v) On-off error; and

(vi) Trunnion centricity.

(d) To satisfy the requirements of paragraphs (a)(2) and (a)(3) of this section, spot-checks must assure proper operation of--

(1) Electrical interlocks at each gamma stereotactic radiosurgery room entrance;

(2) Source exposure indicator lights on the gamma stereotactic radiosurgery unit, on the control console, and in the facility;

(3) Viewing and intercom systems;

(4) Timer termination;

(5) Radiation monitors used to indicate room exposures; and

(6) Emergency off buttons.

(e) A licensee shall arrange for the repair of any system identified in paragraph (c) of this section that is not operating properly as soon as possible.

(f) If the results of the checks required in paragraph (d) of this section indicate the malfunction of any system, a licensee shall lock the control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.

(g) A licensee shall retain a record of each check required by paragraphs (c) and (d) and a copy of the procedures required by paragraph (b) of this section in accordance with § 35.2645.

§ 35.647 Additional technical requirements for mobile remote afterloader units.

[Top of File]

(a) A licensee providing mobile remote afterloader service shall--

(1) Check survey instruments before medical use at each address of use or on each day of use, whichever is more frequent; and

(2) Account for all sources before departure from a client's address of use.

(b) In addition to the periodic spot-checks required by § 35.643, a licensee authorized to use mobile afterloaders for medical use shall perform checks on each remote afterloader unit before use at each address of use. At a minimum, checks must be made to verify the operation of--

(1) Electrical interlocks on treatment area access points;

(2) Source exposure indicator lights on the remote afterloader unit, on the control console, and in the facility;

(3) Viewing and intercom systems;

(4) Applicators, source transfer tubes, and transfer tube-applicator interfaces;

(5) Radiation monitors used to indicate room exposures;

(6) Source positioning (accuracy); and

(7) Radiation monitors used to indicate whether the source has returned to a safe shielded position.

(c) In addition to the requirements for checks in paragraph (b) of this section, a licensee shall ensure overall proper operation of the remote afterloader unit by conducting a simulated cycle of treatment before use at each address of use.

(d) If the results of the checks required in paragraph (b) of this section indicate the malfunction of any system, a licensee shall lock the

control console in the off position and not use the unit except as may be necessary to repair, replace, or check the malfunctioning system.

(e) A licensee shall retain a record of each check required by paragraph (b) of this section in accordance with § 35.2647.

§ 35.652 Radiation surveys.

[Top of File]

(a) In addition to the survey requirement in § 20.1501 of this chapter, a person licensed under this subpart shall make surveys to ensure that the maximum radiation levels and average radiation levels from the surface of the main source safe with the source(s) in the shielded position do not exceed the levels stated in the Sealed Source and Device Registry.

(b) The licensee shall make the survey required by paragraph (a) of this section at installation of a new source and following repairs to the source(s) shielding, the source(s) driving unit, or other electronic or mechanical component that could expose the source, reduce the shielding around the source(s), or compromise the radiation safety of the unit or the source(s).

(c) A licensee shall retain a record of the radiation surveys required by paragraph (a) of this section in accordance with § 35.2652.

§ 35.655 Five-year inspection for teletherapy and gamma stereotactic radiosurgery units.

[Top of File]

(a) A licensee shall have each teletherapy unit and gamma stereotactic radiosurgery unit fully inspected and serviced during source replacement or at intervals not to exceed 5 years, whichever comes first, to assure proper functioning of the source exposure mechanism.

(b) This inspection and servicing may only be performed by persons specifically licensed to do so by the Commission or an Agreement State.

(c) A licensee shall keep a record of the inspection and servicing in accordance with § 35.2655.

§ 35.657 Therapy-related computer systems.

[Top of File]

The licensee shall perform acceptance testing on the treatment planning system of therapy-related computer systems in accordance with published protocols accepted by nationally recognized bodies. At a minimum, the acceptance testing must include, as applicable, verification of:

(a) The source-specific input parameters required by the dose calculation algorithm;

(b) The accuracy of dose, dwell time, and treatment time calculations at representative points;

(c) The accuracy of isodose plots and graphic displays;

(d) The accuracy of the software used to determine sealed source positions from radiographic images; and

(e) The accuracy of electronic transfer of the treatment delivery parameters to the treatment delivery unit from the treatment planning system.

§ 35.690 Training for use of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units.

[Top of File]

Except as provided in § 35.57, the licensee shall require an authorized user of a sealed source for a use authorized under § 35.600 to be a physician who—

(a) Is certified by a medical specialty board whose certification process has been recognized by the Commission or an Agreement State and who meets the requirements in paragraphs (b)(3) and (c) of this section. (The names of board certifications which have been recognized by the Commission or an Agreement State will be posted on the NRC's web page.) To have its certification process recognized, a specialty board shall require all candidates for certification to:

(1) Successfully complete a minimum of 3 years of residency training in a radiation therapy program approved by the Residency Review Committee of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Post-Graduate Training of the American Osteopathic Association; and

(2) Pass an examination, administered by diplomates of the specialty board, which tests knowledge and competence in radiation safety,

radionuclide handling, treatment planning, quality assurance, and clinical use of stereotactic radiosurgery, remote afterloaders and external beam therapy; or

(b)(1) Has completed a structured educational program in basic radionuclide techniques applicable to the use of a sealed source in a therapeutic medical unit that includes—

(i) 200 hours of classroom and laboratory training in the following areas—

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity; and

(D) Radiation biology; and

(ii) 500 hours of work experience, under the supervision of an authorized user who meets the requirements in § 35.690 or, equivalent Agreement State requirements at a medical institution, involving--

(A) Reviewing full calibration measurements and periodic spot-checks;

(B) Preparing treatment plans and calculating treatment doses and times;

(C) Using administrative controls to prevent a medical event involving the use of byproduct material;

(D) Implementing emergency procedures to be followed in the event of the abnormal operation of the medical unit or console;

(E) Checking and using survey meters; and

(F) Selecting the proper dose and how it is to be administered; and

(2) Has completed 3 years of supervised clinical experience in radiation therapy, under an authorized user who meets the requirements in § 35.690 or equivalent Agreement State requirements, as part of a formal training program approved by the Residency Review Committee for Radiation Oncology of the Accreditation Council for Graduate Medical Education or the Royal College of Physicians and Surgeons of Canada or the Committee on Postdoctoral Training of the American Osteopathic Association. This experience may be obtained concurrently with the supervised work experience required by paragraph (b)(1)(ii) of this section; and

(3) Has obtained written attestation that the individual has satisfactorily completed the requirements in paragraphs (a)(1) or (b)(1) and (b)(2), and (c) of this section, and has achieved a level of competency sufficient to function independently as an authorized user of each type of therapeutic medical unit for which the individual is requesting authorized user status. The written attestation must be signed by a preceptor authorized user who meets the requirements in § 35.690 or equivalent Agreement State requirements for an authorized user for each type of therapeutic medical unit for which the individual is requesting authorized user status; and

(c) Has received training in device operation, safety procedures, and clinical use for the type(s) of use for which authorization is sought. This training requirement may be satisfied by satisfactory completion of a training program provided by the vendor for new users or by receiving training supervised by an authorized user or authorized medical physicist, as appropriate, who is authorized for the type(s) of use for which the individual is seeking authorization.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19326, Apr. 21, 2003; 69 FR 55739, Sep. 16, 2004; 70 FR 16366, Mar. 30, 2005; 71 FR 15011, Mar. 27, 2006]

Subpart I--[Reserved]

Subpart J--[Reserved]

Subpart J--Training and Experience Requirements

[Top of File]

§ 35.900 Radiation Safety Officer.

Except as provided in § 35.57, the licensee shall require an individual fulfilling the responsibilities of the Radiation Safety Officer as provided in § 35.24 to be an individual who--

(a) Is certified by the--

(1) American Board of Health Physics in Comprehensive Health Physics;

(2) American Board of Radiology;

(3) American Board of Nuclear Medicine;

(4) American Board of Science in Nuclear Medicine;

(5) Board of Pharmaceutical Specialties in Nuclear Pharmacy;

(6) American Board of Medical Physics in radiation oncology physics;

(7) Royal College of Physicians and Surgeons of Canada in nuclear medicine;

(8) American Osteopathic Board of Radiology; or

(9) American Osteopathic Board of Nuclear Medicine; or

(b) Has had classroom and laboratory training and experience as follows--

(1) 200 hours of classroom and laboratory training that includes--

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity;

(iv) Radiation biology; and

(v) Radiopharmaceutical chemistry; and

(2) One year of full time experience as a radiation safety technologist at a medical institution under the supervision of the individual identified as the Radiation Safety Officer on a Commission or Agreement State license that authorizes the medical use of byproduct material; or

(c) Is an authorized user identified on the licensee's license.

§ 35.910 Training for uptake, dilution, and excretion studies.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of a radiopharmaceutical in § 35.100(a) to be a physician who--

(a) Is certified in--

(1) Nuclear medicine by the American Board of Nuclear Medicine;

(2) Diagnostic radiology by the American Board of Radiology;

(3) Diagnostic radiology or radiology by the American Osteopathic Board of Radiology;

(4) Nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or

(5) American Osteopathic Board of Nuclear Medicine in nuclear medicine; or

(b) Has had classroom and laboratory training in basic radioisotope handling techniques applicable to the use of prepared radiopharmaceuticals, and supervised clinical experience as follows--

(1) 40 hours of classroom and laboratory training that includes--

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity;

(iv) Radiation biology; and

(v) Radiopharmaceutical chemistry; and

(2) 20 hours of supervised clinical experience under the supervision of an authorized user and that includes--

(i) Examining patients or human research subjects and reviewing their case histories to determine their suitability for radioisotope diagnosis, limitations, or contraindications;

(ii) Selecting the suitable radiopharmaceuticals and calculating and measuring the dosages;

(iii) Administering dosages to patients or human research subjects and using syringe radiation shields;

(iv) Collaborating with the authorized user in the interpretation of radioisotope test results; and

(v) Patient or human research subject follow up; or

(c) Has successfully completed a 6-month training program in nuclear medicine as part of a training program that has been approved by the Accreditation Council for Graduate Medical Education and that included classroom and laboratory training, work experience, and supervised clinical experience in all the topics identified in paragraph (b) of this section.

§ 35.920 Trainiq for imaging and localization studies.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of a radiopharmaceutical, generator, or reagent kit in § 35.200 (a) to be a physician who--

(a) Is certified in--

(1) Nuclear medicine by the American Board of Nuclear Medicine;

(2) Diagnostic radiology by the American Board of Radiology;

(3) Diagnostic radiology or radiology by the American Osteopathic Board of Radiology;

(4) Nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or

(5) American Osteopathic Board of Nuclear Medicine in nuclear medicine; or

(b) Has had classroom and laboratory training in basic radioisotope handling techniques applicable to the use of prepared radiopharmaceuticals, generators, and reagent kits, supervised work experience, and supervised clinical experience as follows--

(1) 200 hours of classroom and laboratory training that includes--

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity;

(iv) Radiopharmaceutical chemistry; and

(v) Radiation biology; and

(2) 500 hours of supervised work experience under the supervision of an authorized user that includes--

(i) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

(ii) Calibrating dose calibrators and diagnostic instruments and performing checks for proper operation of survey meters;

(iii) Calculating and safely preparing patient or human research subject dosages;

(iv) Using administrative controls to prevent the medical event of byproduct material;

(v) Using procedures to contain spilled byproduct material safely and using proper decontamination procedures; and

(vi) Eluting technetium-99m from generator systems, measuring and testing the eluate for molybdenum-99 and alumina contamination, and processing the eluate with reagent kits to prepare technetium-99m labeled radiopharmaceuticals; and

(3) 500 hours of supervised clinical experience under the supervision of an authorized user that includes--

(i) Examining patients or human research subjects and reviewing their case histories to determine their suitability for radioisotope diagnosis, limitations, or contraindications;

(ii) Selecting the suitable radiopharmaceuticals and calculating and measuring the dosages;

(iii) Administering dosages to patients or human research subjects and using syringe radiation shields;

(iv) Collaborating with the authorized user in the interpretation of radioisotope test results; and

(v) Patient or human research subject follow up; or

(c) Has successfully completed a 6-month training program in nuclear medicine that has been approved by the Accreditation Council for Graduate Medical Education and that included classroom and laboratory training, work experience, and supervised clinical experience in all the topics identified in paragraph (b) of this section.

§ 35.930 Training for therapeutic use of unsealed byproduct material.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of radiopharmaceuticals in § 35.300 to be a physician who--

(a) Is certified by--

(1) The American Board of Nuclear Medicine;

(2) The American Board of Radiology in radiology, therapeutic radiology, or radiation oncology;

(3) The Royal College of Physicians and Surgeons of Canada in nuclear medicine; or

(4) The American Osteopathic Board of Radiology after 1984; or

(b) Has had classroom and laboratory training in basic radioisotope handling techniques applicable to the use of therapeutic radiopharmaceuticals, and supervised clinical experience as follows--

(1) 80 hours of classroom and laboratory training that includes--

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity; and

(iv) Radiation biology; and

(2) Supervised clinical experience under the supervision of an authorized user at a medical institution that includes--

(i) Use of iodine-131 for diagnosis of thyroid function and the treatment of hyperthyroidism or cardiac dysfunction in 10 individuals; and

(ii) Use of iodine-131 for treatment of thyroid carcinoma in 3 individuals.

§ 35.932 Training for treatment of hyperthyroidism.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of only iodine-131 for the treatment of hyperthyroidism to be a physician with special experience in thyroid disease who has had classroom and laboratory training in basic radioisotope handling

techniques applicable to the use of iodine-131 for treating hyperthyroidism, and supervised clinical experience as follows--

(a) 80 hours of classroom and laboratory training that includes--

(1) Radiation physics and instrumentation;

(2) Radiation protection,

(3) Mathematics pertaining to the use and measurement of radioactivity; and

(4) Radiation biology; and

(b) Supervised clinical experience under the supervision of an authorized user that includes the use of iodine-131 for diagnosis of thyroid function, and the treatment of hyperthyroidism in 10 individuals.

§ 35.934 Training for treatment of thyroid carcinoma.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of only iodine-131 for the treatment of thyroid carcinoma to be a physician with special experience in thyroid disease who has had classroom and laboratory training in basic radioisotope handling techniques applicable to the use of iodine-131 for treating thyroid carcinoma, and supervised clinical experience as follows--

(a) 80 hours of classroom and laboratory training that includes--

(1) Radiation physics and instrumentation;

(2) Radiation protection;

(3) Mathematics pertaining to the use and measurement of radioactivity; and

(4) Radiation biology; and

(b) Supervised clinical experience under the supervision of an authorized user that includes the use of iodine-131 for the treatment of thyroid carcinoma in 3 individuals.

§ 35.940 Training for use of brachytherapy sources.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of a brachytherapy source listed in § 35.400 for therapy to be a physician who--

(a) Is certified in--

(1) Radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology;

(2) Radiation oncology by the American Osteopathic Board of Radiology;

(3) Radiology, with specialization in radiotherapy, as a British "Fellow of the Faculty of Radiology" or "Fellow of the Royal College of Radiology"; or

(4) Therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; or

(b) Is in the active practice of therapeutic radiology, has had classroom and laboratory training in radioisotope handling techniques applicable to the therapeutic use of brachytherapy sources, supervised work experience, and supervised clinical experience as follows--

(1) 200 hours of classroom and laboratory training that includes--

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity; and

(iv) Radiation biology;

(2) 500 hours of supervised work experience under the supervision of an authorized user at a medical institution that includes--

(i) Ordering, receiving, and unpacking radioactive materials safely and performing the related radiation surveys;

(ii) Checking survey meters for proper operation;

(iii) Preparing, implanting, and removing sealed sources;

(iv) Maintaining running inventories of material on hand;

(v) Using administrative controls to prevent a medical event involving byproduct material; and

(vi) Using emergency procedures to control byproduct material; and

(3) Three years of supervised clinical experience that includes one year in a formal training program approved by the Residency Review Committee for Radiology of the Accreditation Council for Graduate Medical Education or the Committee on Postdoctoral Training of the American Osteopathic Association, and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user at a medical institution that includes--

(i) Examining individuals and reviewing their case histories to determine their suitability for brachytherapy treatment, and any limitations or contraindications;

(ii) Selecting the proper brachytherapy sources and dose and method of administration;

(iii) Calculating the dose; and

(iv) Post-administration follow up and review of case histories in collaboration with the authorized user.

§ 35.941 Training for ophthalmic use of strontium-90.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of only strontium-90 for ophthalmic radiotherapy to be a physician who is in the active practice of therapeutic radiology or ophthalmology, and has had classroom and laboratory training in basic radioisotope handling techniques applicable to the use of strontium-90 for ophthalmic radiotherapy, and a period of supervised clinical training in ophthalmic radiotherapy as follows--

(a) 24 hours of classroom and laboratory training that includes--

(1) Radiation physics and instrumentation;

(2) Radiation protection;

(3) Mathematics pertaining to the use and measurement of radioactivity; and

(4) Radiation biology;

(b) Supervised clinical training in ophthalmic radiotherapy under the supervision of an authorized user at a medical institution that includes the use of strontium-90 for the ophthalmic treatment of five individuals that includes--

(1) Examination of each individual to be treated;

(2) Calculation of the dose to be administered;

(3) Administration of the dose; and

(4) Follow up and review of each individual's case history.

§ 35.950 Training for use of sealed sources for diagnosis.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of a sealed source in a device listed in § 35.500 to be a

physician, dentist, or podiatrist who--

(a) Is certified in--

(1) Radiology, diagnostic radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology;

(2) Nuclear medicine by the American Board of Nuclear Medicine;

(3) Diagnostic radiology or radiology by the American Osteopathic Board of Radiology; or

(4) Nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or

(b) Has had 8 hours of classroom and laboratory training in basic radioisotope handling techniques specifically applicable to the use of the device that includes--

(1) Radiation physics, mathematics pertaining to the use and measurement of radioactivity, and instrumentation;

(2) Radiation biology;

(3) Radiation protection; and

(4) Training in the use of the device for the uses requested.

§ 35.960 Training for use of therapeutic medical devices.

[Top of File]

Except as provided in § 35.57, the licensee shall require the authorized user of a sealed source listed in § 35.600 to be a physician who--

(a) Is certified in--

(1) Radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology;

(2) Radiation oncology by the American Osteopathic Board of Radiology;

(3) Radiology, with specialization in radiotherapy, as a British "Fellow of the Faculty of Radiology" or "Fellow of the Royal College of Radiology"; or

(4) Therapeutic radiology by the Canadian Royal College of Physicians and Surgeons; or

(b) Is in the active practice of therapeutic radiology, and has had classroom and laboratory training in basic radioisotope techniques applicable to the use of a sealed source in a therapeutic medical device, supervised work experience, and supervised clinical experience as follows--

(1) 200 hours of classroom and laboratory training that includes--

(i) Radiation physics and instrumentation;

(ii) Radiation protection;

(iii) Mathematics pertaining to the use and measurement of radioactivity; and

(iv) Radiation biology;

(2) 500 hours of supervised work experience under the supervision of an authorized user at a medical institution that includes--

(i) Review of the full calibration measurements and periodic spot-checks;

(ii) Preparing treatment plans and calculating treatment times;

(iii) Using administrative controls to prevent medical events;

(iv) Implementing emergency procedures to be followed in the event of the abnormal operation of the medical device or console; and

(v) Checking and using survey meters; and

(3) Three years of supervised clinical experience that includes one year in a formal training program approved by the Residency Review Committee for Radiology of the Accreditation Council for Graduate Medical Education or the Committee on Postdoctoral Training of the American Osteopathic Association and an additional two years of clinical experience in therapeutic radiology under the supervision of an authorized user at a medical institution that includes--

(i) Examining individuals and reviewing their case histories to determine their suitability for teletherapy, remote afterloader, or gamma stereotactic radiosurgery treatment, and any limitations or contraindications;

(ii) Selecting the proper dose and how it is to be administered;

(iii) Calculating the doses and collaborating with the authorized user in the review of patients' or human research subjects' progress and consideration of the need to modify originally prescribed doses as warranted by patients' or human research subjects' reaction to radiation; and

(iv) Post-administration follow up and review of case histories.

§ 35.961 Training for authorized medical physicist.

[Top of File]

The licensee shall require the authorized medical physicist to be an individual who--

(a) Is certified by the American Board of Radiology in--

(1) Therapeutic radiological physics;

(2) Roentgen ray and gamma ray physics;

(3) X-ray and radium physics; or

(4) Radiological physics; or

(b) Is certified by the American Board of Medical Physics in radiation oncology physics; or

(c) Holds a master's or doctor's degree in physics, biophysics, radiological physics, or health physics, and has completed 1 year of full time training in therapeutic radiological physics and an additional year of full time work experience under the supervision of a medical physicist at a medical institution that includes the tasks listed in §§ 35.67, 35.632, 35.633, 35.635, 35.642, 35.643, 35.644, 35.645 and 35.652, as applicable.

§ 35.980 Training for an authorized nuclear pharmacist.

[Top of File]

The licensee shall require the authorized nuclear pharmacist to be a pharmacist who--

(a) Has current board certification as a nuclear pharmacist by the Board of Pharmaceutical Specialties; or

(b)(1) Has completed 700 hours in a structured educational program consisting of both--

(i) Didactic training in the following areas:

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity;

(D) Chemistry of byproduct material for medical use; and

(E) Radiation biology; and

(ii) Supervised experience in a nuclear pharmacy involving the following--

(A) Shipping, receiving, and performing related radiation surveys;

(B) Using and performing checks for proper operation of dose calibrators, survey meters, and, if appropriate, instruments used to measure alpha- or beta-emitting radionuclides;

(C) Calculating, assaying, and safely preparing dosages for patients or human research subjects;

(D) Using administrative controls to avoid mistakes in the administration of byproduct material;

(E) Using procedures to prevent or minimize contamination and using proper decontamination procedures; and

(2) Has obtained written attestation, signed by a preceptor authorized nuclear pharmacist, that the above training has been satisfactorily completed and that the individual has achieved a level of competency sufficient to independently operate a nuclear pharmacy.

[70 FR 16367, Mar. 30, 2005]

§ 35.981 Training for experienced nuclear pharmacists.

[Top of File]

A licensee may apply for and must receive a license amendment identifying an experienced nuclear pharmacist as an authorized nuclear pharmacist before it allows this individual to work as an authorized nuclear pharmacist. A pharmacist who has completed a structured educational program as specified in § 35.980(b)(1) before December 2, 1994, and who is working in a nuclear pharmacy would qualify as an experienced nuclear pharmacist. An experienced nuclear pharmacist need not comply with the requirements for a preceptor statement (§ 35.980(b)(2)) and recentness of training (§ 35.59) to qualify as an authorized nuclear pharmacist.

Subpart K--Other Medical Uses of Byproduct Material or Radiation From Byproduct Material

[Top of File]

§ 35.1000 Other medical uses of byproduct material or radiation from byproduct material.

A licensee may use byproduct material or a radiation source approved for medical use which is not specifically addressed in subparts D through H of this part if--

(a) The applicant or licensee has submitted the information required by § 35.12(b) through (d); and

(b) The applicant or licensee has received written approval from the Commission in a license or license amendment and uses the material in accordance with the regulations and specific conditions the Commission considers necessary for the medical use of the material.

Subpart L--Records

[Top of File]

§ 35.2024 Records of authority and responsibilities for radiation protection programs.

(a) A licensee shall retain a record of actions taken by the licensee's management in accordance with § 35.24(a) for 5 years. The record must include a summary of the actions taken and a signature of licensee management.

(b) The licensee shall retain a copy of both authority, duties, and responsibilities of the Radiation Safety Officer as required by § 35.24(e), and a signed copy of each Radiation Safety Officer's agreement to be responsible for implementing the radiation safety program, as required by § 35.24(b), for the duration of the license. The records must include the signature of the Radiation Safety Officer and licensee management.

§ 35.2026 Records of radiation protection program changes.

[Top of File]

A licensee shall retain a record of each radiation protection program change made in accordance with § 35.26(a) for 5 years. The record must include a copy of the old and new procedures; the effective date of the change; and the signature of the licensee management that reviewed and approved the change.

§ 35.2040 Records of written directives.

[Top of File]

A licensee shall retain a copy of each written directive as required by § 35.40 for 3 years.

§ 35.2041 Records for procedures for administrations requiring a written directive.

[Top of File]

A licensee shall retain a copy of the procedures required by § 35.41(a) for the duration of the license.

§ 35.2060 Records of calibrations of instruments used to measure the activity of unsealed byproduct material.

[Top of File]

A licensee shall maintain a record of instrument calibrations required by § 35.60 for 3 years. The records must include the model and serial number of the instrument, the date of the calibration, the results of the calibration, and the name of the individual who performed the calibration.

§ 35.2061 Records of radiation survey instrument calibrations.

[Top of File]

A licensee shall maintain a record of radiation survey instrument calibrations required by § 35.61 for 3 years. The record must include the model and serial number of the instrument, the date of the calibration, the results of the calibration, and the name of the individual who performed the calibration.

§ 35.2063 Records of dosages of unsealed byproduct material for medical use.

[Top of File]

(a) A licensee shall maintain a record of dosage determinations required by § 35.63 for 3 years.

(b) The record must contain--

(1) The radiopharmaceutical;

(2) The patient's or human research subject's name, or identification number if one has been assigned;

(3) The prescribed dosage, the determined dosage, or a notation that the total activity is less than 1.1 MBq (30 µCi);

(4) The date and time of the dosage determination; and

(5) The name of the individual who determined the dosage.

§ 35.2067 Records of leaks tests and inventory of sealed sources and brachytherapy sources.

[Top of File]

(a) A licensee shall retain records of leak tests required by § 35.67(b) for 3 years. The records must include the model number, and serial number if one has been assigned, of each source tested; the identity of each source by radionuclide and its estimated activity; the results of the test; the date of the test; and the name of the individual who performed the test.

(b) A licensee shall retain records of the semi-annual physical inventory of sealed sources and brachytherapy sources required by § 35.67 (g) for 3 years. The inventory records must contain the model number of each source, and serial number if one has been assigned, the identity of each source by radionuclide and its nominal activity, the location of each source, and the name of the individual who performed the inventory.

§ 35.2070 Records of surveys for ambient radiation exposure rate.

[Top of File]

A licensee shall retain a record of each survey required by § 35.70 for 3 years. The record must include the date of the survey, the results of the survey, the instrument used to make the survey, and the name of the individual who performed the survey.

§ 35.2075 Records of the release of individuals containing unsealed byproduct material or implants containing byproduct material.

[Top of File]

(a) A licensee shall retain a record of the basis for authorizing the release of an individual in accordance with § 35.75, if the total effective dose equivalent is calculated by--

(1) Using the retained activity rather than the activity administered;

(2) Using an occupancy factor less than 0.25 at 1 meter;

(3) Using the biological or effective half-life; or

(4) Considering the shielding by tissue.

(b) A licensee shall retain a record that the instructions required by § 35.75(b) were provided to a breast-feeding female if the radiation dose to the infant or child from continued breast-feeding could result in a total effective dose equivalent exceeding 5 mSv (0.5 rem).

(c) The records required by paragraphs (a) and (b) of this section must be retained for 3 years after the date of release of the individual.

§ 35.2080 Records of mobile medical services.

[Top of File]

(a) A licensee shall retain a copy of each letter that permits the use of byproduct material at a client's address, as required by § 35.80(a)(1). Each letter must clearly delineate the authority and responsibility of the licensee and the client and must be retained for 3 years after the last provision of service.

(b) A licensee shall retain the record of each survey required by § 35.80(a)(4) for 3 years. The record must include the date of the survey, the results of the survey, the instrument used to make the survey, and the name of the individual who performed the survey.

§ 35.2092 Records of decay-in-storage.

[Top of File]

A licensee shall maintain records of the disposal of licensed materials, as required by § 35.92, for 3 years. The record must include the date of the disposal, the survey instrument used, the background radiation level, the radiation level measured at the surface of each waste container, and the name of the individual who performed the survey.

§ 35.2204 Records of molybdenum-99, strontium-82, and strontium-85 concentrations.

[Top of File]

A licensee shall maintain a record of the molybdenum-99 concentration or strontium-82 and strontium-85 concentration tests required by § 35.204(b) and (c) for 3 years. The record must include:

(a) For each measured elution of technetium-99m, the ratio of the measures expressed as kilobecquerel of molybdenum-99 per megabecquerel of technetium-99m (or microcuries of molybdenum per millicurie of technetium), the time and date of the measurement, and the name of the individual who made the measurement; or

(b) For each measured elution of rubidium-82, the ratio of the measures expressed as kilobecquerel of strontium-82 per megabecquerel of rubidium-82 (or microcuries of strontium-82 per millicurie of rubidium), kilobecquerel of strontium-85 per megabecquerel of rubidium-82 (or microcuries of strontium-85 per millicurie of rubidium), the time and date of the measurement, and the name of the individual who made the measurement.

[72 FR 55932 Oct. 1, 2007]

§ 35.2310 Records of safety instruction.

[Top of File]

A licensee shall maintain a record of safety instructions required by §§ 35.310, 35.410, and 35.610 for 3 years. The record must include a list of the topics covered, the date of the instruction, the name(s) of the attendee(s), and the name(s) of the individual(s) who provided the instruction.

§ 35.2404 Records of surveys after source implant and removal.

[Top of File]

A licensee shall maintain a record of the surveys required by §§ 35.404 and 35.604 for 3 years. Each record must include the date and results of the survey, the survey instrument used, and the name of the individual who made the survey.

§ 35.2406 Records of brachytherapy source accountability.

[Top of File]

(a) A licensee shall maintain a record of brachytherapy source accountability required by § 35.406 for 3 years.

(b) For temporary implants, the record must include--

(1) The number and activity of sources removed from storage, the time and date they were removed from storage, the name of the individual who removed them from storage, and the location of use; and

(2) The number and activity of sources returned to storage, the time and date they were returned to storage, and the name of the individual who returned them to storage.

(c) For permanent implants, the record must include--

(1) The number and activity of sources removed from storage, the date they were removed from storage, and the name of the individual who removed them from storage;

(2) The number and activity of sources not implanted, the date they were returned to storage, and the name of the individual who returned them to storage; and

(3) The number and activity of sources permanently implanted in the patient or human research subject.

§ 35.2432 Records of calibration measurements of brachytherapy sources.

[Top of File]

(a) A licensee shall maintain a record of the calibrations of brachytherapy sources required by § 35.432 for 3 years after the last use of the source.

(b) The record must include—

(1) The date of the calibration;

(2) The manufacturer's name, model number, and serial number for the source and the instruments used to calibrate the source;

(3) The source output or activity;

(4) The source positioning accuracy within the applicators; and

(5) The name of the individual, the source manufacturer, or the calibration laboratory that performed the calibration.

[67 FR 20370, Apr. 24, 2002, as amended at 68 FR 19326, Apr. 21, 2003]

§ 35.2433 Records of decay of strontium-90 sources for ophthalmic treatments.

[Top of File]

(a) A licensee shall maintain a record of the activity of a strontium-90 source required by § 35.433 for the life of the source.

(b) The record must include--

(1) The date and initial activity of the source as determined under § 35.432; and

(2) For each decay calculation, the date and the source activity as determined under § 35.433.

§ 35.2605 Records of installation, maintenance, adjustment, and repair of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units.

[Top of File]

A licensee shall retain a record of the installation, maintenance, adjustment, and repair of remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units as required by § 35.605 for 3 years. For each installation, maintenance, adjustment and repair, the record must include the date, description of the service, and name(s) of the individual(s) who performed the work.

§ 35.2610 Records of safety procedures

[Top of File]

A licensee shall retain a copy of the procedures required by §§ 35.610(a)(4) and (d)(2) until the licensee no longer possesses the remote afterloader, teletherapy unit, or gamma stereotactic radiosurgery unit..

§ 35.2630 Records of dosimetry equipment used with remote afterloader units, teletherapy units, and gamma stereotactic radiosurgery units.

[Top of File]

(a) A licensee shall retain a record of the calibration, intercomparison, and comparisons of its dosimetry equipment done in accordance with § 35.630 for the duration of the license.

(b) For each calibration, intercomparison, or comparison, the record must include--

(1) The date;

(2) The manufacturer's name, model numbers and serial numbers of the instruments that were calibrated, intercompared, or compared as required by paragraphs (a) and (b) of § 35.630;

(3) The correction factor that was determined from the calibration or comparison or the apparent correction factor that was determined from an intercomparison; and

(4) The names of the individuals who performed the calibration, intercomparison, or comparison.

§ 35.2632 Records of teletherapy, remote afterloader, and gamma stereotactic radiosurgery full calibrations.

[Top of File]

(a) A licensee shall maintain a record of the teletherapy unit, remote afterloader unit, and gamma stereotactic radiosurgery unit full calibrations required by §§ 35.632, 35.633, and 35.635 for 3 years.

(b) The record must include--

(1) The date of the calibration;

(2) The manufacturer's name, model number, and serial number of the teletherapy, remote afterloader, and gamma stereotactic radiosurgery unit(s), the source(s), and the instruments used to calibrate the unit(s);

(3) The results and an assessment of the full calibrations;

(4) The results of the autoradiograph required for low dose-rate remote afterloader units; and

(5) The signature of the authorized medical physicist who performed the full calibration.

§ 35.2642 Records of periodic spot-checks for teletherapy units.

[Top of File]

(a) A licensee shall retain a record of each periodic spot-check for teletherapy units required by § 35.642 for 3 years.

(b) The record must include--

(1) The date of the spot-check;

(2) The manufacturer's name, model number, and serial number of the teletherapy unit, source and instrument used to measure the output of the teletherapy unit;

(3) An assessment of timer linearity and constancy;

(4) The calculated on-off error;

(5) A determination of the coincidence of the radiation field and the field indicated by the light beam localizing device;

(6) The determined accuracy of each distance measuring and localization device;

(7) The difference between the anticipated output and the measured output;

(8) Notations indicating the operability of each entrance door electrical interlock, each electrical or mechanical stop, each source exposure indicator light, and the viewing and intercom system and doors; and

(9) The name of the individual who performed the periodic spot-check and the signature of the authorized medical physicist who reviewed the record of the spot-check.

(c) A licensee shall retain a copy of the procedures required by § 35.642(b) until the licensee no longer possesses the teletherapy unit.

§ 35.2643 Records of periodic spot-checks for remote afterloader units.

[Top of File]

(a) A licensee shall retain a record of each spot-check for remote afterloader units required by § 35.643 for 3 years.

(b) The record must include, as applicable--

(1) The date of the spot-check;

(2) The manufacturer's name, model number, and serial number for the remote afterloader unit and source;

(3) An assessment of timer accuracy;

(4) Notations indicating the operability of each entrance door electrical interlock, radiation monitors, source exposure indicator lights, viewing and intercom systems, and clock and decayed source activity in the unit's computer; and

(5) The name of the individual who performed the periodic spot-check and the signature of the authorized medical physicist who reviewed the record of the spot-check.

(c) A licensee shall retain a copy of the procedures required by § 35.643(b) until the licensee no longer possesses the remote afterloader unit.

§ 35.2645 Records of periodic spot-checks for gamma stereotactic radiosurgery units.

[Top of File]

(a) A licensee shall retain a record of each spot-check for gamma stereotactic radiosurgery units required by § 35.645 for 3 years.

(b) The record must include--

(1) The date of the spot-check;

(2) The manufacturer's name, model number, and serial number for the gamma stereotactic radiosurgery unit and the instrument used to measure the output of the unit;

(3) An assessment of timer linearity and accuracy;

(4) The calculated on-off error;

(5) A determination of trunnion centricity;

(6) The difference between the anticipated output and the measured output;

(7) An assessment of source output against computer calculations;

(8) Notations indicating the operability of radiation monitors, helmet microswitches, emergency timing circuits, emergency off buttons, electrical interlocks, source exposure indicator lights, viewing and intercom systems, timer termination, treatment table retraction mechanism, and stereotactic frames and localizing devices (trunnions); and

(9) The name of the individual who performed the periodic spot-check and the signature of the authorized medical physicist who reviewed the record of the spot-check.

(c) A licensee shall retain a copy of the procedures required by § 35.645(b) until the licensee no longer possesses the gamma stereotactic radiosurgery unit.

§ 35.2647 Records of additional technical requirements for mobile remote afterloader units.

[Top of File]

(a) A licensee shall retain a record of each check for mobile remote afterloader units required by § 35.647 for 3 years.

(b) The record must include--

(1) The date of the check;

(2) The manufacturer's name, model number, and serial number of the remote afterloader unit;

(3) Notations accounting for all sources before the licensee departs from a facility;

(4) Notations indicating the operability of each entrance door electrical interlock, radiation monitors, source exposure indicator lights, viewing and intercom system, applicators, source transfer tubes, and transfer tube applicator interfaces, and source positioning accuracy; and

(5) The signature of the individual who performed the check.

§ 35.2652 Records of surveys of therapeutic treatment units.

[Top of File]

(a) A licensee shall maintain a record of radiation surveys of treatment units made in accordance with § 35.652 for the duration of use of the unit.

(b) The record must include--

(1) The date of the measurements;

(2) The manufacturer's name, model number and serial number of the treatment unit, source, and instrument used to measure radiation levels;

(3) Each dose rate measured around the source while the unit is in the off position and the average of all measurements; and

(4) The signature of the individual who performed the test.

§ 35.2655 Records of 5-year inspection for teletherapy and gamma stereotactic radiosurgery units.

[Top of File]

(a) A licensee shall maintain a record of the 5-year inspections for teletherapy and gamma stereotactic radiosurgery units required by § 35.655 for the duration of use of the unit.

(b) The record must contain--

(1) The inspector's radioactive materials license number;

(2) The date of inspection;

(3) The manufacturer's name and model number and serial number of both the treatment unit and source;

(4) A list of components inspected and serviced, and the type of service; and

(5) The signature of the inspector.

Subpart M--Reports

[Top of File]

§ 35.3045 Report and notification of a medical event.

(a) A licensee shall report any event, except for an event that results from patient intervention, in which the administration of byproduct material or radiation from byproduct material results in--

(1) A dose that differs from the prescribed dose or dose that would have resulted from the prescribed dosage by more than 0.05 Sv (5 rem) effective dose equivalent, 0.5 Sv (50 rem) to an organ or tissue, or 0.5 Sv (50 rem) shallow dose equivalent to the skin; and

(i) The total dose delivered differs from the prescribed dose by 20 percent or more;

(ii) The total dosage delivered differs from the prescribed dosage by 20 percent or more or falls outside the prescribed dosage range; or

(iii) The fractionated dose delivered differs from the prescribed dose, for a single fraction, by 50 percent or more.

(2) A dose that exceeds 0.05 Sv (5 rem) effective dose equivalent, 0.5 Sv (50 rem) to an organ or tissue, or 0.5 Sv (50 rem) shallow dose equivalent to the skin from any of the following--

(i) An administration of a wrong radioactive drug containing byproduct material;

(ii) An administration of a radioactive drug containing byproduct material by the wrong route of administration;

(iii) An administration of a dose or dosage to the wrong individual or human research subject;

(iv) An administration of a dose or dosage delivered by the wrong mode of treatment; or

(v) A leaking sealed source.

(3) A dose to the skin or an organ or tissue other than the treatment site that exceeds by 0.5 Sv (50 rem) to an organ or tissue and 50 percent or more of the dose expected from the administration defined in the written directive (excluding, for permanent implants, seeds that were implanted in the correct site but migrated outside the treatment site).

(b) A licensee shall report any event resulting from intervention of a patient or human research subject in which the administration of byproduct material or radiation from byproduct material results or will result in unintended permanent functional damage to an organ or a physiological system, as determined by a physician.

(c) The licensee shall notify by telephone the NRC Operations Center[3] no later than the next calendar day after discovery of the medical event.

(d) By an appropriate method listed in § 30.6(a) of this chapter, the licensee shall submit a written report to the appropriate NRC Regional Office listed in § 30.6 of this chapter within 15 days after discovery of the medical event.

(1) The written report must include--

(i) The licensee's name;

(ii) The name of the prescribing physician;

(iii) A brief description of the event;

(iv) Why the event occurred;

(v) The effect, if any, on the individual(s) who received the administration;

(vi) What actions, if any, have been taken or are planned to prevent recurrence; and

(vii) Certification that the licensee notified the individual (or the individual's responsible relative or guardian), and if not, why not.

(2) The report may not contain the individual's name or any other information that could lead to identification of the individual.

(e) The licensee shall provide notification of the event to the referring physician and also notify the individual who is the subject of the medical event no later than 24 hours after its discovery, unless the referring physician personally informs the licensee either that he or she will inform the individual or that, based on medical judgment, telling the individual would be harmful. The licensee is not required to notify the individual without first consulting the referring physician. If the referring physician or the affected individual cannot be reached within 24 hours, the licensee shall notify the individual as soon as possible thereafter. The licensee may not delay any appropriate medical care for the individual, including any necessary remedial care as a result of the medical event, because of any delay in notification. To meet the requirements of this paragraph, the notification of the individual who is the subject of the medical event may be made instead to that individual's responsible relative or guardian. If a verbal notification is made, the licensee shall inform the individual, or appropriate responsible relative or guardian, that a written description of the event can be obtained from the licensee upon request. The licensee shall provide such a written description if requested.

(f) Aside from the notification requirement, nothing in this section affects any rights or duties of licensees and physicians in relation to each other, to individuals affected by the medical event, or to that individual's responsible relatives or guardians.

(g) A licensee shall:

(1) Annotate a copy of the report provided to the NRC with the:

(i) Name of the individual who is the subject of the event; and

(ii) Social security number or other identification number, if one has been assigned, of the individual who is the subject of the event; and

(2) Provide a copy of the annotated report to the referring physician, if other than the licensee, no later than 15 days after the discovery of the event.

[68 FR 58805, Oct. 10, 2003]

[3] The commercial telephone number of the NRC Operations Center is (301) 951-0550.

§ 35.3047 Report and notification of a dose to an embryo/fetus or a nursing child.

[Top of File]

(a) A licensee shall report any dose to an embryo/fetus that is greater than 50 mSv (5 rem) dose equivalent that is a result of an administration of byproduct material or radiation from byproduct material to a pregnant individual unless the dose to the embryo/fetus was specifically approved, in advance, by the authorized user.

(b) A licensee shall report any dose to a nursing child that is a result of an administration of byproduct material to a breast-feeding individual that--

(1) Is greater than 50 mSv (5 rem) total effective dose equivalent; or

(2) Has resulted in unintended permanent functional damage to an organ or a physiological system of the child, as determined by a physician.

(c) The licensee shall notify by telephone the NRC Operations Center no later than the next calendar day after discovery of a dose to the embryo/fetus or nursing child that requires a report in paragraphs (a) or (b) in this section.

(d) By an appropriate method listed in § 30.6(a) of this chapter, the licensee shall submit a written report to the appropriate NRC Regional Office listed in § 30.6 of this chapter within 15 days after discovery of a dose to the embryo/fetus or nursing child that requires a report in paragraphs (a) or (b) in this section.

(1) The written report must include--

(i) The licensee's name;

(ii) The name of the prescribing physician;

(iii) A brief description of the event;

(iv) Why the event occurred;

(v) The effect, if any, on the embryo/fetus or the nursing child;

(vi) What actions, if any, have been taken or are planned to prevent recurrence; and

(vii) Certification that the licensee notified the pregnant individual or mother (or the mother's or child's responsible relative or guardian), and if not, why not.

(2) The report must not contain the individual's or child's name or any other information that could lead to identification of the individual or child.

(e) The licensee shall provide notification of the event to the referring physician and also notify the pregnant individual or mother, both hereafter referred to as the mother, no later than 24 hours after discovery of an event that would require reporting under paragraph (a) or (b) of this section, unless the referring physician personally informs the licensee either that he or she will inform the mother or that, based on medical judgment, telling the mother would be harmful. The licensee is not required to notify the mother without first consulting with the referring physician. If the referring physician or mother cannot be reached within 24 hours, the licensee shall make the appropriate notifications as soon as possible thereafter. The licensee may not delay any appropriate medical care for the embryo/fetus or for the nursing child, including any necessary remedial care as a result of the event, because of any delay in notification. To meet the requirements of this paragraph, the notification may be made to the mother's or child's responsible relative or guardian instead of the mother. If a verbal notification is made, the licensee shall inform the mother, or the mother's or child's responsible relative or guardian, that a written description of the event can be obtained from the licensee upon request. The licensee shall provide such a written description if requested.

(f) A licensee shall:

(1) Annotate a copy of the report provided to the NRC with the:

(i) Name of the pregnant individual or the nursing child who is the subject of the event; and

(ii) Social security number or other identification number, if one has been assigned, of the pregnant individual or the nursing child who is the subject of the event; and

(2) Provide a copy of the annotated report to the referring physician, if other than the licensee, no later than 15 days after the discovery of the event.

[68 FR 58805, Oct. 10, 2003]

§ 35.3067 Report of a leaking source.

[Top of File]

A licensee shall file a report within 5 days if a leak test required by § 35.67 reveals the presence of 185 Bq (0.005 •Ci) or more of removable contamination. The report must be filed with the appropriate NRC Regional Office listed in § 30.6 of this chapter, by an appropriate method listed in § 30.6(a) of this chapter, with a copy to the Director, Office of Federal and State Materials and Environmental Management Programs. The written report must include the model number and serial number, if assigned, of the leaking source; the radionuclide and its estimated activity; the results of the test; the date of the test; and the action taken.

[68 FR 58805, Oct. 10, 2003; 73 FR 5720, Jan. 31, 2008]

Subpart N--Enforcement

[Top of File]

§ 35.4001 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued under those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under Section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued under the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

§ 35.4002 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of Section 223, all the regulations in 10 CFR part 35 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in 10 CFR part 35 that are not issued under subsections 161b, 161i, or 161o for the purposes of Section 223 are as follows: §§ 35.1, 35.2, 35.7, 35.8, 35.12, 35.15, 35.18, 35.19, 35.65, 35.100, 35.200, 35.300, 35.4001, and 35.4002.

PART 36--LICENSES AND RADIATION SAFETY REQUIREMENTS FOR IRRADIATORS

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 36.1 Purpose and scope.

(a) This part contains requirements for the issuance of a license authorizing the use of sealed sources containing radioactive materials in irradiators used to irradiate objects or materials using gamma radiation. This part also contains radiation safety requirements for operating irradiators. The requirements of this part are in addition to other requirements of this chapter. In particular, the provisions of parts 19, 20, 21, 30, 71, 170, and 171 of this chapter apply to applications and licenses subject to this part. Nothing in this part relieves the licensee from complying with other applicable Federal, State and local regulations governing the siting, zoning, land use, and building code requirements for industrial facilities.

(b) The regulations in this part apply to panoramic irradiators that have either dry or wet storage of the radioactive sealed sources and to underwater irradiators in which both the source and the product being irradiated are under water. Irradiators whose dose rates exceed 5 grays (500 rads) per hour at 1 meter from the radioactive sealed sources in air or in water, as applicable for the irradiator type, are covered by this part.

(c) The regulations in this part do not apply to self-contained dry-source-storage irradiators (those in which both the source and the area subject to irradiation are contained within a device and are not accessible by personnel), medical radiology or teletherapy, radiography (the irradiation of materials for nondestructive testing purposes), gauging, or open-field (agricultural) irradiations.

§ 36.2 Definitions.

[Top of File]

Annually means either (1) at intervals not to exceed 1 year or (2) once per year, at about the same time each year (plus or minus 1 month).

Doubly encapsulated sealed source means a sealed source in which the radioactive material is sealed within a capsule and that capsule is sealed within another capsule.

Irradiator means a facility that uses radioactive sealed sources for the irradiation of objects or materials and in which radiation dose rates exceeding 5 grays (500 rads) per hour exist at 1 meter from the sealed radioactive sources in air or water, as applicable for the irradiator type, but does not include irradiators in which both the sealed source and the area subject to irradiation are contained within a device and are not accessible to personnel.

Irradiator operator means an individual who has successfully completed the training and testing described in § 36.51 and is authorized by the terms of the license to operate the irradiator without a supervisor present.

Panoramic dry-source-storage irradiator means an irradiator in which the irradiations occur in air in areas potentially accessible to personnel and in which the sources are stored in shields made of solid materials. The term includes beam-type dry-source-storage irradiators in which only a narrow beam of radiation is produced for performing irradiations.

Panoramic irradiator means an irradiator in which the irradiations are done in air in areas potentially accessible to personnel. The term includes beam-type irradiators.

Panoramic wet-source-storage irradiator means an irradiator in which the irradiations occur in air in areas potentially accessible to personnel and in which the sources are stored under water in a storage pool.

Pool irradiator means any irradiator at which the sources are stored or used in a pool of water including panoramic wet-source-storage irradiators and underwater irradiators.

Product conveyor system means a system for moving the product to be irradiated to, from, and within the area where irradiation takes place.

Radiation room means a shielded room in which irradiations take place. Underwater irradiators do not have radiation rooms.

Radiation safety officer means an individual with responsibility for the overall radiation safety program at the facility.

Sealed source means any byproduct material that is used as a source of radiation and is encased in a capsule designed to prevent leakage or escape of the byproduct material.

Seismic area means any area where the probability of a horizontal acceleration in rock of more than 0.3 times the acceleration of gravity in 250 years is greater than 10 percent, as designated by the U.S. Geological Survey.

Underwater irradiator means an irradiator in which the sources always remain shielded under water and humans do not have access to the sealed sources or the space subject to irradiation without entering the pool.

§ 36.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

§ 36.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0158.

(b) The approved information collection requirements contained in this part appear in §§ 36.11, 36.13, 36.17, 36.19, 36.21, 36.53, 36.69, 36.81, and 36.83.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 36.11, NRC Form 313 is approved under control number 3150-0120.

(2) [Reserved]

[58 FR 7728, Feb. 9, 1993, as amended at 62 FR 52187, Oct. 6, 1997]

Subpart B--Specific Licensing Requirements

[Top of File]

§ 36.11 Application for a specific license.

A person, as defined in § 30.4 of this chapter, may file an application for a specific license authorizing the use of sealed sources in an irradiator on Form NRC 313, "Application for Material License." Each application for a license, other than a license exempted from part 170 of this chapter, must be accompanied by the fee prescribed in § 170.31 of this chapter. The application and one copy must be sent to the appropriate NRC Regional Office listed in appendix D to part 20 of this chapter.

§ 36.13 Specific licenses for irradiators.

[Top of File]

The Commission will approve an application for a specific license for the use of licensed material in an irradiator if the applicant meets the requirements contained in this section.

(a) The applicant shall satisfy the general requirements specified in § 30.33 of this chapter and the requirements contained in this part.

(b) The application must describe the training provided to irradiator operators including--

(1) Classroom training;

(2) On-the-job or simulator training;

(3) Safety reviews;

(4) Means employed by the applicant to test each operator's understanding of the Commission's regulations and licensing requirements and the irradiator operating and emergency procedures; and

(5) Minimum training and experience of personnel who may provide training.

(c) The application must include an outline of the written operating and emergency procedures listed in § 36.53 that describes the radiation safety aspects of the procedures.

(d) The application must describe the organizational structure for managing the irradiator, specifically the radiation safety responsibilities and authorities of the radiation safety officer and those management personnel who have important radiation safety responsibilities or authorities. In particular, the application must specify who, within the management structure, has the authority to stop unsafe operations. The application must also describe the training and experience required for the position of radiation safety officer.

(e) The application must include a description of the access control systems required by § 36.23, the radiation monitors required by § 36.29, the method of detecting leaking sources required by § 36.59 including the sensitivity of the method, and a diagram of the facility that shows the locations of all required interlocks and radiation monitors.

(f) If the applicant intends to perform leak testing of dry-source-storage sealed sources, the applicant shall establish procedures for leak testing and submit a description of these procedures to the Commission. The description must include the--

(1) Instruments to be used;

(2) Methods of performing the analysis; and

(3) Pertinent experience of the individual who analyzes the samples.

(g) If licensee personnel are to load or unload sources, the applicant shall describe the qualifications and training of the personnel and the procedures to be used. If the applicant intends to contract for source loading or unloading at its facility, the loading or unloading must be done by an organization specifically authorized by the Commission or an Agreement State to load or unload irradiator sources.

(h) The applicant shall describe the inspection and maintenance checks, including the frequency of the checks required by § 36.61.

§ 36.15 Start of construction.

[Top of File]

The applicant may not begin construction of a new irradiator prior to the submission to NRC of both an application for a license for the irradiator and the fee required by § 170.31. As used in this section, the term "construction" includes the construction of any portion of the permanent irradiator structure on the site but does not include: Engineering and design work, purchase of a site, site surveys or soil testing, site preparation, site excavation, construction of warehouse or auxiliary structures, and other similar tasks. Any activities undertaken prior to the issuance of a license are entirely at the risk of the applicant and have no bearing on the issuance of a license with respect to the requirements of the Atomic Energy Act of 1954, as amended, and rules, regulations, and orders issued under the Act.

§ 36.17 Applications for exemptions.

[Top of File]

(a) The Commission may, upon application of any interested person or upon its own initiative, grant any exemptions from the requirements in this part that it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

(b) Any application for a license or for amendment of a license authorizing use of a teletherapy-type unit for irradiation of materials or objects may include proposed alternatives for the requirements of this part. The Commission will approve the proposed alternatives if the applicant provides adequate rationale for the proposed alternatives and demonstrates that they are likely to provide an adequate level of safety for workers and the public.

§ 36.19 Request for written statements.

[Top of File]

(a) After the filing of the original application, the Commission may request further information necessary to enable the Commission to determine whether the application should be granted or denied.

(b) Each license is issued with the condition that the licensee will, at any time before expiration of the license, upon the Commission's request, submit written statements to enable the Commission to determine whether the license should be modified, suspended, or revoked.

Subpart C--Design and Performance Requirements for Irradiators

[Top of File]

§ 36.21 Performance criteria for sealed sources.

(a) *Requirements*. Sealed sources installed after July 1, 1993:

(1) Must have a certificate of registration issued under 10 CFR 32.210;

(2) Must be doubly encapsulated;

(3) Must use radioactive material that is as nondispersible as practical and that is as insoluble as practical if the source is used in a wet-source-storage or wet-source-change irradiator;

(4) Must be encapsulated in a material resistant to general corrosion and to localized corrosion, such as 316L stainless steel or other material with equivalent resistance if the sources are for use in irradiator pools; and

(5) In prototype testing of the sealed source, must have been leak tested and found leak-free after each of the tests described in paragraphs (b) through (g) of this section.

(b) *Temperature*. The test source must be held at -40ºC for 20 minutes, 600ºC for 1 hour, and then be subjected to a thermal shock test with a temperature drop from 600ºC to 20ºC within 15 seconds.

(c) *Pressure*. The test source must be twice subjected for at least 5 minutes to an external pressure (absolute) of 2 million newtons per square meter.

(d) *Impact*. A 2-kilogram steel weight, 2.5 centimeters in diameter, must be dropped from a height of 1 meter onto the test source.

(e) *Vibration*. The test source must be subjected 3 times for 10 minutes each to vibrations sweeping from 25 hertz to 500 hertz with a peak amplitude of 5 times the acceleration of gravity. In addition, each test source must be vibrated for 30 minutes at each resonant frequency found.

(f) *Puncture*. A 50-gram weight and pin, 0.3-centimeter pin diameter, must be dropped from a height of 1 meter onto the test source.

(g) *Bend*. If the length of the source is more than 15 times larger than the minimum cross-sectional dimension, the test source must be subjected to a force of 2000 newtons at its center equidistant from two support cylinders, the distance between which is 10 times the minimum cross-sectional dimension of the source.

§ 36.23 Access control.

[Top of File]

(a) Each entrance to a radiation room at a panoramic irradiator must have a door or other physical barrier to prevent inadvertent entry of personnel if the sources are not in the shielded position. Product conveyor systems may serve as barriers as long as they reliably and consistently function as a barrier. It must not be possible to move the sources out of their shielded position if the door or barrier is open. Opening the door or barrier while the sources are exposed must cause the sources to return promptly to their shielded position. The personnel entrance door or barrier must have a lock that is operated by the same key used to move the sources. The doors and barriers must not prevent any individual in the radiation room from leaving.

(b) In addition, each entrance to a radiation room at a panoramic irradiator must have an independent backup access control to detect personnel entry while the sources are exposed. Detection of entry while the sources are exposed must cause the sources to return to their fully shielded position and must also activate a visible and audible alarm to make the individual entering the room aware of the hazard. The alarm must also alert at least one other individual who is onsite of the entry. That individual shall be trained on how to respond to the alarm and prepared to promptly render or summon assistance.

(c) A radiation monitor must be provided to detect the presence of high radiation levels in the radiation room of a panoramic irradiator before personnel entry. The monitor must be integrated with personnel access door locks to prevent room access when radiation levels are high. Attempted personnel entry while the monitor measures high radiation levels, must activate the alarm described in paragraph (b) of this section. The monitor may be located in the entrance (normally referred to as the maze) but not in the direct radiation beam.

(d) Before the sources move from their shielded position in a panoramic irradiator, the source control must automatically activate conspicuous visible and audible alarms to alert people in the radiation room that the sources will be moved from their shielded position. The alarms must give individuals enough time to leave the room before the sources leave the shielded position.

(e) Each radiation room at a panoramic irradiator must have a clearly visible and readily accessible control that would allow an individual in the room to make the sources return to their fully shielded position.

(f) Each radiation room of a panoramic irradiator must contain a control that prevents the sources from moving from the shielded position unless the control has been activated and the door or barrier to the radiation room has been closed within a preset time after activation of the control.

(g) Each entrance to the radiation room of a panoramic irradiator and each entrance to the area within the personnel access barrier of an underwater irradiator must be posted as required by 10 CFR 20.1902. Radiation postings for panoramic irradiators must comply with the posting requirements of 10 CFR 20.1902, except that signs may be removed, covered, or otherwise made inoperative when the sources are fully shielded.

(h) If the radiation room of a panoramic irradiator has roof plugs or other movable shielding, it must not be possible to operate the irradiator unless the shielding is in its proper location. This requirement may be met by interlocks that prevent operation if shielding is not placed properly or by an operating procedure requiring inspection of shielding before operating.

(i) Underwater irradiators must have a personnel access barrier around the pool which must be locked to prevent access when the irradiator is not attended. Only operators and facility management may have access to keys to the personnel access barrier. There must be an intrusion alarm to detect unauthorized entry when the personnel access barrier is locked. Activation of the intrusion alarm must alert an individual (not necessarily onsite) who is prepared to respond or summon assistance.

§ 36.25 Shielding.

[Top of File]

(a) The radiation dose rate in areas that are normally occupied during operation of a panoramic irradiator may not exceed 0.02 millisievert (2 millirems) per hour at any location 30 centimeters or more from the wall of the room when the sources are exposed. The dose rate must be averaged over an area not to exceed 100 square centimeters having no linear dimension greater than 20 cm. Areas where the radiation dose rate exceeds 0.02 millisievert (2 millirems) per hour must be locked, roped off, or posted.

(b) The radiation dose at 30 centimeters over the edge of the pool of a pool irradiator may not exceed 0.02 millisievert (2 millirems) per hour when the sources are in the fully shielded position.

(c) The radiation dose rate at 1 meter from the shield of a dry-source-storage panoramic irradiator when the source is shielded may not exceed 0.02 millisievert (2 millirems) per hour and at 5 centimeters from the shield may not exceed 0.2 millisievert (20 millirems) per hour.

§ 36.27 Fire protection.

[Top of File]

(a) The radiation room at a panoramic irradiator must have heat and smoke detectors. The detectors must activate an audible alarm. The alarm must be capable of alerting a person who is prepared to summon assistance promptly. The sources must automatically become fully shielded if a fire is detected.

(b) The radiation room at a panoramic irradiator must be equipped with a fire extinguishing system capable of extinguishing a fire without the entry of personnel into the room. The system for the radiation room must have a shut-off valve to control flooding into unrestricted areas.

§ 36.29 Radiation monitors.

[Top of File]

(a) Irradiators with automatic product conveyor systems must have a radiation monitor with an audible alarm located to detect loose radioactive sources that are carried toward the product exit. If the monitor detects a source, an alarm must sound and product conveyors must stop automatically. The alarm must be capable of alerting an individual in the facility who is prepared to summon assistance. Underwater irradiators in which the product moves within an enclosed stationary tube are exempt from the requirements of this paragraph.

(b) Underwater irradiators that are not in a shielded radiation room must have a radiation monitor over the pool to detect abnormal radiation levels. The monitor must have an audible alarm and a visible indicator at entrances to the personnel access barrier around the pool. The audible alarm may have a manual shut-off. The alarm must be capable of alerting an individual who is prepared to respond promptly.

§ 36.31 Control of source movement.

[Top of File]

(a) The mechanism that moves the sources of a panoramic irradiator must require a key to actuate. Actuation of the mechanism must cause an audible signal to indicate that the sources are leaving the shielded position. Only one key may be in use at any time, and only operators or facility management may possess it. The key must be attached to a portable radiation survey meter by a chain or cable. The lock for source control must be designed so that the key may not be removed if the sources are in an unshielded position. The door to the radiation room must require the same key.

(b) The console of a panoramic irradiator must have a source position indicator that indicates when the sources are in the fully shielded position, when they are in transit, and when the sources are exposed.

(c) The control console of a panoramic irradiator must have a control that promptly returns the sources to the shielded position.

(d) Each control for a panoramic irradiator must be clearly marked as to its function.

§ 36.33 Irradiator pools.

[Top of File]

(a) For licenses initially issued after July 1, 1993, irradiator pools must either:

(1) Have a water-tight stainless steel liner or a liner metallurgically compatible with other components in the pool; or

(2) Be constructed so that there is a low likelihood of substantial leakage and have a surface designed to facilitate decontamination. In either case, the licensee shall have a method to safely store the sources during repairs of the pool.

(b) For licenses initially issued after July 1, 1993, irradiator pools must have no outlets more than 0.5 meter below the normal low water level that could allow water to drain out of the pool. Pipes that have intakes more than 0.5 meter below the normal low water level and that could act as siphons must have siphon breakers to prevent the siphoning of pool water.

(c) A means must be provided to replenish water losses from the pool.

(d) A visible indicator must be provided in a clearly visible location to indicate if the pool water level is below the normal low water level or above the normal high water level.

(e) Irradiator pools must be equipped with a purification system designed to be capable of maintaining the water during normal operation at a conductivity of 20 microsiemens per centimeter or less and with a clarity so that the sources can be seen clearly.

(f) A physical barrier, such as a railing or cover, must be used around or over irradiator pools during normal operation to prevent personnel from accidentally falling into the pool. The barrier may be removed during maintenance, inspection, and service operations.

(g) If long-handled tools or poles are used in irradiator pools, the radiation dose rate on the handling areas of the tools may not exceed 0.02 millisievert (2 millirems) per hour.

§ 36.35 Source rack protection.

[Top of File]

If the product to be irradiated moves on a product conveyor system, the source rack and the mechanism that moves the rack must be protected by a barrier or guides to prevent products and product carriers from hitting or touching the rack or mechanism.

§ 36.37 Power failures.

[Top of File]

(a) If electrical power at a panoramic irradiator is lost for longer than 10 seconds, the sources must automatically return to the shielded position.

(b) The lock on the door of the radiation room of a panoramic irradiator may not be deactivated by a power failure.

(c) During a power failure, the area of any irradiator where sources are located may be entered only when using an operable and calibrated radiation survey meter.

§ 36.39 Design requirements.

[Top of File]

Irradiators whose construction begins after July 1, 1993, must meet the design requirements of this section.

(a) *Shielding*. For panoramic irradiators, the licensee shall design shielding walls to meet generally accepted building code requirements for reinforced concrete and design the walls, wall penetrations, and entranceways to meet the radiation shielding requirements of § 36.25. If the irradiator will use more than 2×10^{17} becquerels (5 million curies) of activity, the licensee shall evaluate the effects of heating of the shielding walls by the irradiator sources.

(b) *Foundations*. For panoramic irradiators, the licensee shall design the foundation, with consideration given to soil characteristics, to ensure it is adequate to support the weight of the facility shield walls.

(c) *Pool integrity*. For pool irradiators, the licensee shall design the pool to assure that it is leak resistant, that it is strong enough to bear the weight of the pool water and shipping casks, that a dropped cask would not fall on sealed sources, that all outlets or pipes meet the requirements of § 36.33(b), and that metal components are metallurgically compatible with other components in the pool.

(d) *Water handling system*. For pool irradiators, the licensee shall verify that the design of the water purification system is adequate to meet the requirements of § 36.33(e). The system must be designed so that water leaking from the system does not drain to unrestricted areas without being monitored.

(e) *Radiation monitors*. For all irradiators, the licensee shall evaluate the location and sensitivity of the monitor to detect sources carried by the product conveyor system as required by § 36.29(a). The licensee shall verify that the product conveyor is designed to stop before a source on the product conveyor would cause a radiation overexposure to any person. For pool irradiators, if the licensee uses radiation monitors to detect contamination under § 36.59(b), the licensee shall verify that the design of radiation monitoring systems to detect pool contamination includes sensitive detectors located close to where contamination is likely to concentrate.

(f) *Source rack*. For pool irradiators, the licensee shall verify that there are no crevices on the source or between the source and source holder that would promote corrosion on a critical area of the source. For panoramic irradiators, the licensee shall determine that source rack drops due to loss of power will not damage the source rack and that source rack drops due to failure of cables (or alternate means of support) will not cause loss of integrity of sealed sources. For panoramic irradiators, the licensee shall review the design of the mechanism that moves the sources to assure that the likelihood of a stuck source is low and that, if the rack sticks, a means exists to free it with minimal risk to personnel.

(g) *Access control*. For panoramic irradiators, the licensee shall verify from the design and logic diagram that the access control system will meet the requirements of § 36.23.

(h) *Fire protection*. For panoramic irradiators, the licensee shall verify that the number, location, and spacing of the smoke and heat detectors are appropriate to detect fires and that the detectors are protected from mechanical and radiation damage. The licensee shall verify that the design of the fire extinguishing system provides the necessary discharge patterns, densities, and flow characteristics for complete coverage of the radiation room and that the system is protected from mechanical and radiation damage.

(i) *Source return*. For panoramic irradiators, the licensee shall verify that the source rack will automatically return to the fully shielded position if offsite power is lost for more than 10 seconds.

(j) *Seismic*. For panoramic irradiators to be built in seismic areas, the licensee shall design the reinforced concrete radiation shields to retain their integrity in the event of an earthquake by designing to the seismic requirements of an appropriate source such as American Concrete Institute Standard ACI 318-89, "Building Code Requirements for Reinforced Concrete," Chapter 21, "Special Provisions for Seismic Design," or local building codes, if current.

(k) *Wiring*. For panoramic irradiators, the licensee shall verify that electrical wiring and electrical equipment in the radiation room are selected to minimize failures due to prolonged exposure to radiation.

§ 36.41 Construction monitoring and acceptance testing.

[Top of File]

The requirements of this section must be met for irradiators whose construction begins after July 1, 1993. The requirements must be met prior to loading sources.

(a) *Shielding*. For panoramic irradiators, the licensee shall monitor the construction of the shielding to verify that its construction meets design specifications and generally accepted building code requirements for reinforced concrete.

(b) *Foundations*. For panoramic irradiators, the licensee shall monitor the construction of the foundations to verify that their construction meets design specifications.

(c) *Pool integrity*. For pool irradiators, the licensee shall verify that the pool meets design specifications and shall test the integrity of the pool. The licensee shall verify that outlets and pipes meet the requirements of § 36.33(b).

(d) *Water handling system*. For pool irradiators, the licensee shall verify that the water purification system, the conductivity meter, and the water level indicators operate properly.

(e) *Radiation monitors*. For all irradiators, the licensee shall verify the proper operation of the monitor to detect sources carried on the product conveyor system and the related alarms and interlocks required by § 36.29(a). For pool irradiators, the licensee shall verify the proper operation of the radiation monitors and the related alarm if used to meet § 36.59(b). For underwater irradiators, the licensee shall verify the proper operation of the over-the-pool monitor, alarms, and interlocks required by § 36.29(b).

(f) *Source rack*. For panoramic irradiators, the licensee shall test the movement of the source racks for proper operation prior to source loading; testing must include source rack lowering due to simulated loss of power. For all irradiators with product conveyor systems, the licensee shall observe and test the operation of the conveyor system to assure that the requirements in § 36.35 are met for protection of the source rack and the mechanism that moves the rack; testing must include tests of any limit switches and interlocks used to protect the source rack and mechanism that moves the rack from moving product carriers.

(g) *Access control*. For panoramic irradiators, the licensee shall test the completed access control system to assure that it functions as designed and that all alarms, controls, and interlocks work properly.

(h) *Fire protection*. For panoramic irradiators, the licensee shall test the ability of the heat and smoke detectors to detect a fire, to activate alarms, and to cause the source rack to automatically become fully shielded. The licensee shall test the operability of the fire extinguishing system.

(i) *Source return*. For panoramic irradiators, the licensee shall demonstrate that the source racks can be returned to their fully shielded positions without offsite power.

(j) *Computer systems*. For panoramic irradiators that use a computer system to control the access control system, the licensee shall verify that the access control system will operate properly if offsite power is lost and shall verify that the computer has security features that prevent an irradiator operator from commanding the computer to override the access control system when it is required to be operable.

(k) *Wiring*. For panoramic irradiators, the licensee shall verify that the electrical wiring and electrical equipment that were installed meet the design specifications.

Subpart D--Operation of Irradiators

[Top of File]

§ 36.51 Training.

(a) Before an individual is permitted to operate an irradiator without a supervisor present, the individual must be instructed in:

(1) The fundamentals of radiation protection applied to irradiators (including the differences between external radiation and radioactive contamination, units of radiation dose, NRC dose limits, why large radiation doses must be avoided, how shielding and access controls prevent large doses, how an irradiator is designed to prevent contamination, the proper use of survey meters and personnel dosimeters, other radiation safety features of an irradiator, and the basic function of the irradiator);

(2) The requirements of parts 19 and 36 of NRC regulations that are relevant to the irradiator;

(3) The operation of the irradiator;

(4) Those operating and emergency procedures listed in § 36.53 that the individual is responsible for performing; and

(5) Case histories of accidents or problems involving irradiators.

(b) Before an individual is permitted to operate an irradiator without a supervisor present, the individual shall pass a written test on the instruction received consisting primarily of questions based on the licensee's operating and emergency procedures that the individual is responsible for performing and other operations necessary to safely operate the irradiator without supervision.

(c) Before an individual is permitted to operate an irradiator without a supervisor present, the individual must have received on-the-job training or simulator training in the use of the irradiator as described in the license application. The individual shall also demonstrate the ability to perform those portions of the operating and emergency procedures that he or she is to perform.

(d) The licensee shall conduct safety reviews for irradiator operators at least annually. The licensee shall give each operator a brief written test on the information. Each safety review must include, to the extent appropriate, each of the following--

(1) Changes in operating and emergency procedures since the last review, if any;

(2) Changes in regulations and license conditions since the last review, if any;

(3) Reports on recent accidents, mistakes, or problems that have occurred at irradiators, if any;

(4) Relevant results of inspections of operator safety performance;

(5) Relevant results of the facility's inspection and maintenance checks; and

(6) A drill to practice an emergency or abnormal event procedure.

(e) The licensee shall evaluate the safety performance of each irradiator operator at least annually to ensure that regulations, license conditions, and operating and emergency procedures are followed. The licensee shall discuss the results of the evaluation with the operator and shall instruct the operator on how to correct any mistakes or deficiencies observed.

(f) Individuals who will be permitted unescorted access to the radiation room of the irradiator or the area around the pool of an underwater irradiator, but who have not received the training required for operators and the radiation safety officer, shall be instructed and tested in

any precautions they should take to avoid radiation exposure, any procedures or parts of procedures listed in § 36.53 that they are expected to perform or comply with, and their proper response to alarms required in this part. Tests may be oral.

(g) Individuals who must be prepared to respond to alarms required by §§ 36.23(b), 36.23(i), 36.27(a), 36.29(a), 36.29(b), and 36.59(b) shall be trained and tested on how to respond. Each individual shall be retested at least once a year. Tests may be oral.

§ 36.53 Operating and emergency procedures.

[Top of File]

(a) The licensee shall have and follow written operating procedures for--

(1) Operation of the irradiator, including entering and leaving the radiation room;

(2) Use of personnel dosimeters;

(3) Surveying the shielding of panoramic irradiators;

(4) Monitoring pool water for contamination while the water is in the pool and before release of pool water to unrestricted areas;

(5) Leak testing of sources;

(6) Inspection and maintenance checks required by § 36.61;

(7) Loading, unloading, and repositioning sources, if the operations will be performed by the licensee; and

(8) Inspection of movable shielding required by § 36.23(h), if applicable.

(b) The licensee shall have and follow emergency or abnormal event procedures, appropriate for the irradiator type, for--

(1) Sources stuck in the unshielded position;

(2) Personnel overexposures;

(3) A radiation alarm from the product exit portal monitor or pool monitor;

(4) Detection of leaking sources, pool contamination, or alarm caused by contamination of pool water;

(5) A low or high water level indicator, an abnormal water loss, or leakage from the source storage pool;

(6) A prolonged loss of electrical power;

(7) A fire alarm or explosion in the radiation room;

(8) An alarm indicating unauthorized entry into the radiation room, area around pool, or another alarmed area;

(9) Natural phenomena, including an earthquake, a tornado, flooding, or other phenomena as appropriate for the geographical location of the facility; and

(10) The jamming of automatic conveyor systems.

(c) The licensee may revise operating and emergency procedures without Commission approval only if all of the following conditions are met:

(1) The revisions do not reduce the safety of the facility,

(2) The revisions are consistent with the outline or summary of procedures submitted with the license application,

(3) The revisions have been reviewed and approved by the radiation safety officer, and

(4) The users or operators are instructed and tested on the revised procedures before they are put into use.

§ 36.55 Personnel monitoring.

[Top of File]

(a) Irradiator operators shall wear a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor while operating a panoramic irradiator or while in the area around the pool of an underwater irradiator. The personnel dosimeter processor must be accredited for high energy photons in the normal and accident dose ranges (see 10 CFR 20.1501(c)). Each personnel dosimeter must be assigned to and worn by only one individual. Film badges must be processed at least monthly, and other personnel dosimeters must be processed at least quarterly.

(b) Other individuals who enter the radiation room of a panoramic irradiator shall wear a dosimeter, which may be a pocket dosimeter. For groups of visitors, only two people who enter the radiation room are required to wear dosimeters. If pocket dosimeters are used to meet the requirements of this paragraph, a check of their response to radiation must be done at least annually. Acceptable dosimeters must read within plus or minus 30 percent of the true radiation dose.

§ 36.57 Radiation surveys.

[Top of File]

(a) A radiation survey of the area outside the shielding of the radiation room of a panoramic irradiator must be conducted with the sources in the exposed position before the facility starts to operate. A radiation survey of the area above the pool of pool irradiators must be conducted after the sources are loaded but before the facility starts to operate. Additional radiation surveys of the shielding must be performed at intervals not to exceed 3 years and before resuming operation after addition of new sources or any modification to the radiation room shielding or structure that might increase dose rates.

(b) If the radiation levels specified in § 36.25 are exceeded, the facility must be modified to comply with the requirements in § 36.25.

(c) Portable radiation survey meters must be calibrated at least annually to an accuracy of ±20 percent for the gamma energy of the sources in use. The calibration must be done at two points on each scale or, for digital instruments, at one point per decade over the range that will be used. Portable radiation survey meters must be of a type that does not saturate and read zero at high radiation dose rates.

(d) Water from the irradiator pool, other potentially contaminated liquids, and sediments from pool vacuuming must be monitored for radioactive contamination before release to unrestricted areas. Radioactive concentrations must not exceed those specified in 10 CFR part 20, Table 2, Column 2 or Table 3 of appendix B, "Annual Limits on Intake (ALIs) and Derived Air Concentrations (DACs) of Radionuclides for Occupational Exposure; Effluent Concentrations; Concentrations for Release to Sewerage."

(e) Before releasing resins for unrestricted use, they must be monitored before release in an area with a background level less than 0.5 microsievert (0.05 millirem) per hour. The resins may be released only if the survey does not detect radiation levels above background radiation levels. The survey meter used must be capable of detecting radiation levels of 0.5 microsievert (0.05 millirem) per hour.

§ 36.59 Detection of leaking sources.

[Top of File]

(a) Each dry-source-storage sealed source must be tested for leakage at intervals not to exceed 6 months using a leak test kit or method approved by the Commission or an Agreement State. In the absence of a certificate from a transferor that a test has been made within the 6 months before the transfer, the sealed source may not be used until tested. The test must be capable of detecting the presence of 200 becquerels (0.005 microcurie) of radioactive material and must be performed by a person approved by the Commission or an Agreement State to perform the test.

(b) For pool irradiators, sources may not be put into the pool unless the licensee tests the sources for leaks or has a certificate from a transferor that leak test has been done within the 6 months before the transfer. Water from the pool must be checked for contamination each day the irradiator operates. The check may be done either by using a radiation monitor on a pool water circulating system or by analysis of a sample of pool water. If a check for contamination is done by analysis of a sample of pool water, the results of the analysis must be available within 24 hours. If the licensee uses a radiation monitor on a pool water circulating system, the detection of above normal radiation levels must activate an alarm. The alarm set-point must be set as low as practical, but high enough to avoid false alarms. The licensee may reset the alarm set-point to a higher level if necessary to operate the pool water purification system to clean up contamination in the pool if specifically provided for in written emergency procedures.

(c) If a leaking source is detected, the licensee shall arrange to remove the leaking source from service and have it decontaminated, repaired, or disposed of by an NRC or Agreement State licensee that is authorized to perform these functions. The licensee shall promptly check its personnel, equipment, facilities, and irradiated product for radioactive contamination. No product may be shipped until the product has been checked and found free of contamination. If a product has been shipped that may have been inadvertently contaminated, the licensee shall arrange to locate and survey that product for contamination. If any personnel are found to be contaminated, decontamination must be performed promptly. If contaminated equipment, facilities, or products are found, the licensee shall arrange to have them decontaminated or disposed of by an NRC or Agreement State licensee that is authorized to perform these functions. If a pool is contaminated, the licensee shall arrange to clean the pool until the contamination levels do not exceed the appropriate concentration in Table 2, Column 2, appendix B to part 20. (See 10 CFR 30.50 for reporting requirements.)

[58 FR 7728, Feb. 9, 1993, as amended at 58 FR 67660, Dec. 22, 1993]

§ 36.61 Inspection and maintenance.

[Top of File]

(a) The licensee shall perform inspection and maintenance checks that include, as a minimum, each of the following at the frequency specified in the license or license application:

(1) Operability of each aspect of the access control system required by § 36.23.

(2) Functioning of the source position indicator required by § 36.31(b).

(3) Operability of the radiation monitor for radioactive contamination in pool water required by § 36.59(b) using a radiation check source, if applicable.

(4) Operability of the over-pool radiation monitor at underwater irradiators as required by § 36.29(b).

(5) Operability of the product exit monitor required by § 36.29(a).

(6) Operability of the emergency source return control required by § 36.31(c).

(7) Leak-tightness of systems through which pool water circulates (visual inspection).

(8) Operability of the heat and smoke detectors and extinguisher system required by § 36.27 (but without turning extinguishers on).

(9) Operability of the means of pool water replenishment required by § 36.33(c).

(10) Operability of the indicators of high and low pool water levels required by § 36.33(d).

(11) Operability of the intrusion alarm required by § 36.23(i), if applicable.

(12) Functioning and wear of the system, mechanisms, and cables used to raise and lower sources.

(13) Condition of the barrier to prevent products from hitting the sources or source mechanism as required by § 36.35.

(14) Amount of water added to the pool to determine if the pool is leaking.

(15) Electrical wiring on required safety systems for radiation damage.

(16) Pool water conductivity measurements and analysis as required by § 36.63(b).

(b) Malfunctions and defects found during inspection and maintenance checks must be repaired without undue delay.

§ 36.63 Pool water purity.

[Top of File]

(a) Pool water purification system must be run sufficiently to maintain the conductivity of the pool water below 20 microsiemens per centimeter under normal circumstances. If pool water conductivity rises above 20 microsiemens per centimeter, the licensee shall take prompt actions to lower the pool water conductivity and shall take corrective actions to prevent future recurrences.

(b) The licensee shall measure the pool water conductivity frequently enough, but no less than weekly, to assure that the conductivity remains below 20 microsiemens per centimeter. Conductivity meters must be calibrated at least annually.

§ 36.65 Attendance during operation.

[Top of File]

(a) Both an irradiator operator and at least one other individual, who is trained on how to respond and prepared to promptly render or summon assistance if the access control alarm sounds, shall be present onsite:

(1) Whenever the irradiator is operated using an automatic product conveyor system; and

(2) Whenever the product is moved into or out of the radiation room when the irradiator is operated in a batch mode.

(b) At a panoramic irradiator at which static irradiations (no movement of the product) are occurring, a person who has received the training on how to respond to alarms described in § 36.51(g) must be onsite.

(c) At an underwater irradiator, an irradiator operator must be present at the facility whenever the product is moved into or out of the pool. Individuals who move the product into or out of the pool of an underwater irradiator need not be qualified as irradiator operators; however, they must have received the training described in § 36.51 (f) and (g). Static irradiations may be performed without a person present at the facility.

§ 36.67 Entering and leaving the radiation room.

[Top of File]

(a) Upon first entering the radiation room of a panoramic irradiator after an irradiation, the irradiator operator shall use a survey meter to determine that the source has returned to its fully shielded position. The operator shall check the functioning of the survey meter with a radiation check source prior to entry.

(b) Before exiting from and locking the door to the radiation room of a panoramic irradiator prior to a planned irradiation, the irradiator operator shall:

(1) Visually inspect the entire radiation room to verify that no one else is in it; and

(2) Activate a control in the radiation room that permits the sources to be moved from the shielded position only if the door to the radiation room is locked within a preset time after setting the control.

(c) During a power failure, the area around the pool of an underwater irradiator may not be entered without using an operable and calibrated radiation survey meter unless the over-the-pool monitor required by § 36.29(b) is operating with backup power.

§ 36.69 Irradiation of explosive or flammable materials.

[Top of File]

(a) Irradiation of explosive material is prohibited unless the licensee has received prior written authorization from the Commission. Authorization will not be granted unless the licensee can demonstrate that detonation of the explosive would not rupture the sealed sources, injure personnel, damage safety systems, or cause radiation overexposures of personnel.

(b) Irradiation of more than small quantities of flammable material (flash point below 140 F) is prohibited in panoramic irradiators unless the licensee has received prior written authorization from the Commission. Authorization will not be granted unless the licensee can demonstrate that a fire in the radiation room could be controlled without damage to sealed sources or safety systems and without radiation overexposures of personnel.

Subpart E--Records

[Top of File]

§ 36.81 Records and retention periods.

The licensee shall maintain the following records at the irradiator for the periods specified.

(a) A copy of the license, license conditions, documents incorporated into a license by reference, and amendments thereto until superseded by new documents or until the Commission terminates the license for documents not superseded.

(b) Records of each individual's training, tests, and safety reviews provided to meet the requirements of § 36.51(a), (b), (c), (d), (f), and (g) until 3 years after the individual terminates work.

(c) Records of the annual evaluations of the safety performance of irradiator operators required by § 36.51(e) for 3 years after the evaluation.

(d) A copy of the current operating and emergency procedures required by § 36.53 until superseded or the Commission terminates the license. Records of the radiation safety officer's review and approval of changes in procedures as required by § 36.53(c)(3) retained for 3 years from the date of the change.

(e) Evaluations of personnel dosimeters required by § 36.55 until the Commission terminates the license.

(f) Records of radiation surveys required by § 36.57 for 3 years from the date of the survey.

(g) Records of radiation survey meter calibrations required by § 36.57 and pool water conductivity meter calibrations required by § 36.63 (b) until 3 years from the date of calibration.

(h) Records of the results of leak tests required by § 36.59(a) and the results of contamination checks required by § 36.59(b) for 3 years from the date of each test.

(i) Records of inspection and maintenance checks required by § 36.61 for 3 years.

(j) Records of major malfunctions, significant defects, operating difficulties or irregularities, and major operating problems that involve required radiation safety equipment for 3 years after repairs are completed.

(k) Records of the receipt, transfer and disposal, of all licensed sealed sources as required by §§ 30.51 and 30.41.

(l) Records on the design checks required by § 36.39 and the construction control checks as required by § 36.41 until the license is terminated. The records must be signed and dated. The title or qualification of the person signing must be included.

(m) Records related to decommissioning of the irradiator as required by § 30.35(g).

[58 FR 7728, Feb. 9, 1993, as amended at 65 FR 63752, Oct. 24, 2000]

§ 36.83 Reports.

[Top of File]

(a) In addition to the reporting requirements in other parts of NRC regulations, the licensee shall report the following events if not reported under other parts of NRC regulations:

(1) Source stuck in an unshielded position.

(2) Any fire or explosion in a radiation room.

(3) Damage to the source racks.

(4) Failure of the cable or drive mechanism used to move the source racks.

(5) Inoperability of the access control system.

(6) Detection of radiation source by the product exit monitor.

(7) Detection of radioactive contamination attributable to licensed radioactive material.

(8) Structural damage to the pool liner or walls.

(9) Abnormal water loss or leakage from the source storage pool.

(10) Pool water conductivity exceeding 100 microsiemens per centimeter.

(b) The report must include a telephone report within 24 hours as described in § 30.50(c)(1), and a written report within 30 days as described in § 30.50(c)(2).

Subpart F--Enforcement

[Top of File]

§ 36.91 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

§ 36.93 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 36 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 36 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 36.1, 36.2, 36.5, 36.8, 36.11, 36.13, 36.17, 36.19, 36.91, and 36.93.

PART 39--LICENSES AND RADIATION SAFETY REQUIREMENTS FOR WELL LOGGING

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 39.1 Purpose and scope.

(a) This part prescribes requirements for the issuance of a license authorizing the use of licensed materials including sealed sources, radioactive tracers, radioactive markers, and uranium sinker bars in well logging in a single well. This part also prescribes radiation safety requirements for persons using licensed materials in these operations. The provisions and requirements of this part are in addition to, and not in substitution for, other requirements of this chapter. In particular, the provisions of parts 19, 20, 21, 30, 40, 70, 71, and 150 of this chapter apply to applicants and licensees subject to this part.

(b) The requirements set out in this part do not apply to the issuance of a license authorizing the use of licensed material in tracer studies involving multiple wells, such as field flooding studies, or to the use of sealed sources auxiliary to well logging but not lowered into wells.

§ 39.2 Definitions.

[Top of File]

Energy compensation source (ECS) means a small sealed source, with an activity not exceeding 3.7 MBq [100 microcuries], used within a logging tool, or other tool components, to provide a reference standard to maintain the tool's calibration when in use.

Field station means a facility where licensed material may be stored or used and from which equipment is dispatched to temporary jobsites.

Fresh water aquifer, for the purpose of this part, means a geologic formation that is capable of yielding fresh water to a well or spring.

Injection tool means a device used for controlled subsurface injection of radioactive tracer material.

Irretrievable well logging source means any sealed source containing licensed material that is pulled off or not connected to the wireline that suspends the source in the well and for which all reasonable effort at recovery has been expended.

Licensed material means byproduct, source, or special nuclear material received, processed, used, or transferred under a license issued by the Commission under the regulations in this chapter.

Logging assistant means any individual who, under the personal supervision of a logging supervisor, handles sealed sources or tracers that are not in logging tools or shipping containers or who performs surveys required by § 39.67.

Logging supervisor means an individual who uses licensed material or provides personal supervision in the use of licensed material at a temporary jobsite and who is responsible to the licensee for assuring compliance with the requirements of the Commission's regulations and the conditions of the license.

Logging tool means a device used subsurface to perform well logging.

Personal supervision means guidance and instruction by a logging supervisor, who is physically present at a temporary jobsite, who is in personal contact with logging assistants, and who can give immediate assistance.

Radioactive marker means licensed material used for depth determination or direction orientation. For purposes of this part, this term includes radioactive collar markers and radioactive iron nails.

Safety review means a periodic review provided by the licensee for its employees on radiation safety aspects of well logging. The review may include, as appropriate, the results of internal inspections, new procedures or equipment, accidents or errors that have been observed, and opportunities for employees to ask safety questions.

Sealed source means any licensed material that is encased in a capsule designed to prevent leakage or escape of the licensed material.

Source holder means a housing or assembly into which a sealed source is placed to facilitate the handling and use of the source in well logging.

Subsurface tracer study means the release of unsealed license material or a substance labeled with licensed material in a single well for the purpose of tracing the movement or position of the material or substance in the well or adjacent formation.

Surface casing for protecting fresh water aquifers means a pipe or tube used as a lining in a well to isolate fresh water aquifers from the well.

Temporary jobsite means a place where licensed materials are present for the purpose of performing well logging or subsurface tracer studies.

Tritium neutron generator target source means a tritium source used within a neutron generator tube to produce neutrons for use in well logging applications.

Uranium sinker bar means a weight containing depleted uranium used to pull a logging tool toward the bottom of a well.

Well means a drilled hole in which well logging may be performed. As used in this part, "well" includes drilled holes for the purpose of oil, gas, mineral, groundwater, or geological exploration.

Well logging means all operations involving the lowering and raising of measuring devices or tools which contain licensed material or are used to detect licensed materials in wells for the purpose of obtaining information about the well or adjacent formations which may be used in oil, gas, mineral, groundwater, or geological exploration.

[52 FR 8234, Mar. 17, 1987, as amended at 65 FR 20344, Apr. 17, 2000]

§ 39.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

§ 39.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0130.

(b) The approved information collection requirements contained in this part appear in §§ 39.11, 39.13, 39.15, 39.17, 39.31, 39.33, 39.35, 39.37, 39.39, 39.43, 39.51, 39.61, 39.63, 39.65, 39.67, 39.73, 39.75, 39.77, and 39.91.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 39.11, NRC Form 313 is approved under control 3150-0120.

(2) [Reserved]

[62 FR 52187, Oct. 6, 1997, as amended at 67 FR 67099, Nov. 4, 2002]

Subpart B--Specific Licensing Requirements

[Top of File]

§ 39.11 Application for a specific license.

A person, as defined in § 30.4 of this chapter, shall file an application for a specific license authorizing the use of licensed material in well logging on Form NRC 313, "Application for Material License." Each application for a license, other than a license exempted from part 170 of this chapter, must be accompanied by the fee prescribed in § 170.31 of this chapter. The application must be sent to the appropriate NRC Regional Office listed in appendix D of part 20 of this chapter.

§ 39.13 Specific licenses for well logging.

[Top of File]

The Commission will approve an application for a specific license for the use of licensed material in well logging if the applicant meets the following requirements:

(a) The applicant shall satisfy the general requirements specified in § 30.33 of this chapter for byproduct material, in § 40.32 of this chapter for source material, and in § 70.33 of this chapter for special nuclear material, as appropriate, and any special requirements contained in this part.

(b) The applicant shall develop a program for training logging supervisors and logging assistants and submit to the Commission a description of this program which specifies the--

(1) Initial training;

(2) On-the-job training;

(3) Annual safety reviews provided by the licensee;

(4) Means the applicant will use to demonstrate the logging supervisor's knowledge and understanding of and ability to comply with the Commission's regulations and licensing requirements and the applicant's operating and emergency procedures; and

(5) Means the applicant will use to demonstrate the logging assistant's knowledge and understanding of and ability to comply with the applicant's operating and emergency procedures.

(c) The applicant shall submit to the Commission written operating and emergency procedures as described in § 39.63 or an outline or summary of the procedures that includes the important radiation safety aspects of the procedures.

(d) The applicant shall establish and submit to the Commission its program for annual inspections of the job performance of each logging supervisor to ensure that the Commission's regulations, license requirements, and the applicant's operating and emergency procedures are followed. Inspection records must be retained for 3 years after each annual internal inspection.

(e) The applicant shall submit a description of its overall organizational structure as it applies to the radiation safety responsibilities in well logging, including specified delegations of authority and responsibility.

(f) If an applicant wants to perform leak testing of sealed sources, the applicant shall identify the manufacturers and the model numbers of the leak test kits to be used. If the applicant wants to analyze its own wipe samples, the applicant shall establish procedures to be followed and submit a description of these procedures to the Commission. The description must include the--

(1) Instruments to be used;

(2) Methods of performing the analysis; and

(3) Pertinent experience of the person who will analyze the wipe samples.

§ 39.15 Agreement with well owner or operator.

[Top of File]

(a) A licensee may perform well logging with a sealed source only after the licensee has a written agreement with the employing well owner or operator. This written agreement must identify who will meet the following requirements:

(1) If a sealed source becomes lodged in the well, a reasonable effort will be made to recover it.

(2) A person may not attempt to recover a sealed source in a manner which, in the licensee's opinion, could result in its rupture.

(3) The radiation monitoring required in § 39.69(a) will be performed.

(4) If the environment, any equipment, or personnel are contaminated with licensed material, they must be decontaminated before release from the site or release for unrestricted use; and

(5) If the sealed source is classified as irretrievable after reasonable efforts at recovery have been expended, the following requirements must be implemented within 30 days:

(i) Each irretrievable well logging source must be immobilized and sealed in place with a cement plug.

(ii) A means to prevent inadvertent intrusion on the source, unless the source is not accessible to any subsequent drilling operations; and

(iii) A permanent identification plaque, constructed of long lasting material such as stainless steel, brass, bronze, or monel, must be mounted at the surface of the well, unless the mounting of the plaque is not practical. The size of the plaque must be at least 17 cm [7 inches] square and 3 mm [$^{1}/_{8}$-inch] thick. The plaque must contain--

(A) The word "CAUTION";

(B) The radiation symbol (the color requirement in § 20.1901(a) need not be met);

(C) The date the source was abandoned;

(D) The name of the well owner or well operator, as appropriate;

(E) The well name and well identification number(s) or other designation;

(F) An identification of the sealed source(s) by radionuclide and quantity;

(G) The depth of the source and depth to the top of the plug; and

(H) An appropriate warning, such as, "DO NOT RE-ENTER THIS WELL."

(b) The licensee shall retain a copy of the written agreement for 3 years after the completion of the well logging operation.

(c) A licensee may apply, pursuant to § 39.91, for Commission approval, on a case-by-case basis, of proposed procedures to abandon an irretrievable well logging source in a manner not otherwise authorized in paragraph (a)(5) of this section.

(d) A written agreement between the licensee and the well owner or operator is not required if the licensee and the well owner or operator are part of the same corporate structure or otherwise similarly affiliated. However, the licensee shall still otherwise meet the requirements in paragraphs (a)(1) through (a)(5).

[52 FR 8234, Mar. 17, 1987, as amended at 56 FR 23472, May 21, 1991; 58 FR 67660, Dec. 22, 1993; 65 FR 20344, Apr. 17, 2000]

§ 39.17 Request for written statements.

[Top of File]

Each license is issued with the condition that the licensee will, at any time before expiration of the license, upon the Commission's request, submit written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.

Subpart C--Equipment

[Top of File]

§ 39.31 Labels, security, and transportation precautions.

(a) *Labels*. (1) The licensee may not use a source, source holder, or logging tool that contains licensed material unless the smallest component that is transported as a separate piece of equipment with the licensed material inside bears a durable, legible, and clearly visible marking or label. The marking or label must contain the radiation symbol specified in § 20.1901(a), without the conventional color requirements, and the wording "DANGER (or CAUTION) RADIOACTIVE MATERIAL."

(2) The licensee may not use a container to store licensed material unless the container has securely attached to it a durable, legible, and clearly visible label. The label must contain the radiation symbol specified in § 20.1901(a) of this chapter and the wording "CAUTION (or DANGER), RADIOACTIVE MATERIAL, NOTIFY CIVIL AUTHORITIES (or NAME OF COMPANY)."

(3) The licensee may not transport licensed material unless the material is packaged, labeled, marked, and accompanied with appropriate shipping papers in accordance with regulations set out in 10 CFR part 71.

(b) *Security precautions during storage and transportation*. (1) The licensee shall store each source containing licensed material in a storage container or transportation package. The container or package must be locked and physically secured to prevent tampering or removal of licensed material from storage by unauthorized personnel. The licensee shall store licensed material in a manner which will minimize danger from explosion or fire.

(2) The licensee shall lock and physically secure the transport package containing licensed material in the transporting vehicle to prevent accidental loss, tampering, or unauthorized removal of the licensed material from the vehicle.

[52 FR 8234, Mar. 17, 1987, as amended at 56 FR 23472, May 21, 1991; 58 FR 67660, Dec. 22, 1993]

§ 39.33 Radiation detection instruments.

[Top of File]

(a) The licensee shall keep a calibrated and operable radiation survey instrument capable of detecting beta and gamma radiation at each field station and temporary jobsite to make the radiation surveys required by this part and by part 20 of this chapter. To satisfy this requirement, the radiation survey instrument must be capable of measuring 0.001 mSv (0.1 mrem) per hour through at least 0.5 mSv (50 mrem) per hour.

(b) The licensee shall have available additional calibrated and operable radiation detection instruments sensitive enough to detect the low radiation and contamination levels that could be encountered if a sealed source ruptured. The licensee may own the instruments or may have a procedure to obtain them quickly from a second party.

(c) The licensee shall have each radiation survey instrument required under paragraph (a) of this section calibrated--

(1) At intervals not to exceed 6 months and after instrument servicing;

(2) For linear scale instruments, at two points located approximately 1/3 and 2/3 of full-scale on each scale; for logarithmic scale instruments, at midrange of each decade, and at two points of at least one decade; and for digital instruments, at appropriate points; and

(3) So that an accuracy within plus or minus 20 percent of the calibration standard can be demonstrated on each scale.

(d) The licensee shall retain calibration records for a period of 3 years after the date of calibration for inspection by the Commission.

[52 FR 8234, Mar. 17, 1987, as amended at 63 FR 39483, July 23, 1998]

§ 39.35 Leak testing of sealed sources.

[Top of File]

(a) *Testing and recordkeeping requirements*. Each licensee who uses a sealed source shall have the source tested for leakage periodically. The licensee shall keep a record of leak test results in units of microcuries and retain the record for inspection by the Commission for 3 years after the leak test is performed.

(b) *Method of testing.* The wipe of a sealed source must be performed using a leak test kit or method approved by the Commission or an Agreement State. The wipe sample must be taken from the nearest accessible point to the sealed source where contamination might accumulate. The wipe sample must be analyzed for radioactive contamination. The analysis must be capable of detecting the presence of 185 Bq [0.005 microcuries] of radioactive material on the test sample and must be performed by a person approved by the Commission or an Agreement State to perform the analysis.

(c) *Test frequency.* (1) Each sealed source (except an energy compensation source (ECS)) must be tested at intervals not to exceed 6 months. In the absence of a certificate from a transferor that a test has been made within the 6 months before the transfer, the sealed source may not be used until tested.

(2) Each ECS that is not exempt from testing in accordance with paragraph (e) of this section must be tested at intervals not to exceed 3 years. In the absence of a certificate from a transferor that a test has been made within the 3 years before the transfer, the ECS may not be used until tested.

(d) *Removal of leaking source from service.* (1) If the test conducted pursuant to paragraphs (a) and (b) of this section reveals the presence of 185 Bq [0.005 microcuries] or more of removable radioactive material, the licensee shall remove the sealed source from service immediately and have it decontaminated, repaired, or disposed of by an NRC or Agreement State licensee that is authorized to perform these functions. The licensee shall check the equipment associated with the leaking source for radioactive contamination and, if contaminated, have it decontaminated or disposed of by an NRC or Agreement State licensee that is authorized to perform these functions.

(2) The licensee shall submit a report to the appropriate NRC Regional Office listed in appendix D of part 20 of this chapter, within 5 days of receiving the test results. The report must describe the equipment involved in the leak, the test results, any contamination which resulted from the leaking source, and the corrective actions taken up to the time the report is made.

(e) *Exemptions from testing requirements*. The following sealed sources are exempt from the periodic leak test requirements set out in paragraphs (a) through (d) of this section:

(1) Hydrogen-3 (tritium) sources;

(2) Sources containing licensed material with a half-life of 30 days or less;

(3) Sealed sources containing licensed material in gaseous form;

(4) Sources of beta- or gamma-emitting radioactive material with an activity of 3.7 MBq [100 microcuries] or less; and

(5) Sources of alpha- or neutron-emitting radioactive material with an activity of 0.37 MBq [10 microcuries] or less.

[52 FR 8234, Mar. 17, 1987, as amended at 65 FR 20344, Apr. 17, 2000]

§ 39.37 Physical inventory.

[Top of File]

Each licensee shall conduct a semi-annual physical inventory to account for all licensed material received and possessed under the license. The licensee shall retain records of the inventory for 3 years from the date of the inventory for inspection by the Commission. The inventory must indicate the quantity and kind of licensed material, the location of the licensed material, the date of the inventory, and the name of the individual conducting the inventory. Physical inventory records may be combined with leak test records.

§ 39.39 Records of material use.

[Top of File]

(a) Each licensee shall maintain records for each use of licensed material showing--

(1) The make, model number, and a serial number or a description of each sealed source used;

(2) In the case of unsealed licensed material used for subsurface tracer studies, the radionuclide and quantity of activity used in a particular well and the disposition of any unused tracer materials;

(3) The identity of the logging supervisor who is responsible for the licensed material and the identity of logging assistants present; and

(4) The location and date of use of the licensed material.

(b) The licensee shall make the records required by paragraph (a) of this section available for inspection by the Commission. The licensee shall retain the records for 3 years from the date of the recorded event.

§ 39.41 Design and performance criteria for sources.

[Top of File]

(a) A licensee may use a sealed source for use in well logging applications if--

(1) The sealed source is doubly encapsulated;

(2) The sealed source contains licensed material whose chemical and physical forms are as insoluble and nondispersible as practical; and

(3) Meets the requirements of paragraph (b), (c), or (d) of this section.

(b) For a sealed source manufactured on or before July 14,1989, a licensee may use the sealed source, for use in well logging applications if it meets the requirements of USASI N5.10-1968, "Classification of Sealed Radioactive Sources," or the requirements in paragraph (c) or (d) of this section.

(c) For a sealed source manufactured after July 14, 1989, a licensee may use the sealed source, for use in well logging applications if it meets the oil-well logging requirements of ANSI/HPS N43.6-1997, "Sealed Radioactive Sources-Classification."

(d) For a sealed source manufactured after July 14, 1989, a licensee may use the sealed source, for use in well logging applications, if--

(1) The sealed source's prototype has been tested and found to maintain its integrity after each of the following tests:

(i) *Temperature*. The test source must be held at -40° C for 20 minutes, 600° C for 1 hour, and then be subject to a thermal shock test with a temperature drop from 600° C to 20° C within 15 seconds.

(ii) *Impact Test*. A 5 kg steel hammer, 2.5 cm in diameter, must be dropped from a height of 1 m onto the test source.

(iii) *Vibration test*. The test source must be subject to a vibration from 25 Hz to 500 Hz at 5 g amplitude for 30 minutes.

(iv) *Puncture test*. A 1 gram hammer and pin, 0.3 cm pin diameter, must be dropped from a height of 1 m onto the test source.

(v) *Pressure test*. The test source must be subject to an external pressure of 1.695×10^7 pascals [24,600 pounds per square inch absolute].

(e) The requirements in paragraph (a), (b), (c), and (d) of this section do not apply to sealed sources that contain licensed material in gaseous form.

(f) The requirements in paragraphs (a), (b), (c), and (d) of this section do not apply to energy compensation sources (ECS). ECSs must be registered with the Commission under § 32.210 of this chapter or with an Agreement State.

[65 FR 20345, Apr. 17, 2000]

§ 39.43 Inspection, maintenance, and opening of a source or source holder.

[Top of File]

(a) Each licensee shall visually check source holders, logging tools, and source handling tools, for defects before each use to ensure that the equipment is in good working condition and that required labeling is present. If defects are found, the equipment must be removed from service until repaired, and a record must be made listing: the date of check, name of inspector, equipment involved, defects found, and repairs made. These records must be retained for 3 years after the defect is found.

(b) Each licensee shall have a program for semiannual visual inspection and routine maintenance of source holders, logging tools, injection tools, source handling tools, storage containers, transport containers, and uranium sinker bars to ensure that the required labeling is legible and that no physical damage is visible. If defects are found, the equipment must be removed from service until repaired, and a record must be made listing: date, equipment involved, inspection and maintenance operations performed, any defects found, and any actions taken to correct the defects. These records must be retained for 3 years after the defect is found.

(c) Removal of a sealed source from a source holder or logging tool, and maintenance on sealed sources or holders in which sealed sources are contained may not be performed by the licensee unless a written procedure developed pursuant to § 39.63 has been approved either by the Commission pursuant to § 39.13(c) or by an Agreement State.

(d) If a sealed source is stuck in the source holder, the licensee may not perform any operation, such as drilling, cutting, or chiseling, on the source holder unless the licensee is specifically approved by the Commission or an Agreement State to perform this operation.

(e) The opening, repair, or modification of any sealed source must be performed by persons specifically approved to do so by the Commission or an Agreement State.

§ 39.45 Subsurface tracer studies.

[Top of File]

(a) The licensee shall require all personnel handling radioactive tracer material to use protective gloves and, if required by the license, other protective clothing and equipment. The licensee shall take precautions to avoid ingestion or inhalation of radioactive tracer material and to avoid contamination of field stations and temporary jobsites.

(b) A licensee may not knowingly inject licensed material into fresh water aquifers unless specifically authorized to do so by the Commission.

§ 39.47 Radioactive markers.

[Top of File]

The licensee may use radioactive markers in wells only if the individual markers contain quantities of licensed material not exceeding the quantities specified in § 30.71 of this chapter. The use of markers is subject only to the requirements of § 39.37.

§ 39.49 Uranium sinker bars.

[Top of File]

The licensee may use a uranium sinker bar in well logging applications only if it is legibly impressed with the words "CAUTION--RADIOACTIVE--DEPLETED URANIUM" and "NOTIFY CIVIL AUTHORITIES (or COMPANY NAME) IF FOUND."

[65 FR 20345, Apr. 17, 2000]

§ 39.51 Use of a sealed source in a well without a surface casing.

[Top of File]

The licensee may use a sealed source in a well without a surface casing for protecting fresh water aquifers only if the licensee follows a procedure for reducing the probability of the source becoming lodged in the well. The procedure must be approved by the Commission pursuant to § 39.13(c) or by an Agreement State.

§ 39.53 Energy compensation source.

[Top of File]

The licensee may use an energy compensation source (ECS) which is contained within a logging tool, or other tool components, only if the ECS contains quantities of licensed material not exceeding 3.7 MBq [100 microcuries].

(a) For well logging applications with a surface casing for protecting fresh water aquifers, use of the ECS is only subject to the requirements of §§ 39.35, 39.37 and 39.39.

(b) For well logging applications without a surface casing for protecting fresh water aquifers, use of the ECS is only subject to the requirements of §§ 39.15, 39.35, 39.37, 39.39, 39.51, and 39.77.

[65 FR 20345, Apr. 17, 2000]

§ 39.55 Tritium neutron generator target source.

[Top of File]

(a) Use of a tritium neutron generator target source, containing quantities not exceeding 1,110 GBg [30 curies] and in a well with a surface casing to protect fresh water aquifers, is subject to the requirements of this part except §§ 39.15, 39.41, and 39.77.

(b) Use of a tritium neutron generator target source, containing quantities exceeding 1,110 GBg [30 curies] or in a well without a surface casing to protect fresh water aquifers, is subject to the requirements of this part except § 39.41.

[65 FR 20345, Apr. 17, 2000; 68 FR 75390, Dec. 31, 2003]

Subpart D--Radiation Safety Requirements

[Top of File]

§ 39.61 Training.

(a) The licensee may not permit an individual to act as a logging supervisor until that person--

(1) Has completed training in the subjects outlined in paragraph (e) of this section;

(2) Has received copies of, and instruction in--

(i) The NRC regulations contained in the applicable sections of parts 19, 20, and 39 of this chapter;

(ii) The NRC license under which the logging supervisor will perform well logging; and

(iii) The licensee's operating and emergency procedures required by § 39.63;

(3) Has completed on-the-job training and demonstrated competence in the use of licensed materials, remote handling tools, and radiation survey instruments by a field evaluation; and

(4) Has demonstrated understanding of the requirements in paragraphs (a) (1) and (2) of this section by successfully completing a written test.

(b) The licensee may not permit an individual to act as a logging assistant until that person--

(1) Has received instruction in applicable sections of parts 19 and 20 of this chapter;

(2) Has received copies of, and instruction in, the licensee's operating and emergency procedures required by § 39.63;

(3) Has demonstrated understanding of the materials listed in paragraphs (b) (1) and (2) of this section by successfully completing a written or oral test; and

(4) Has received instruction in the use of licensed materials, remote handling tools, and radiation survey instruments, as appropriate for the logging assistant's intended job responsibilities.

(c) The licensee shall provide safety reviews for logging supervisors and logging assistants at least once during each calendar year.

(d) The licensee shall maintain a record on each logging supervisor's and logging assistant's training and annual safety review. The training records must include copies of written tests and dates of oral tests given after July 14, 1987. The training records must be retained until 3

years following the termination of employment. Records of annual safety reviews must list the topics discussed and be retained for 3 years.

(e) The licensee shall include the following subjects in the training required in paragraph (a)(1) of this section:

(1) Fundamentals of radiation safety including--

(i) Characteristics of radiation;

(ii) Units of radiation dose and quantity of radioactivity;

(iii) Hazards of exposure to radiation;

(iv) Levels of radiation from licensed material;

(v) Methods of controlling radiation dose (time, distance, and shielding); and

(vi) Radiation safety practices, including prevention of contamination, and methods of decontamination.

(2) Radiation detection instruments including--

(i) Use, operation, calibration, and limitations of radiation survey instruments;

(ii) Survey techniques; and

(iii) Use of personnel monitoring equipment;

(3) Equipment to be used including--

(i) Operation of equipment, including source handling equipment and remote handling tools;

(ii) Storage, control, and disposal of licensed material; and

(iii) Maintenance of equipment.

(4) The requirements of pertinent Federal regulations. And

(5) Case histories of accidents in well logging.

§ 39.63 Operating and emergency procedures.

[Top of File]

Each licensee shall develop and follow written operating and emergency procedures that cover--

(a) The handling and use of licensed materials including the use of sealed sources in wells without surface casing for protecting fresh water aquifers, if appropriate;

(b) The use of remote handling tools for handling sealed sources and radioactive tracer material except low-activity calibration sources;

(c) Methods and occasions for conducting radiation surveys, including surveys for detecting contamination, as required by § 39.67(c) - (e);

(d) Minimizing personnel exposure including exposures from inhalation and ingestion of licensed tracer materials;

(e) Methods and occasions for locking and securing stored licensed materials;

(f) Personnel monitoring and the use of personnel monitoring equipment;

(g) Transportation of licensed materials to field stations or temporary jobsites, packaging of licensed materials for transport in vehicles, placarding of vehicles when needed, and physically securing licensed materials in transport vehicles during transportation to prevent accidental loss, tampering, or unauthorized removal;

(h) Picking up, receiving, and opening packages containing licensed materials, in accordance with § 20.1906 of this chapter;

(i) For the use of tracers, decontamination of the environment, equipment, and personnel;

(j) Maintenance of records generated by logging personnel at temporary jobsites;

(k) The inspection and maintenance of sealed sources, source holders, logging tools, injection tools, source handling tools, storage containers, transport containers, and uranium sinker bars as required by § 39.43;

(l) Identifying and reporting to NRC defects and noncompliance as required by Part 21 of this chapter;

(m) Actions to be taken if a sealed source is lodged in a well;

(n) Notifying proper persons in the event of an accident; and

(o) Actions to be taken if a sealed source is ruptured including actions to prevent the spread of contamination and minimize inhalation and ingestion of licensed materials and actions to obtain suitable radiation survey instruments as required by § 39.33(b).

[52 FR 8234, Mar. 17, 1987, as amended at 67 FR 77652, Dec. 19, 2002]

§ 39.65 Personnel monitoring.

[Top of File]

(a) The licensee may not permit an individual to act as a logging supervisor or logging assistant unless that person wears, at all times during the handling of licensed radioactive materials, a personnel dosimeter that is processed and evaluated by an accredited National Voluntary Laboratory Accreditation Program (NVLAP) processor. Each personnel dosimeter must be assigned to and worn by only one individual. Film badges must be replaced at least monthly and other personnel dosimeters replaced at least quarterly. After replacement, each personnel dosimeter must be promptly processed.

(b) The licensee shall provide bioassay services to individuals using licensed materials in subsurface tracer studies if required by the license.

(c)The licensee shall retain records of personnel dosimeters required by paragraph (a) of this section and bioassay results for inspection until the Commission authorizes disposition of the records.

[52 FR 8234, Mar. 17, 1987, as amended at 65 FR 63752, Oct. 24, 2000]

§ 39.67 Radiation surveys.

[Top of File]

(a) The licensee shall make radiation surveys, including but not limited to the surveys required under paragraphs (b) through (e) of this section, of each area where licensed materials are used and stored.

(b) Before transporting licensed materials, the licensee shall make a radiation survey of the position occupied by each individual in the vehicle and of the exterior of each vehicle used to transport the licensed materials.

(c) If the sealed source assembly is removed from the logging tool before departure from the temporary jobsite, the licensee shall confirm that the logging tool is free of contamination by energizing the logging tool detector or by using a survey meter.

(d) If the licensee has reason to believe that, as a result of any operation involving a sealed source, the encapsulation of the sealed source could be damaged by the operation, the licensee shall conduct a radiation survey, including a contamination survey, during and after the operation.

(e) The licensee shall make a radiation survey at the temporary jobsite before and after each subsurface tracer study to confirm the absence of contamination.

(f) The results of surveys required under paragraphs (a) through (e) of this section must be recorded and must include the date of the survey, the name of the individual making the survey, the identification of the survey, instrument used, and the location of the survey. The licensee shall retain records of surveys for inspection by the Commission for 3 years after they are made.

§ 39.69 Radioactive contamination control.

[Top of File]

(a) If the licensee detects evidence that a sealed source has ruptured or licensed materials have caused contamination, the licensee shall initiate immediately the emergency procedures required by § 39.63.

(b) If contamination results from the use of licensed material in well logging, the licensee shall decontaminate all work areas, equipment, and unrestricted areas.

(c) During efforts to recover a sealed source lodged in the well, the licensee shall continuously monitor, with an appropriate radiation detection instrument or a logging tool with a radiation detector, the circulating fluids from the well, if any, to check for contamination resulting from damage to the sealed source.

Subpart E--Security, Records, Notifications

[Top of File]

§ 39.71 Security.

(a) A logging supervisor must be physically present at a temporary jobsite whenever licensed materials are being handled or are not stored and locked in a vehicle or storage place. The logging supervisor may leave the jobsite in order to obtain assistance if a source becomes lodged in a well.

(b) During well logging, except when radiation sources are below ground or in shipping or storage containers, the logging supervisor or other individual designated by the logging supervisor shall maintain direct surveillance of the operation to prevent unauthorized entry into a restricted area, as defined in § 20.1003 of this chapter.

[52 FR 8234, Mar. 17, 1987, as amended at 63 FR 39483, July 23, 1998]

§ 39.73 Documents and records required at field stations.

[Top of File]

Each licensee shall maintain the following documents and records at the field station:

(a) A copy of parts 19, 20, and 39 of NRC regulations;

(b) The license authorizing the use of licensed material;

(c) Operating and emergency procedures required by § 39.63;

(d) The record of radiation survey instrument calibrations required by § 39.33;

(e) The record of leak test results required by § 39.35;

(f) Physical inventory records required by § 39.37;

(g) Utilization records required by § 39.39;

(h) Records of inspection and maintenance required by § 39.43;

(i) Training records required by § 39.61(d); and

(j) Survey records required by § 39.67.

§ 39.75 Documents and records required at temporary jobsites.

[Top of File]

Each licensee conducting operations at a temporary jobsite shall maintain the following documents and records at the temporary jobsite until the well logging operation is completed:

(a) Operating and emergency procedures required by § 39.63.

(b) Evidence of latest calibration of the radiation survey instruments in use at the site required by § 39.33.

(c) Latest survey records required by §§ 39.67 (b), (c), and (e).

(d) The shipping papers for the transportation of radioactive materials required by § 71.5 of this chapter; and

(e) When operating under reciprocity pursuant to § 150.20 of this chapter, a copy of the Agreement State license authorizing use of licensed materials.

§ 39.77 Notification of incidents and lost sources; abandonment procedures for irretrievable sources.

[Top of File]

(a) The licensee shall immediately notify the appropriate NRC Regional Office by telephone and subsequently, within 30 days, by confirmation in writing, using an appropriate method listed in § 30.6(a) of this chapter, if the licensee knows or has reason to believe that a sealed source has been ruptured. The written confirmation must designate the well or other location, describe the magnitude and extent of the escape of licensed materials, assess the consequences of the rupture, and explain efforts planned or being taken to mitigate these consequences.

(b) The licensee shall notify the Commission of the theft or loss of radioactive materials, radiation overexposures, excessive levels and concentrations of radiation, and certain other accidents as required by §§ 20.2201 - 20.2202, § 20.2203 and § 30.50 of this chapter.

(c) If a sealed source becomes lodged in a well, and when it becomes apparent that efforts to recover the sealed source will not be successful, the licensee shall--

(1) Notify the appropriate NRC Regional Office by telephone of the circumstances that resulted in the inability to retrieve the source and--

(i) Obtain NRC approval to implement abandonment procedures; or

(ii) That the licensee implemented abandonment before receiving NRC approval because the licensee believed there was an immediate threat to public health and safety; and

(2) Advise the well owner or operator, as appropriate, of the abandonment procedures under § 39.15 (a) or (c); and

(3) Either ensure that abandonment procedures are implemented within 30 days after the sealed source has been classified as irretrievable or request an extension of time if unable to complete the abandonment procedures.

(d) The licensee shall, within 30 days after a sealed source has been classified as irretrievable, make a report in writing to the appropriate NRC Regional Office. The licensee shall send a copy of the report to each appropriate State or Federal agency that issued permits or otherwise approved of the drilling operation. The report must contain the following information:

(1) Date of occurrence;

(2) A description of the irretrievable well logging source involved including the radionuclide and its quantity, chemical, and physical form;

(3) Surface location and identification of the well;

(4) Results of efforts to immobilize and seal the source in place;

(5) A brief description of the attempted recovery effort;

(6) Depth of the source;

(7) Depth of the top of the cement plug;

(8) Depth of the well;

(9) The immediate threat to public health and safety justification for implementing abandonment if prior NRC approval was not obtained in accordance with paragraph (c)(1)(ii) of this section;

(10) Any other information, such as a warning statement, contained on the permanent identification plaque; and

(11) State and Federal agencies receiving copy of this report.

[52 FR 8234, Mar. 17, 1987, as amended at 56 FR 64980, Dec. 13, 1991; 58 FR 67660, Dec. 22, 1993; 65 FR 20345, Apr. 17, 2000; 68 FR 58806, Oct. 10, 2003]

Subpart F--Exemptions

[Top of File]

§ 39.91 Applications for exemptions.

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and

security and are otherwise in the public interest.

Subpart G--Enforcement

[Top of File]

§ 39.101 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55074, Nov. 24, 1992]

§ 39.103 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 39 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 39 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 39.1, 39.2, 39.5, 39.8, 39.13, 39.91, 39.101, and 39.103.

[57 FR 55074, Nov. 24, 1992]

PART 40--DOMESTIC LICENSING OF SOURCE MATERIAL

[Top of File]

General Provisions

[Top of File]

§ 40.1 Purpose.

(a) The regulations in this part establish procedures and criteria for the issuance of licenses to receive title to, receive, possess, use, transfer, or deliver source and byproduct materials, as defined in this part, and establish and provide for the terms and conditions upon which the Commission will issue such licenses. (Additional requirements applicable to natural and depleted uranium at enrichment facilities are set forth in § 70.22 of this chapter.) These regulations also provide for the disposal of byproduct material and for the long-term care and custody of byproduct material and residual radioactive material. The regulations in this part also establish certain requirements for the physical protection of import, export, and transient shipments of natural uranium. (Additional requirements applicable to the import and export of natural uranium are set forth in part 110 of this chapter.)

(b) The regulations contained in this part are issued under the Atomic Energy Act of 1954, as amended (68 Stat. 919), title II of the Energy Reorganization Act of 1974, as amended (88 Stat. 1242), and titles I and II of the Uranium Mill Tailings Radiation Control Act of 1978, as amended (42 U.S.C. 7901).

[55 FR 45597, Oct. 30, 1990, as amended at 56 FR 55997, Oct. 31, 1991]

§ 40.2 Scope.

[Top of File]

Except as provided in §§ 40.11 to 40.14, inclusive, the regulations in this part apply to all persons in the United States. This part also gives notice to all persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 40.10.

[56 FR 40689, Aug. 15, 1991]

§ 40.2a Coverage of inactive tailings sites.

[Top of File]

(a) Prior to the completion of the remedial action, the Commission will not require a license pursuant to 10 CFR chapter I for possession of residual radioactive materials as defined in this part that are located at a site where milling operations are no longer active, if the site is covered by the remedial action program of title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended. The Commission will exert its regulatory role in remedial actions primarily through concurrence and consultation in the execution of the remedial action pursuant to title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended. After remedial actions are completed, the Commission will license the long-term care of sites, where residual radioactive materials are disposed, under the requirements set out in § 40.27.

(b) The Commission will regulate byproduct material as defined in this part that is located at a site where milling operations are no longer active, if such site is not covered by the remedial action program of title I of the Uranium Mill Tailings Radiation Control Act of 1978. The criteria in appendix A of this part will be applied to such sites.

[45 FR 65531, Oct. 3, 1980, as amended at 55 FR 45598, Oct. 30, 1990]

§ 40.3 License requirements.

[Top of File]

A person subject to the regulations in this part may not receive title to, own, receive, possess, use, transfer, provide for long-term care, deliver or dispose of byproduct material or residual radioactive material as defined in this part or any source material after removal from its place of deposit in nature, unless authorized in a specific or general license issued by the Commission under the regulations in this part.

[55 FR 45598, Oct. 30, 1990]

§ 40.4 Definitions.

Act means the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto;

Agreement State means any State with which the Atomic Energy Commission or the Nuclear Regulatory Commission has entered into an effective agreement under subsection 274b. of the Atomic Energy Act of 1954, as amended.

Alert means events may occur, are in progress, or have occurred that could lead to a release of radioactive material but that the release is not expected to require a response by offsite response organizations to protect persons offsite.

Byproduct Material means the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by such solution extraction operations do not constitute "byproduct material" within this definition.

With the exception of "byproduct material" as defined in section 11e. of the Act, other terms defined in section 11 of the Act shall have the same meaning when used in the regulations in this part.

Commencement of construction means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site but does not include changes desirable for the temporary use of the land for public recreational uses, necessary borings to determine site characteristics or other preconstruction monitoring to establish background information related to the suitability of a site or to the protection of environmental values.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Corporation means the United States Enrichment Corporation (USEC), or its successor, a Corporation that is authorized by statute to lease the gaseous diffusion enrichment plants in Paducah, Kentucky, and Piketon, Ohio, from the Department of Energy, or any person authorized to operate one or both of the gaseous diffusion plants, or other facilities, pursuant to a plan for the privatization of USEC that is approved by the President.

Decommission means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits--

(1) Release of the property for unrestricted use and termination of the license; or

(2) Release of the property under restricted conditions and termination of the license.

Department and Department of Energy means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 et seq.) to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104 (b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

Depleted uranium means the source material uranium in which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

Effective kilogram means (1) for the source material uranium in which the uranium isotope uranium-235 is greater than 0.005 (0.5 weight percent) of the total uranium present: 10,000 kilograms, and (2) for any other source material: 20,000 kilograms.

Foreign obligations means the commitments entered into by the U.S. Government under Atomic Energy Act (AEA) section 123 agreements for cooperation in the peaceful uses of atomic energy. Imports and exports of material or equipment pursuant to such agreements are subject to these commitments, which in some cases involve an exchange of information on imports, exports, retransfers with foreign governments, peaceful end-use assurances, and other conditions placed on the transfer of the material or equipment. The U.S. Government informs the licensee of obligations attached to material.

Government agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

License, except where otherwise specified, means a license issued pursuant to the regulations in this part.

Persons means: (1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy except that the Department of Energy shall be considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244) and the Uranium Mill Tailings Radiation Control Act of 1978 (92 Stat. 3021), any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent or agency of the foregoing.

Pharmacist means an individual registered by a state or territory of the United States, the District of Columbia or the Commonwealth of Puerto Rico to compound and dispense drugs, prescriptions and poisons.

Physician means a medical doctor or doctor of osteopathy licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to prescribe drugs in the practice of medicine.

Principal activities, as used in this part, means activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

Reconciliation means the process of evaluating and comparing licensee reports required under this part to the projected material balances generated by the Nuclear Materials Management and Safeguards System. This process is considered complete when the licensee resolves any differences between the reported and projected balances, including those listed for foreign obligated materials.

Residual radioactive material means: (1) Waste (which the Secretary of Energy determines to be radioactive) in the form of tailings resulting from the processing of ores for the extraction of uranium and other valuable constituents of the ores; and (2) other waste (which the Secretary of Energy determines to be radioactive) at a processing site which relates to such processing, including any residual stock of unprocessed ores or low-grade materials. This term is used only with respect to materials at sites subject to remediation under title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended.

Site area emergency means events may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by offsite response organizations to protect persons offsite.

Source Material means: (1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of: (i) Uranium, (ii) thorium or (iii) any combination thereof. Source material does not include special nuclear material.

Special nuclear material means: (1) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material; or (2) any material artificially enriched by any of the foregoing.

Transient shipment means a shipment of nuclear material, originating and terminating in foreign countries, on a vessel or aircraft that stops at a United States port.

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

Unrefined and unprocessed ore means ore in its natural form prior to any processing, such as grinding, roasting or beneficiating, or refining.

Uranium enrichment facility means:

(1) Any facility used for separating the isotopes of uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for such equipment or device, capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

Uranium Milling means any activity that results in the production of byproduct material as defined in this part.

[26 FR 284, Jan. 14, 1961; 73 FR 32461, Jun. 9, 2008]

Editorial Note: For Federal Register citations affecting § 40.4, see the List of CFR Sections Affected in the Finding Aids section.

§ 40.5 Communications.

[Top of File]

(a) Unless otherwise specified or covered under the regional licensing program as provided in paragraph (b) of this section, any communication or report concerning the regulations in this part and any application filed under these regulations may be submitted to the Commission as follows:

(1) By mail addressed: ATTN: Document Control Desk, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Security, or Director, Office of Nuclear Security and Incident Response, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

(2) By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland.

(3) Where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services,

U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(b) The Commission has delegated to the four Regional Administrators licensing authority for selected parts of its decentralized licensing program for nuclear materials as described in paragraph (b)(1) of this section. Any communication, report, or application covered under this licensing program must be submitted to the appropriate Regional Administrator. The administrators' jurisdictions and mailing addresses are listed in paragraph (b)(2) of this section.

(1) The delegated licensing program includes authority to issue, renew, amend, cancel, modify, suspend, or revoke licenses for nuclear materials issued pursuant to 10 CFR parts 30 through 36, 39, 40, and 70 to all persons for academic, medical, and industrial uses, with the following exceptions:

(i) Activities in the fuel cycle and special nuclear material in quantities sufficient to constitute a critical mass in any room or area. This exception does not apply to license modifications relating to termination of special nuclear material licenses that authorize possession of larger quantities when the case is referred for action from NRC's Headquarters to the Regional Administrators.

(ii) Health and safety design review of sealed sources and devices and approval, for licensing purposes, of sealed sources and devices.

(iii) Processing of source material for extracting of metallic compounds (including Zirconium, Hafnium, Tantalum, Titanium, Niobium, etc.).

(iv) Distribution of products containing radioactive material to persons exempt pursuant to 10 CFR 32.11 through 32.26.

(v) New uses or techniques for use of byproduct, source, or special nuclear material.

(vi) Uranium enrichment facilities.

(2) *Submission*--(i) *Region I*. The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region I non-Agreement States and the District of Columbia: Connecticut, Delaware, Maine, Massachusetts, New Jersey, Pennsylvania, and Vermont. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, 475 Allendale Road, King of Prussia, Pennsylvania 19406-1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter@nrc.gov*.

(ii) *Region II*. The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region II non-Agreement states and territories: Virginia, West Virginia, Puerto Rico, and the Virgin Islands. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region II Material Licensing/Inspection Branch, Sam Nunn Atlanta Federal Center, Suite 23T85, 61 Forsyth Street, Atlanta, Georgia 30303-8931; where e-mail is appropriate it should be addressed to *RidsRgn2MailCenter@nrc.gov*.

(iii) *Region III.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region III non-Agreement States: Indiana, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter@nrc.gov*.

(iv) *Region IV*. The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region IV non-Agreement States and a territory: Alaska, Hawaii, Montana, Oklahoma, South Dakota, Wyoming, and Guam. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Material Radiation Protection Section, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter@nrc.gov*.

[48 FR 16031, Apr. 14, 1983, as amended at 49 FR 19631, May 9, 1984; 49 FR 47824, Dec. 7, 1984; 50 FR 14694, Apr. 15, 1985; 51 FR 36001, Oct. 8, 1986; 52 FR 8241, Mar. 17, 1987; 52 FR 38392, Oct. 16, 1987; 52 FR 48093, Dec. 18, 1987; 53 FR 3862, Feb. 10, 1988; 53 FR 43420, Oct. 27, 1988; 57 FR 18390, Apr. 30, 1992; 58 FR 7736, Feb. 9, 1993; 58 FR 64111, Dec. 6, 1993; 59 FR 17466, Apr. 13, 1994; 60 FR 24551, May 9, 1995; 62 FR 22880, Apr. 28, 1997; 68 FR 58806, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 71 FR 15011, Mar. 27, 2006; 72 FR 33386, Jun. 18, 2007; 73 FR 5720, Jan. 31, 2008]

§ 40.6 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 40.7 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in paragraph (a) introductory text of this section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) introductory text or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) introductory text.

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraphs (a), (e), or (f) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant may be grounds for--

(1) Denial, revocation, or suspension of the license.

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant.

(3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) Each specific licensee, each applicant for a specific license, and each general licensee subject to part 19 shall prominently post the revision of NRC Form 3, "Notice to Employees", referenced in 10 CFR 19.11(c).

(2) The posting of NRC Form 3 must be at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(3) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[58 FR 52409, Oct. 8, 1993, as amended at 60 FR 24551, May 9, 1995; 61 FR 6765, Feb. 22, 1996; 68 FR 58806, Oct. 10, 2003; 72 FR 63973, Nov. 14, 2007]

§ 40.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0020.

(b) The approved information collection requirements contained in this part appear in §§ 40.9, 40.23, 40.25, 40.26, 40.27, 40.31, 40.35, 40.36, 40.41, 40.42, 40.43, 40.44, 40.51, 40.60, 40.61, 40.64, 40.65, 40.66, 40.67, and appendix A to this part.

(c) This Part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In §§ 40.31, 40.43, 40.44, and appendix A, NRC Form 313 is approved under control number 3150-0120.

(2) In § 40.31, DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control numbers 0694–0135.

(3) In § 40.31, Forms N–71 and associated forms are approved under control number 3150–0056.

(4) In § 40.42, NRC Form 314 is approved under control number 3150–0028.

(5) In § 40.64, DOE/NRC Form 741 is approved under control number 3150–0003.

[49 FR 19626, May 9, 1984, as amended at 56 FR 40768, Aug. 16, 1991; 58 FR 68731, Dec. 29, 1993; 62 FR 52187, Oct. 6, 1997; 73 FR 78604, Dec. 23, 2008]

§ 40.9 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or undating requirements.

[52 FR 49371, Dec. 31, 1987]

§ 40.10 Deliberate misconduct.

[Top of File]

(a) Any licensee, applicant for a license, employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any

license issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

[63 FR 1896, Jan. 13, 1998]

Exemptions

[Top of File]

§ 40.11 Persons using source material under certain Department of Energy and Nuclear Regulatory Commission contracts.

Except to the extent that Department facilities or activities of the types subject to licensing pursuant to section 202 of the Energy Reorganization Act of 1974 or the Uranium Mill Tailings Radiation Control Act of 1978 are involved, any prime contractor of the Department is exempt from the requirements for a license set forth in sections 62, 63, and 64 of the Act and from the regulations in this part to the extent that such contractor, under his prime contract with the Department, receives, possesses, uses, transfers or delivers source material for: (a) The performance of work for the Department at a United States Government-owned or controlled site, including the transportation of source material to or from such site and the performance of contract services during temporary interruptions of such transportation; (b) research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof; or (c) the use or operation of nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel. In addition to the foregoing exemptions, and subject to the requirement for licensing of Department facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974 or the Uranium Mill Tailings Radiation Control Act of 1980, any prime contractor or subcontractor of the Department or the Commission is exempt from the requirements for a license set forth in sections 62, 63, and 64 of the Act and from the regulations in this part to the extent that such prime contractor or subcontractor receives, possesses, uses, transfers or delivers source material under his prime contract or subcontract when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

[40 FR 8787, Mar. 3, 1975, as amended at 43 FR 6923, Feb. 17, 1978; 45 FR 65531, Oct. 3, 1980]

§ 40.12 Carriers.

[Top of File]

(a) Except as specified in paragraph (b) of this section, common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in this part and the requirements for a license set forth in section 62 of the Act to the extent that they transport or store source material in the regular course of the carriage for another or storage incident thereto.

(b) The exemption in paragraph (a) of this section does not apply to a person who possesses a transient shipment (as defined in § 40.4(r)), an import shipment, or an export shipment of natural uranium in an amount exceeding 500 kilograms, unless the shipment is in the form of ore or ore residue.

[52 FR 9651, Mar. 26, 1987]

§ 40.13 Unimportant quantities of source material.

[Top of File]

(a) Any person is exempt from the regulations in this part and from the requirements for a license set forth in section 62 of the Act to the extent that such person receives, possesses, uses, transfers or delivers source material in any chemical mixture, compound, solution, or alloy in which the source material is by weight less than one-twentieth of 1 percent (0.05 percent) of the mixture, compound, solution or alloy. The exemption contained in this paragraph does not include byproduct material as defined in this part.

(b) Any person is exempt from the regulations in this part and from the requirements for a license set forth in section 62 of the act to the extent that such person receives, possesses, uses, or transfers unrefined and unprocessed ore containing source material; provided, that, except as authorized in a specific license, such person shall not refine or process such ore.

(c) Any person is exempt from the regulation in this part and from the requirements for a license set forth in section 62 of the Act to the extent that such person receives, possesses, uses, or transfers:

(1) Any quantities of thorium contained in (i) incandescent gas mantles, (ii) vacuum tubes, (iii) welding rods, (iv) electric lamps for illuminating purposes: *Provided*, That each lamp does not contain more than 50 milligrams of thorium, (v) germicidal lamps, sunlamps, and lamps for outdoor or industrial lighting: *Provided*, That each lamp does not contain more than 2 grams of thorium, (vi) rare earth metals and compounds, mixtures, and products containing not more than 0.25 percent by weight thorium, uranium, or any combination of these, or (vii) personnel neutron dosimeters: *Provided*, That each dosimeter does not contain more than 50 milligrams of thorium.

(2) Source material contained in the following products:

(i) Glazed ceramic tableware, provided that the glaze contains not more than 20 percent by weight source material;

(ii) Piezoelectric ceramic containing not more than 2 percent by weight source material;

(iii) Glassware containing not more than 10 percent by weight source material; but not including commercially manufactured glass brick, pane glass, ceramic tile, or other glass or ceramic used in construction;

(iv) Glass enamel or glass enamel frit containing not more than 10 percent by weight source material imported or ordered for importation into the United States, or initially distributed by manufacturers in the United States, before July 25, 1983.[1]

(3) Photographic film, negatives, and prints containing uranium or thorium;

(4) Any finished product or part fabricated of, or containing tungsten or magnesium-thorium alloys, provided that the thorium content of the alloy does not exceed 4 percent by weight and that the exemption contained in this subparagraph shall not be deemed to authorize the chemical, physical or metallurgical treatment or processing of any such product or part; and

(5) Uranium contained in counterweights installed in aircraft, rockets, projectiles, and missiles, or stored or handled in connection with installation or removal of such counterweights: *Provided*, That:

(i) The counterweights are manufactured in accordance with a specific license issued by the Commission or the Atomic Energy Commission authorizing distribution by the licensee pursuant to this paragraph;

(ii) Each counterweight has been impressed with the following legend clearly legible through any plating or other covering: "Depleted Uranium";[2]

(iii) Each counterweight is durably and legibly labeled or marked with the identification of the manufacturer, and the statement: "Unauthorized Alterations Prohibited";[2] and

(iv) The exemption contained in this paragraph shall not be deemed to authorize the chemical, physical, or metallurgical treatment or processing of any such counterweights other than repair or restoration of any plating or other covering.

(6) Natural or depleted uranium metal used as shielding constituting part of any shipping container: *Provided*, That:

(i) The shipping container is conspicuously and legibly impressed with the legend "CAUTION--RADIOACTIVE SHIELDING--URANIUM"; and

(ii) The uranium metal is encased in mild steel or equally fire resistant metal of minimum wall thickness of one-eighth inch (3.2 mm).

(7) Thorium contained in finished optical lenses, provided that each lens does not contain more than 30 percent by weight of thorium; and that the exemption contained in this subparagraph shall not be deemed to authorize either:

(i) The shaping, grinding or polishing of such lens or manufacturing processes other than the assembly of such lens into optical systems and devices without any alteration of the lens; or

(ii) The receipt, possession, use, transfer, or of thorium contained in contact lenses, or in spectacles, or in eyepieces in binoculars or other optical instruments.

(8) Thorium contained in any finished aircraft engine part containing nickel-thoria alloy, *Provided*, That:

(i) The thorium is dispersed in the nickel-thoria alloy in the form of finely divided thoria (thorium dioxide); and

(ii) The thorium content in the nickel-thoria alloy does not exceed 4 percent by weight.

(9) The exemptions in this paragraph (c) do not authorize the manufacture of any of the products described.

(d) Any person is exempt from the regulations in this part and from the requirements for a license set forth in section 62 of the Act to the extent that such person receives, possesses, uses, or transfers uranium contained in detector heads for use in fire detection units, provided that each detector head contains not more than 0.005 microcurie of uranium. The exemption in this paragraph does not authorize the manufacture of any detector head containing uranium.

[26 FR 284, Jan. 14, 1961]

Editorial Note: For Federal Register citations affecting § 40.13, see the List of CFR Sections Affected in the Finding Aids section.

[1] On July 25, 1983, the exemption of glass enamel or glass enamel frit was suspended. The exemption was eliminated on September 11,

1984.

[2] The requirements specified in paragraphs (c)(5) (ii) and (iii) of this section need not be met by counterweights manufactured prior to Dec. 31, 1969: Provided, That such counterweights were manufactured under a specific license issued by the Atomic Energy Commission and were impressed with the legend required by § 40.13(c)(5)(ii) in effect on June 30, 1969.

§ 40.14 Specific exemptions.

[Top of File]

(a) The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulation in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

(b) [Reserved]

(c) The Department of Energy is exempt from the requirements of this part to the extent that its activities are subject to the requirements of part 60 or 63 of this chapter.

(d) Except as specifically provided in part 61 of this chapter any licensee is exempt from the requirements of this part to the extent that its activities are subject to the requirements of part 61 of this chapter.

[37 FR 5747, Mar. 21, 1972, as amended at 39 FR 26279, July 18, 1974; 40 FR 8787, Mar. 3, 1975; 45 FR 65531, Oct. 3, 1980; 46 FR 13979, Feb. 25, 1981; 47 FR 57481, Dec. 27, 1982; 66 FR 55790, Nov. 2, 2001]

General Licenses

[Top of File]

§ 40.20 Types of licenses.

(a) Licenses for source material and byproduct material are of two types: general and specific. Licenses for long-term care and custody of residual radioactive material at disposal sites are general licenses. The general licenses provided in this part are effective without the filing of applications with the Commission or the issuance of licensing documents to particular persons. Specific licenses are issued to named persons upon applications filed pursuant to the regulations in this part.

(b) Section 40.27 contains a general license applicable for custody and long-term care of residual radioactive material at uranium mill tailings disposal sites remediated under title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended.

(c) Section 40.28 contains a general license applicable for custody and long-term care of byproduct material at uranium or thorium mill tailings disposal sites under title II of the Uranium Mill Tailings Radiation Control Act of 1978, as amended.

[55 FR 45598, Oct. 30, 1990]

§ 40.21 General license to receive title to source or byproduct material.

[Top of File]

A general license is hereby issued authorizing the receipt of title to source or byproduct material, as defined in this part, without regard to quantity. This general license does not authorize any person to receive, possess, deliver, use, or transfer source or byproduct material.

[45 FR 65531, Oct. 3, 1980]

§ 40.22 Small quantities of source material.

[Top of File]

(a) A general license is hereby issued authorizing commercial and industrial firms, research, educational and medical institutions and Federal, State and local government agencies to use and transfer not more than fifteen (15) pounds of source material at any one time for research, development, educational, commercial or operational purposes. A person authorized to use or transfer source material, pursuant to this general license, may not receive more than a total of 150 pounds of source material in any one calendar year.

(b) Persons who receive, possess, use, or transfer source material pursuant to the general license issued in paragraph (a) of this section are exempt from the provisions of parts 19, 20, and 21, of this chapter to the extent that such receipt, possession, use or transfer are within the terms of such general license: *Provided, however*, That this exemption shall not be deemed to apply to any such person who is also in possession of source material under a specific license issued pursuant to this part.

(c) Persons who receive, possess, use or transfer source material pursuant to the general license in paragraph (a) of this section are prohibited from administering source material, or the radiation therefrom, either externally or internally, to human beings except as may be authorized by NRC in a specific license.

[26 FR 284, Jan. 14, 1961, as amended at 38 FR 22221, Aug. 17, 1973; 42 FR 28896, June 6, 1977; 45 FR 55420, Aug. 20, 1980]

§ 40.23 General license for carriers of transient shipments of natural uranium other than in the form of ore or ore residue.

[Top of File]

(a) A general license is hereby issued to any person to possess a transient shipment of natural uranium, other than in the form of ore or ore residue, in amounts exceeding 500 kilograms.

(b)(1) Persons generally licensed under paragraph (a) of this section, who plan to carry a transient shipment with scheduled stops at a United States port, shall notify the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, using an appropriate method listed in § 40.5. The notification must be in writing and must be received at least 10 days before transport of the shipment commences at the shipping facility.

(2) The notification must include the following information:

(i) Location of all scheduled stops in United States territory;

(ii) Arrival and departure times for all scheduled stops in United States territory;

(iii) The type of transport vehicle;

(iv) A physical description of the shipment;

(v) The numbers and types of containers;

(vi) The name and telephone number of the carrier's representatives at each stopover location in the United States territory;

(vii) A listing of the modes of shipments, transfer points, and routes to be used;

(viii) The estimated date and time that shipment will commence and that each nation (other than the United States) along the route is scheduled to be entered;

(ix) For shipment between countries that are not party to the Convention on the Physical Protection of Nuclear Material (i.e., not listed in appendix F to part 73 of this chapter), a certification that arrangements have been made to notify the Director, Division of Nuclear Security when the shipment is received at the destination facility.

(c) Persons generally licensed under this section making unscheduled stops at United States ports, immediately after the decision to make an unscheduled stop, shall provide to the Director, Division of Nuclear Security the information required under paragraph (b) of this section.

(d) A licensee who needs to amend a notification may do so by telephoning the Division of Nuclear Security at (301) 415-6828.

[52 FR 9651, Mar. 26, 1987, as amended at 53 FR 4110, Feb. 12, 1988; 60 FR 24551, May 9, 1995; 68 FR 58807, Oct. 10, 2003]

§ 40.24 [Reserved]

[Top of File]

§ 40.25 General license for use of certain industrial products or devices.

[Top of File]

(a) A general license is hereby issued to receive, acquire, possess, use, or transfer, in accordance with the provisions of paragraphs (b), (c), (d), and (e) of this section, depleted uranium contained in industrial products or devices for the purpose of providing a concentrated mass in a small volume of the product or device.

(b) The general license in paragraph (a) of this section applies only to industrial products or devices which have been manufactured or initially transferred in accordance with a specific license issued pursuant to § 40.34 (a) of this part or in accordance with a specific license issued by an Agreement State which authorizes manufacture of the products or devices for distribution to persons generally licensed by the Agreement State.

(c)(1) Persons who receive, acquire, possess, or use depleted uranium pursuant to the general license established by paragraph (a) of this section shall file NRC Form 244, "Registration Certificate—Use of Depleted Uranium Under General License," with the Director, Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 40.5, with a copy to the appropriate NRC Regional Administrator. The form shall be submitted within 30 days after the first receipt or acquisition of such depleted uranium. The registrant shall furnish on NRC Form 244 the following information and such other information as may be required by that form:

(i) Name and address of the registrant;

(ii) A statement that the registrant has developed and will maintain procedures designed to establish physical control over the depleted uranium described in paragraph (a) of this section and designed to prevent transfer of such depleted uranium in any form, including metal scrap, to persons not authorized to receive the depleted uranium; and

(iii) Name and/or title, address, and telephone number of the individual duly authorized to act for and on behalf of the registrant in supervising the procedures identified in paragraph (c)(1)(ii) of this section.

(2) The registrant possessing or using depleted uranium under the general license established by paragraph (a) of this section shall report in writing to the Director, Office of Federal and State Materials and Environmental Management Programs, with a copy to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D of part 20 of this chapter, any changes in information furnished by him in the NRC Form 244 "Registration Certificate—Use of Depleted Uranium Under General License." The report shall be submitted within 30 days after the effective date of such change.

(d) A person who receives, acquires, possesses, or uses depleted uranium pursuant to the general license established by paragraph (a) of this section:

(1) Shall not introduce such depleted uranium, in any form, into a chemical, physical, or metallurgical treatment or process, except a treatment or process for repair or restoration of any plating or other covering of the depleted uranium.

(2) Shall not abandon such depleted uranium.

(3) Shall transfer or dispose of such depleted uranium only by transfer in accordance with the provisions of § 40.51 of this part. In the case where the transferee receives the depleted uranium pursuant to the general license established by paragraph (a) of this section, the transferor shall furnish the transferee a copy of this section and a copy of Form NRC 244. In the case where the transferee receives the depleted uranium pursuant to a general license contained in an Agreement State's regulation equivalent to this section, the transferor shall furnish the transferee a copy of this section and a copy of Form NRC 244 accompanied by a note explaining that use of the product or device is regulated by the Agreement State under requirements substantially the same as those in this section.

(4) Within 30 days of any transfer, shall report in writing to the Director, Office of Federal and State Materials and Environmental Management Programs, with a copy to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D of part 20 of this chapter, the name and address of the person receiving the source material pursuant to such transfer.

(e) Any person receiving, acquiring, possessing, using, or transferring depleted uranium pursuant to the general license established by paragraph (a) of this section is exempt from the requirements of parts 19, 20 and 21 of this chapter with respect to the depleted uranium covered by that general license.

[41 FR 53331, Dec. 6, 1976, as amended at 42 FR 28896, June 6, 1977; 43 FR 6923, Feb. 17, 1978; 43 FR 52202, Nov. 9, 1978; 52 FR 31611, Aug. 21, 1987; 60 FR 24551, May 9, 1995; 68 FR 58807, Oct. 10, 2003; 73 FR 5720, Jan. 31, 2008]

§ 40.26 General license for possession and storage of byproduct material as defined in this part.

[Top of File]

(a) A general license is hereby issued to receive title to, own, or possess byproduct material as defined in this part without regard to form or quantity.

(b) The general license in paragraph (a) of this section applies only: In the case of licensees of the Commission, where activities that result in the production of byproduct material are authorized under a specific license issued by the Commission pursuant to this part, to byproduct material possessed or stored at an authorized disposal containment area or transported incident to such authorized activity: Provided, That authority to receive title to, own, or possess byproduct material under this general license shall terminate when the specific license for source material expires, is renewed, or is amended to include a specific license for byproduct material as defined in this part.

(c) The general license in paragraph (a) of this section is subject to:

(1) The provisions of parts 19, 20, 21, and §§ 40.1, 40.2a, 40.3, 40.4, 40.5, 40.6, 40.41, 40.46, 40.60, 40.61, 40.62, 40.63, 40.65, 40.71, and 40.81 of part 40 of this chapter; and

(2) The documentation of daily inspections of tailings or waste retention systems and the immediate notification of the appropriate NRC regional office as indicated in appendix D to part 20 of this chapter, or the Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555, of any failure in a tailings or waste retention system

that results in a release of tailings or waste into unrestricted areas, or of any unusual conditions (conditions not contemplated in the design of the retention system) that if not corrected could lead to failure of the system and result in a release of tailings or waste into unrestricted areas; and any additional requirements the Commission may by order deem necessary. The licensee shall retain this documentation of each daily inspection as a record for three years after each inspection is documented.

(d) The general license in paragraph (a) of this section shall expire nine months from the effective date of this subparagraph unless an applicable licensee has submitted, pursuant to the provisions of § 40.31 of this part, an application for license renewal or amendment which includes a detailed program for meeting the technical and financial criteria contained in appendix A of this part.

[44 FR 50014, Aug. 24, 1979, as amended at 45 FR 12377, Feb. 26, 1980; 45 FR 65531, Oct. 3, 1980; 53 FR 19248, May 27, 1988; 56 FR 40768, Aug. 16, 1991; 73 FR 5720, Jan. 31, 2008]

§ 40.27 General license for custody and long-term care of residual radioactive material disposal sites.

[Top of File]

(a) A general license is issued for the custody of and long-term care, including monitoring, maintenance, and emergency measures necessary to protect public health and safety and other actions necessary to comply with the standards promulgated under section 275(a) of the Atomic Energy Act of 1954, as amended, for disposal sites under title I of the Uranium Mill Tailings Radiation Control Act of 1978, as amended. The license is available only to the Department of Energy, or another Federal agency designated by the President to provide long-term care. The purpose of this general license is to ensure that uranium mill tailings disposal sites will be cared for in such a manner as to protect the public health, safety, and the environment after remedial action has been completed.

(b) The general license in paragraph (a) of this section becomes effective when the Commission accepts a site Long-Term Surveillance Plan (LTSP) that meets the requirements of this section, and when the Commission concurs with the Department of Energy's determination of completion of remedial action at each disposal site. There is no termination of this general license. The LTSP may incorporate by reference information contained in documents previously submitted to the Commission if the references to the individual incorporated documents are clear and specific. Each LTSP must include--

(1) A legal description of the disposal site to be licensed, including documentation on whether land and interests are owned by the United States or an Indian tribe. If the site is on Indian land, then, as specified in the Uranium Mill Tailings Radiation Control Act of 1978, as amended, the Indian tribe and any person holding any interest in the land shall execute a waiver releasing the United States of any liability or claim by the Tribe or person concerning or arising from the remedial action and holding the United States harmless against any claim arising out of the performance of the remedial action;

(2) A detailed description, which can be in the form of a reference, of the final disposal site conditions, including existing ground water characterization and any necessary ground water protection activities or strategies. This description must be detailed enough so that future inspectors will have a baseline to determine changes to the site and when these changes are serious enough to require maintenance or repairs. If the disposal site has continuing aquifer restoration requirements, then the licensing process will be completed in two steps. The first step includes all items other than ground water restoration. Ground water monitoring, which would be addressed in the LTSP, may still be required in this first step to assess performance of the tailings disposal units. When the Commission concurs with the completion of ground water restoration, the licensee shall assess the need to modify the LTSP and report results to the Commission. If the proposed modifications meet the requirements of this section, the LTSP will be considered suitable to accommodate the second step.

(3) A description of the long-term surveillance program, including proposed inspection frequency and reporting to the Commission (as specified in appendix A, criterion 12 of this part), frequency and extent of ground water monitoring if required, appropriate constituent concentration limits for ground water, inspection personnel qualifications, inspection procedures, recordkeeping and quality assurance procedures;

(4) The criteria for follow-up inspections in response to observations from routine inspections or extreme natural events; and

(5) The criteria for instituting maintenance or emergency measures.

(c) The long-term care agency under the general license established by paragraph (a) of this section shall--

(1) Implement the LTSP as described in paragraph (b) of this section;

(2) Care for the disposal site in accordance with the provisions of the LTSP;

(3) Notify the Commission of any changes to the LTSP; the changes may not conflict with the requirements of this section;

(4) Guarantee permanent right-of-entry to Commission representatives for the purpose of periodic site inspections; and

(5) Notify the Commission prior to undertaking any significant construction, actions, or repairs related to the disposal site, even if the action is required by a State or another Federal agency.

(d) As specified in the Uranium Mill Tailings Radiation Control Act of 1978, as amended, the Secretary of the Interior, with the concurrence of the Secretary of Energy and the Commission, may sell or lease any subsurface mineral rights associated with land on which residual radioactive materials are disposed. In such cases, the Commission shall grant a license permitting use of the land if it finds that the use will not disturb the residual radioactive materials or that the residual radioactive materials will be restored to a safe and environmentally sound

condition if they are disturbed by the use.

(e) The general license in paragraph (a) of this section is exempt from parts 19, 20, and 21 of this chapter, unless significant construction, actions, or repairs are required. If these types of actions are to be undertaken, the licensee shall explain to the Commission which requirements from these parts apply for the actions and comply with the appropriate requirements.

[55 FR 45598, Oct. 30, 1990]

§ 40.28 General license for custody and long-term care of uranium or thorium byproduct materials disposal sites.

[Top of File]

(a) A general license is issued for the custody of and long-term care, including monitoring, maintenance, and emergency measures necessary to protect the public health and safety and other actions necessary to comply with the standards in this part for uranium or thorium mill tailings sites closed under title II of the Uranium Mill Tailings Radiation Control Act of 1978, as amended. The licensee will be the Department of Energy, another Federal agency designated by the President, or a State where the disposal site is located. The purpose of this general license is to ensure that uranium and thorium mill tailings disposal sites will be cared for in such a manner as to protect the public health, safety, and the environment after closure.

(b) The general license in paragraph (a) of this section becomes effective when the Commission terminates, or concurs in an Agreement State's termination of, the current specific license and a site Long-Term Surveillance Plan (LTSP) meeting the requirements of this section has been accepted by the Commission. There is no termination of this general license. If the LTSP has not been formally received by the NRC prior to termination of the current specific license, the Commission may issue a specific order to the intended custodial agency to ensure continued control and surveillance of the disposal site to protect the public health, safety, and the environment. The Commission will not unnecessarily delay the termination of the specific license solely on the basis that an acceptable LTSP has not been received. The LTSP may incorporate by reference information contained in documents previously submitted to the Commission if the references to the individual incorporated documents are clear and specific. Each LTSP must include--

(1) A legal description of the disposal site to be transferred (unless transfer is exempted under provisions of the Atomic Energy Act, § 83(b)(1)(A)) and licensed;

(2) A detailed description, which can be in the form of a reference of the final disposal site conditions, including existing ground water characterization. This description must be detailed enough so that future inspectors will have a baseline to determine changes to the site and when these changes are serious enough to require maintenance or repairs;

(3) A description of the long-term surveillance program, including proposed inspection frequency and reporting to the Commission (as specified in appendix A, Criterion 12 of this part), frequency and extent of ground water monitoring if required, appropriate constituent concentration limits for ground water, inspection personnel qualifications, inspection procedures, recordkeeping and quality assurance procedures;

(4) The criteria for follow-up inspections in response to observations from routine inspections or extreme natural events; and

(5) The criteria for instituting maintenance or emergency measures.

(c) The long-term care agency who has a general license established by paragraph (a) of this section shall--

(1) Implement the LTSP as described in paragraph (b) of this section;

(2) Care for the disposal site in accordance with the provisions of the LTSP;

(3) Notify the Commission of any changes to the LTSP; the changes may not conflict with the requirements of this section;

(4) Guarantee permanent right-of-entry to Commission representatives for the purpose of periodic site inspections; and

(5) Notify the Commission prior to undertaking any significant construction, actions, or repairs related to the disposal site, even if the action is required by a State or another Federal agency.

(d) Upon application, the Commission may issue a specific license, as specified in the Uranium Mill Tailings Radiation Control Act of 1978, as amended, permitting the use of surface and/or subsurface estates transferred to the United States or a State. Although an application may be received from any person, if permission is granted, the person who transferred the land to DOE or the State shall receive the right of first refusal with respect to this use of the land. The application must demonstrate that--

(1) The proposed action does not endanger the public health, safety, welfare, or the environment;

(2) Whether the proposed action is of a temporary or permanent nature, the site would be maintained and/or restored to meet requirements in appendix A of this part for closed sites; and

(3) Adequate financial arrangements are in place to ensure that the byproduct materials will not be disturbed, or if disturbed that the applicant is able to restore the site to a safe and environmentally sound condition.

(e) The general license in paragraph (a) of this section is exempt from parts 19, 20, and 21 of this chapter, unless significant construction, actions, or repairs are required. If these types of actions are to be undertaken, the licensee shall explain to the Commission which requirements from these parts apply for the actions and comply with the appropriate requirements.

(f) In cases where the Commission determines that transfer of title of land used for disposal of any byproduct materials to the United States or any appropriate State is not necessary to protect the public health, safety or welfare or to minimize or eliminate danger to life or property (Atomic Energy Act, § 83(b)(1)(A)), the Commission will consider specific modifications of the custodial agency's LTSP provisions on a case-by-case basis.

[55 FR 45599, Oct. 30, 1990]

License Applications

[Top of File]

§ 40.31 Application for specific licenses.

(a) A person may file an application for specific license on NRC Form 313, "Application for Material License," in accordance with the instructions in § 40.5 of this chapter. Information contained in previous applications, statements or reports filed with the Commission may be incorporated by reference provided that the reference is clear and specific.

(b) The Commission may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked. All applications and statements shall be signed by the applicant or licensee or a person duly authorized to act for and on his behalf.

(c) Applications and documents submitted to the Commission in connection with applications will be made available for public inspection in accordance with the provisions of the regulations contained in parts 2 and 9 of this chapter.

(d) An application for a license filed pursuant to the regulations in this part will be considered also as an application for licenses authorizing other activities for which licenses are required by the Act: *Provided*, That the application specifies the additional activities for which licenses are requested and complies with regulations of the Commission as to applications for such licenses.

(e) Each application for a source material license, other than a license exempted from part 170 of this chapter, shall be accompanied by the fee prescribed in § 170.31 of this chapter. No fee will be required to accompany an application for renewal or amendment of a license, except as provided in § 170.31 of this chapter.

(f) An application for a license to possess and use source material for uranium milling, production of uranium hexafluoride, or for the conduct of any other activity which the Commission has determined pursuant to subpart A of part 51 of this chapter will significantly affect the quality of the environment shall be filed at least 9 months prior to commencement of construction of the plant or facility in which the activity will be conducted and shall be accompanied by any Environmental Report required pursuant to subpart A of part 51 of this chapter.

(g) An applicant for a license to possess and use source material, or the recipient of such a license shall report information to the Commission as follows:

(1) In response to a written request by the Commission, a uranium or thorium processing plant, and any other applicant for a license to possess and use source material, shall submit facility information described in § 75.10 of this chapter on Form N–71 and associated forms and site information on DOC/NRC Form AP–A, and associated forms;

(2) As required by the Additional Protocol, a uranium or thorium processing plant, and any other applicant for a license to possess and use source material, shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms; shall permit verification of this information by the International Atomic Energy Agency (IAEA); and shall take other actions as may be necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter; or

(3) As required by the Additional Protocol, an ore processing plant or a facility using or storing ore concentrates or other impure source materials shall submit the information described in § 75.11 of this chapter, as appropriate, on DOC/NRC Form AP–1 and associated forms; shall permit verification of this information by the International Atomic Energy Agency (IAEA); and shall take other actions as may be necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

(h) An application for a license to receive, possess, and use source material for uranium or thorium milling or byproduct material, as defined in this part, at sites formerly associated with such milling shall contain proposed written specifications relating to milling operations and the disposition of the byproduct material to achieve the requirements and objectives set forth in appendix A of this part. Each application must clearly demonstrate how the requirements and objectives set forth in appendix A of this part have been addressed. Failure to clearly demonstrate how the requirements and objectives in appendix A have been addressed shall be grounds for refusing to accept an application.

(i) As provided by § 40.36, certain applications for specific licenses filed under this part must contain a proposed decommissioning funding plan or a certification of financial assurance for decommissioning. In the case of renewal applications submitted before July 27, 1990, this

submittal may follow the renewal application but must be submitted on or before July 27, 1990.

(j)(1) Each application to possess uranium hexafluoride in excess of 50 kilograms in a single container or 1000 kilograms total must contain either:

(i) An evaluation showing that the maximum intake of uranium by a member of the public due to a release would not exceed 2 milligrams; or

(ii) An emergency plan for responding to the radiological hazards of an accidental release of source material and to any associated chemical hazards directly incident thereto.

(2) One or more of the following factors may be used to support an evaluation submitted under paragraph (j)(1)(i) of this section:

(i) All or part of the radioactive material is not subject to release during an accident because of the way it is stored or packaged;

(ii) Facility design or engineered safety features in the facility would reduce the amount of the release; or

(iii) Other factors appropriate for the specific facility.

(3) An emergency plan submitted under paragraph (j)(1)(ii) of this section must include the following:

(i) Facility description. A brief description of the licensee's facility and area near the site.

(ii) Types of accidents. An identification of each type of accident for which protective actions may be needed.

(iii) Classification of accidents. A classification system for classifying accidents as alerts or site area emergencies.

(iv) Detection of accidents. Identification of the means of detecting each type of radioactive materials accident in a timely manner.

(v) Mitigation of consequences. A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(vi) Assessment of releases. A brief description of the methods and equipment to assess releases of radioactive materials.

(vii) Responsibilities. A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC; also responsibilities for developing, maintaining, and updating the plan.

(viii) Notification and coordination. A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the NRC operations center immediately after notification of the offsite response organizations and not later than one hour after the licensee declares an emergency.[1]

(ix) Information to be communicated. A brief description of the types of information on facility status, radioactive releases, and recommended protective actions, if necessary, to be given to offsite response organizations and to the NRC.

(x) Training. A brief description of the frequency, performance objectives and plans for the training that the licensee will provide workers on how to respond to an emergency including any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also, the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.

(xi) Safe shutdown. A brief description of the means of restoring the facility to a safe condition after an accident.

(xii) Exercises. Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the biennial exercises. Participation of offsite response organizations in biennial exercises although recommended is not required. Exercises must use accident scenarios postulated as most probable for the specific site and the scenarios shall not be known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for the plan. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.

(xiii) Hazardous chemicals. A certification that the application has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, title III, Pub. L. 99-499, if applicable to the applicant's activities at the proposed place of the use of the source material.

(4) The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the licensee's emergency plan before submitting it to the NRC. The licensee shall provide any comments received within the 60 days to the NRC with the emergency plan.

(k) A license application for a uranium enrichment facility must be accompanied by an Environmental Report required under subpart A of part 51 of this chapter.

(l) A license application that involves the use of source material in a uranium enrichment facility must include the applicant's provisions for liability insurance.

(m) Each applicant for a license for the possession of source material at a facility for the production or conversion of uranium hexafluoride shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in §§ 73.21 and 73.22 of this chapter, as applicable. Each applicant for a license for source material shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

[26 FR 284, Jan. 14, 1961, as amended at 31 FR 4669, Mar. 19, 1966; 34 FR 19546, Dec. 11, 1969; 36 FR 145, Jan. 6, 1971; 37 FR 5748, Mar. 21, 1972; 46 FR 13497, Feb. 23, 1981; 49 FR 9403, Mar. 12, 1984; 49 FR 19626, May 9, 1984; 49 FR 21699, May 23, 1984; 49 FR 27924, July 9, 1984; 53 FR 24047, June 27, 1988; 54 FR 14061, Apr. 7, 1989; 57 FR 18390, Apr. 30, 1992; 68 FR 58807, Oct. 10, 2003; 73 FR 78604, Dec. 23, 2008; 73 FR 63570, Oct. 24, 2008]

[1] These reporting requirements do not supersede or release licensees of complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III. Pub. L. 99-499 or other state or federal reporting requirements.

§ 40.32 General requirements for issuance of specific licenses.

[Top of File]

An application for a specific license will be approved if:

(a) The application is for a purpose authorized by the Act; and

(b) The applicant is qualified by reason of training and experience to use the source material for the purpose requested in such manner as to protect health and minimize danger to life or property; and

(c) The applicant's proposed equipment, facilities and procedures are adequate to protect health and minimize danger to life or property; and

(d) The issuance of the license will not be inimical to the common defense and security or to the health and safety of the public; and

(e) In the case of an application for a license for a uranium enrichment facility, or for a license to possess and use source and byproduct material for uranium milling, production of uranium hexafluoride, or for the conduct of any other activity which the Commission determines will significantly affect the quality of the environment, the Director, Office of Federal and State Materials and Environmental Management Programs or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to subpart A of part 51 of this chapter, has concluded, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to this conclusion is grounds for denial of a license to possess and use source and byproduct material in the plant or facility. As used in this paragraph, the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, roads necessary for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

(f) The applicant satisfies any applicable special requirements contained in § 40.34.

(g) If the proposed activity involves use of source material in a uranium enrichment facility, the applicant has satisfied the applicable provisions of part 140 of this chapter.

[26 FR 284, Jan. 14, 1961, as amended at 36 FR 12731, July 7, 1971; 40 FR 8787, Mar. 3, 1975; 41 FR 53332, Dec. 6, 1976; 43 FR 6924, Feb. 17, 1978; 49 FR 9403, Mar. 12, 1984; 57 FR 18390, Apr. 30, 1992; 73 FR 5721, Jan. 31, 2008]

§ 40.33 Issuance of a license for a uranium enrichment facility.

[Top of File]

(a) The Commission will hold a hearing pursuant to 10 CFR part 2, subparts A, G, and I, on each application with regard to the licensing of the construction and operation of a uranium enrichment facility. The Commission will publish public notice of the hearing in the Federal Register at least 30 days before the hearing.

(b) A license for a uranium enrichment facility may not be issued before the hearing is completed and a decision issued on the application.

[57 FR 18391, Apr. 30, 1992]

§ 40.34 Special requirements for issuance of specific licenses.

[Top of File]

(a) An application for a specific license to manufacture industrial products and devices containing depleted uranium, or to initially transfer such products or devices, for use pursuant to § 40.25 of this part or equivalent regulations of an Agreement State, will be approved if:

(1) The applicant satisfies the general requirements specified in § 40.32;

(2) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses, and potential hazards of the industrial product or device to provide reasonable assurance that possession, use, or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive in 1 year a radiation dose in excess of 10 percent of the annual limits specified in § 20.1201(a) of this chapter; and

(3) The applicant submits sufficient information regarding the industrial product or device and the presence of depleted uranium for a mass-volume application in the product or device to provide reasonable assurance that unique benefits will accrue to the public because of the usefulness of the product or device.

(b) In the case of an industrial product or device whose unique benefits are questionable, the Commission will approve an application for a specific license under this paragraph only if the product or device is found to combine a high degree of utility and low probability of uncontrolled disposal and dispersal of significant quantities of depleted uranium into the environment.

(c) The Commission may deny an applicant for a specific license under this paragraph if the end uses of the industrial product or device cannot be reasonably foreseen.

[41 FR 53332, Dec. 6, 1976, as amended at 43 FR 6924, Feb. 17, 1978; 58 FR 67661, Dec. 22, 1993; 59 FR 41643, Aug. 15, 1994]

§ 40.35 Conditions of specific licenses issued pursuant to § 40.34.

[Top of File]

Each person licensed pursuant to § 40.34 shall:

(a) Maintain the level of quality control required by the license in the manufacture of the industrial product or device, and in the installation of the depleted uranium into the product or device;

(b) Label or mark each unit to: (1) Identify the manufacturer or initial transferor of the product or device and the number of the license under which the product or device was manufactured or initially transferred, the fact that the product or device contains depleted uranium, and the quantity of depleted uranium in each product or device; and (2) state that the receipt, possession, use, and transfer of the product or device are subject to a general license or the equivalent and the regulations of the U.S. NRC or of an Agreement State;

(c) Assure that the depleted uranium before being installed in each product or device has been impressed with the following legend clearly legible through any plating or other covering: "Depleted Uranium";

(d)(1) Furnish a copy of the general license contained in § 40.25 and a copy of Form NRC 244 to each person to whom he transfers source material in a product or device for use pursuant to the general license contained in § 40.25; or

(2) Furnish a copy of the general license contained in the Agreement State's regulation equivalent to § 40.25 and a copy of the Agreement State's certificate, or alternately, furnish a copy of the general license contained in § 40.25 and a copy of Form NRC 244 to each person to whom he transfers source material in a product or device for use pursuant to the general license of an Agreement State. If a copy of the general license in § 40.25 and a copy of Form NRC 244 are furnished to such person, they shall be accompanied by a note explaining that use of the product or device is regulated by the Agreement State under requirements substantially the same as those in § 40.25; and

(e)(1) Report to the Director, Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 40.5, all transfers of industrial products or devices to persons for use under the general license in § 40.25. Such report shall identify each general licensee by name and address, an individual by name and/or position who may constitute a point of contact between the Commission and the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which such a product or device is transferred to the generally licensed person. If no transfers have been made to persons generally licensed under § 40.25 during the reporting period, the report shall so indicate;

(2) Report to the responsible Agreement State Agency all transfers of industrial products or devices to persons for use under the general license in the Agreement State's regulation equivalent to § 40.25. Such report shall identify each general licensee by name and address, an

individual by name and/or position who may constitute a point of contact between the Agency and the general licensee, the type and model number of device transferred, and the quantity of depleted uranium contained in the product or device. The report shall be submitted within 30 days after the end of each calendar quarter in which such product or device is transferred to the generally licensed person. If no transfers have been made to a particular Agreement State during the reporting period, this information shall be reported to the responsible Agreement State Agency;

(3) Keep records showing the name, address, and a point of contact for each general license to whom he or she transfers depleted uranium in industrial products or devices for use pursuant to the general license provided in § 40.25 or equivalent regulations of an Agreement State. The records must be retained for three years from the date of transfer and must show the date of each transfer, the quantity of depleted uranium in each product or device transferred, and compliance with the report requirements of this section.

(f) Licensees required to submit emergency plans by § 40.31(i) shall follow the emergency plan approved by the Commission. The licensee may change the plan without Commission approval if the changes do not decrease the effectiveness of the plan. The licensee shall furnish the change to the Director, Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 40.5, and to affected offsite response
organizations, within six months after the change is made. Proposed changes that decrease the effectiveness of the approved emergency plan may not be implemented without application to and prior approval by the Commission.

[41 FR 53332, Dec. 6, 1976, as amended at 43 FR 6924, Feb. 17, 1978; 52 FR 31611, Aug. 21, 1987; 53 FR 19248, May 27, 1988; 54 FR 14062, Apr. 7, 1989; 68 FR 58807, Oct. 10, 2003; 73 FR 5721, Jan. 31, 2008]

§ 40.36 Financial assurance and recordkeeping for decommissioning.

[Top of File]

Except for licenses authorizing the receipt, possession, and use of source material for uranium or thorium milling, or byproduct material at sites formerly associated with such milling, for which financial assurance requirements are set forth in appendix A of this part, criteria for providing financial assurance for decommissioning are as follows:

(a) Each applicant for a specific license authorizing the possession and use of more than 100 mCi of source material in a readily dispersible form shall submit a decommissioning funding plan as described in paragraph (d) of this section.

(b) Each applicant for a specific license authorizing possession and use of quantities of source material greater than 10 mCi but less than or equal to 100 mCi in a readily dispersible form shall either--

(1) Submit a decommissioning funding plan as described in paragraph (d) of this section; or

(2) Submit a certification that financial assurance for decommissioning has been provided in the amount of $225,000 by June 2, 2005 using one of the methods described in paragraph (e) of this section. For an applicant, this certification may state that the appropriate assurance will be obtained after the application has been approved and the license issued but before the receipt of licensed material. If the applicant defers execution of the financial instrument until after the license has been issued, a signed original of the financial instrument obtained to satisfy the requirements of paragraph (e) of this section must be submitted to NRC prior to receipt of licensed material. If the applicant does not defer execution of the financial instrument, the applicant shall submit to NRC, as part of the certification, a signed original of the financial instrument obtained to satisfy the requirements of paragraph (e) of this section.

(c)(1) Each holder of a specific license issued on or after July 27, 1990, which is covered by paragraph (a) or (b) of this section, shall provide financial assurance for decommissioning in accordance with the criteria set forth in this section.

(2) Each holder of a specific license issued before July 27, 1990, and of a type described in paragraph (a) of this section shall submit a decommissioning funding plan as described in paragraph (d) of this section or a certification of financial assurance for decommissioning in an amount at least equal to $1,125,000 in accordance with the criteria set forth in this section. If the licensee submits the certification of financial assurance rather than a decommissioning funding plan, the licensee shall include a decommissioning funding plan in any application for license renewal. Licensees required to submit the $1,125,000 amount must do so by December 2, 2004.

(3) Each holder of a specific license issued before July 27, 1990, and of a type described in paragraph (b) of this section shall submit, on or before July 27, 1990, a decommissioning funding plan, as described in paragraph (d) of this section, or a certification of financial assurance for decommissioning in accordance with the criteria set forth in this section.

(4) Any licensee who has submitted an application before July 27, 1990, for renewal of license in accordance with § 40.43 shall provide financial assurance for decommissioning in accordance with paragraphs (a) and (b) of this section. This assurance must be submitted when this rule becomes effective November 24, 1995.

(d) Each decommissioning funding plan must contain a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning from paragraph (e) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility. Cost estimates must be adjusted at intervals not to exceed 3 years. The decommissioning funding plan must also contain a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning and a signed original of the financial instrument obtained to satisfy the requirements of paragraph (e) of this section.

(e) Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) Prepayment. Prepayment is the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(2) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to part 30. A parent company guarantee may not be used in combination with other financial methods to satisfy the requirements of this section. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to part 30. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to part 30. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are as contained in appendix E to part 30. A guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section or in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Commission, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Commission within 30 days after receipt of notification of cancellation.

(ii) The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(iii) The surety method or insurance must remain in effect until the Commission has terminated the license.

(3) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provision must be as stated in paragraph (e)(2) of this section.

(4) In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning or an amount based on paragraph (b) of this section, and indicating that funds for decommissioning will be obtained when necessary.

(5) When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

(f) Each person licensed under this part shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. Before licensed activities are transferred or assigned in accordance with § 40.41(b) licensees shall transfer all records described in this paragraph to the new licensee. In this case, the new licensee will be responsible for maintaining these records until the license is terminated. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of--

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) Except for areas containing depleted uranium used only for shielding or as penetrators in unused munitions, a list contained in a single document and updated every 2 years, of the following:

(i) All areas designated and formerly designated as restricted areas as defined under 10 CFR 20.1003;

(ii) All areas outside of restricted areas that require documentation under § 40.36(f)(1);

(iii) All areas outside of restricted areas where current and previous wastes have been buried as documented under 10 CFR 20.2108; and

(iv) All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in 10 CFR part 20, subpart E, or apply for approval for disposal under 10 CFR 20.2002.

(4) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

[53 FR 24047, June 27, 1988, as amended at 58 FR 39633, July 26, 1993; 58 FR 67661, Dec. 22, 1993; 58 FR 68731, Dec. 29, 1993; 59 FR 1618, Jan. 12, 1994; 60 FR 38238, July 26, 1995; 61 FR 24674, May 16, 1996; 62 FR 39090, July 21, 1997; 63 FR 29543, June 1, 1998; 68 FR 57336, Oct. 3, 2003]

§ 40.38 Ineligibility of certain applicants.

[Top of File]

A license may not be issued to the Corporation if the Commission determines that:

(a) The Corporation is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; or

(b) The issuance of such a license would be inimical to--

(1) The common defense and security of the United States; or

(2) The maintenance of a reliable and economical domestic source of enrichment services.

[62 FR 6669, Feb. 12, 1997]

Licenses

[Top of File]

§ 40.41 Terms and conditions of licenses.

(a) Each license issued pursuant to the regulations in this part shall be subject to all the provisions of the act, now or hereafter in effect, and to all rules, regulations and orders of the Commission.

(b) Neither the license nor any right under the license shall be assigned or otherwise transferred in violation of the provisions of the Act.

(c) Each person licensed by the Commission pursuant to the regulations in this part shall confine his possession and use of source or byproduct material to the locations and purposes authorized in the license. Except as otherwise provided in the license, a license issued pursuant to the regulations in this part shall carry with it the right to receive, possess, and use source or byproduct material. Preparation for shipment and transport of source or byproduct material shall be in accordance with the provisions of part 71 of this chapter.

(d) Each license issued pursuant to the regulations in this part shall be deemed to contain the provisions set forth in sections 183b.-d., of the Act, whether or not said provisions are expressly set forth in the license.

(e) The Commission may incorporate in any license at the time of issuance, or thereafter, by appropriate rule, regulation or order, such additional requirements and conditions with respect to the licensee's receipt, possession, use, and transfer of source or byproduct material as it deems appropriate or necessary in order to:

(1) Promote the common defense and security;

(2) Protect health or to minimize danger of life or property;

(3) Protect restricted data;

(4) Require such reports and the keeping of such records, and to provide for such inspections of activities under the license as may be necessary or appropriate to effectuate the purposes of the act and regulations thereunder.

(f)(1) Each licensee shall notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of title 11 (Bankruptcy) of the United States Code by or against:

(i) The licensee;

(ii) An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or

(iii) An affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.

(2) This notification must indicate:

(i) The bankruptcy court in which the petition for bankruptcy was filed; and

(ii) The date of the filing of the petition.

(g) No person may commence operation of a uranium enrichment facility until the Commission verifies through inspection that the facility has been constructed in accordance with the requirements of the license. The Commission shall publish notice of the inspection results in the Federal Register.

(h) Each licensee shall ensure that Safeguards Information is protected against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

[26 FR 284, Jan. 14, 1961, as amended at 31 FR 15145, Dec. 2, 1966; 45 FR 65531, Oct. 3, 1980; 48 FR 32328, July 15, 1983; 52 FR 1295, Jan. 12, 1987; 57 FR 18391, Apr. 30, 1992; 73 FR 63571, Oct. 24, 2008]

§ 40.42 Expiration and termination of licenses and decommissioning of sites and separate buildings or outdoor areas.

[Top of File]

(a) Each specific license expires at the end of the day on the expiration date stated in the license unless the licensee has filed an application for renewal under § 40.43 not less than 30 days before the expiration date stated in the existing license. If an application for renewal has been filed at least 30 days before the expiration date stated in the existing license, the existing license expires at the end of the day on which the Commission makes a final determination to deny the renewal application or, if the determination states an expiration date, the expiration date stated in the determination.

(b) Each specific license revoked by the Commission expires at the end of the day on the date of the Commission's final determination to revoke the license, or on the expiration date stated in the determination, or as otherwise provided by Commission Order.

(c) Each specific license continues in effect, beyond the expiration date if necessary, with respect to possession of source material until the Commission notifies the licensee in writing that the license is terminated. During this time, the licensee shall--

(1) Limit actions involving source material to those related to decommissioning; and

(2) Continue to control entry to restricted areas until they are suitable for release in accordance with NRC requirements;

(d) Within 60 days of the occurrence of any of the following, consistent with the administrative directions in § 40.5, each licensee shall provide notification to the NRC in writing and either begin decommissioning its site, or any separate building or outdoor area that contains residual radioactivity, so that the building or outdoor area is suitable for release in accordance with NRC requirements, or submit within 12 months of notification a decommissioning plan, if required by paragraph (g)(1) of this section, and begin decommissioning upon approval of that plan if--

(1) The license has expired pursuant to paragraph (a) or (b) of this section; or

(2) The licensee has decided to permanently cease principal activities, as defined in this part, at the entire site or in any separate building or outdoor area; or

(3) No principal activities under the license have been conducted for a period of 24 months; or

(4) No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements.

(e) Coincident with the notification required by paragraph (d) of this section, the licensee shall maintain in effect all decommissioning financial assurances established by the licensee pursuant to § 40.36 in conjunction with a license issuance or renewal or as required by this section. The amount of the financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to paragraph (g)(4)(v) of this section.

(1) Any licensee who has not provided financial assurance to cover the detailed cost estimate submitted with the decommissioning plan shall do so when this rule becomes effective November 24, 1995.

(2) Following approval of the decommissioning plan, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the Commission.

(f) The Commission may grant a request to delay or postpone initiation of the decommissioning process if the Commission determines that such relief is not detrimental to the public health and safety and is otherwise in the public interest. The request must be submitted no later than 30 days before notification pursuant to paragraph (d) of this section. The schedule for decommissioning set forth in paragraph (d) of this section may not commence until the Commission has made a determination on the request.

(g)(1) A decommissioning plan must be submitted if required by license condition or if the procedures and activities necessary to carry out decommissioning of the site or separate building or outdoor area have not been previously approved by the Commission and these procedures could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(i) Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(ii) Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(iii) Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or

(iv) Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(2) The Commission may approve an alternate schedule for submittal of a decommissioning plan required pursuant to paragraph (d) of this section if the Commission determines that the alternative schedule is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the public health and safety and is otherwise in the public interest.

(3) The procedures listed in paragraph (g)(1) of this section may not be carried out prior to approval of the decommissioning plan.

(4) The proposed decommissioning plan for the site or separate building or outdoor area must include:

(i) A description of the conditions of the site or separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(ii) A description of planned decommissioning activities;

(iii) A description of methods used to ensure protection of workers and the environment against radiation hazards during decommissioning;

(iv) A description of the planned final radiation survey; and

(v) An updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning.

(vi) For decommissioning plans calling for completion of decommissioning later than 24 months after plan approval, a justification for the delay based on the criteria in paragraph (i) of this section.

(5) The proposed decommissioning plan will be approved by the Commission if the information therein demonstrates that the decommissioning will be completed as soon as practicable and that the health and safety of workers and the public will be adequately protected.

(h)(1) Except as provided in paragraph (i) of this section, licensees shall complete decommissioning of the site or separate building or outdoor area as soon as practicable but no later than 24 months following the initiation of decommissioning.

(2) Except as provided in paragraph (i) of this section, when decommissioning involves the entire site, the licensee shall request license termination as soon as practicable but no later than 24 months following the initiation of decommissioning.

(i) The Commission may approve a request for an alternate schedule for completion of decommissioning of the site or separate building or outdoor area, and license termination if appropriate, if the Commission determines that the alternative is warranted by consideration of the following:

(1) Whether it is technically feasible to complete decommissioning within the allotted 24-month period;

(2) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted 24-month period;

(3) Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(4) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(5) Other site-specific factors which the Commission may consider appropriate on a case-by-case basis, such as the regulatory requirements of other government agencies, lawsuits, ground-water treatment activities, monitored natural ground-water restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(j) As the final step in decommissioning, the licensee shall--

(1) Certify the disposition of all licensed material, including accumulated wastes, by submitting a completed NRC Form 314 or equivalent information; and

(2) Conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this

survey, unless the licensee demonstrates in some other manner that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E or, for uranium milling (uranium and thorium recovery) facilities, Criterion 6(6) of Appendix A to this part. The licensee shall, as appropriate--

(i) Report levels of gamma radiation in units of millisieverts (microroentgen) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of megabecquerels (disintegrations per minute or microcuries) per 100 square centimeters removable and fixed for surfaces, megabecquerels (microcuries) per milliliter for water, and becquerels (picocuries) per gram for solids such as soils or concrete; and

(ii) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

(k) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the Commission determines that:

(1) Source material has been properly disposed;

(2) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and

(3)(i) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E; or for uranium milling (uranium and thorium recovery) facilities, Criterion 6(6) of Appendix A to this part;

(ii) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E.

(4) Records required by § 40.61(d) and (f) have been received.

(l) Specific licenses for uranium and thorium milling are exempt from paragraphs (d)(4), (g) and (h) of this section with respect to reclamation of tailings impoundments and/or waste disposal areas.

[59 FR 36035, July 15, 1994, as amended at 60 FR 38239, July 26, 1995; 61 FR 1114, Jan. 16, 1996; 61 FR 24674, May 16, 1996; 61 FR 29637, June 12, 1996; 62 FR 39090, July 21, 1997; 66 FR 64738, Dec. 14, 2001; 68 FR 75390, Dec. 31, 2003; 73 FR 42673, Jul. 23, 2008]

§ 40.43 Renewal of licenses.

[Top of File]

(a) Application for renewal of a specific license must be filed on NRC Form 313 and in accordance with § 40.31.

(b) If any licensee granted the extension described in 10 CFR 40.42(a)(2) has a currently pending renewal application for the extended license, that application will be considered to be withdrawn by the licensee and any renewal fees paid by the licensee for that application will be refunded.

[59 FR 36037, July 15, 1994, as amended at 61 FR 1114, Jan. 16, 1996; 62 FR 52187, Oct. 6, 1997]

§ 40.44 Amendment of licenses at request of licensee.

[Top of File]

Applications for amendment of a license shall be filed on NRC Form 313 in accordance with § 40.31 and shall specify the respects in which the licensee desires the license to be amended and the grounds for such amendment.

[49 FR 19627, May 9, 1984, as amended at 56 FR 40768, Aug. 16, 1991]

§ 40.45 Commission action on applications to renew or amend.

[Top of File]

In considering an application by a licensee to renew or amend his license the Commission will apply the applicable criteria set forth in § 40.32.

[26 FR 284, Jan. 14, 1961, as amended at 43 FR 6924, Feb. 17, 1978]

§ 40.46 Inalienability of licenses.

[Top of File]

No license issued or granted pursuant to the regulations in this part shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person, unless the Commission shall after securing full information, find that the transfer is in accordance with the provisions of this act, and shall give its consent in writing.

Transfer of Source Material

[Top of File]

§ 40.51 Transfer of source or byproduct material.

(a) No licensee shall transfer source or byproduct material except as authorized pursuant to this section.

(b) Except as otherwise provided in his license and subject to the provisions of paragraphs (c) and (d) of this section, any licensee may transfer source or byproduct material:

(1) To the Department of Energy;

(2) To the agency in any Agreement State which regulates radioactive materials pursuant to an agreement with the Commission or the Atomic Energy Commission under section 274 of the Act;

(3) To any person exempt from the licensing requirements of the Act and regulations in this part, to the extent permitted under such exemption;

(4) To any person in an Agreement State subject to the jurisdiction of that State who has been exempted from the licensing requirements and regulations of that State, to the extent permitted under such exemptions;

(5) To any person authorized to receive such source or byproduct material under terms of a specific license or a general license or their equivalents issued by the Commission or an Agreement State;

(6) To any person abroad pursuant to an export license issued under part 110 of this chapter; or

(7) As otherwise authorized by the commission in writing.

(c) Before transferring source or byproduct material to a specific licensee of the Commission or an Agreement State or to a general licensee who is required to register with the Commission or with an Agreement State prior to receipt of the source or byproduct material, the licensee transferring the material shall verify that the transferee's license authorizes receipt of the type, form, and quantity of source or byproduct material to be transferred.

(d) The following methods for the verification required by paragraph (c) of this section are acceptable:

(1) The transferor may have in his possession, and read, a current copy of the transferee's specific license or registration certificate;

(2) The transferor may have in his possession a written certification by the transferee that he is authorized by license or registration certificate to receive the type, form, and quantity of source or byproduct material to be transferred, specifying the license or registration certification number, issuing agency and expiration date;

(3) For emergency shipments the transferor may accept oral certification by the transferee that he is authorized by license or registration certificate to receive the type, form, and quantity of source or byproduct material to be transferred, specifying the license or registration certificate number, issuing agency and expiration date: *Provided*, That the oral certification is confirmed in writing within 10 days;

(4) The transferor may obtain other sources of information compiled by a reporting service from official records of the Commission or the licensing agency of an Agreement State as to the identity of licensees and the scope and expiration dates of licenses and registrations; or

(5) When none of the methods of verification described in paragraphs (d)(1) to (4) of this section are readily available or when a transferor desires to verify that information received by one of such methods is correct or up-to-date, the transferor may obtain and record confirmation from the Commission or the licensing agency of an Agreement State that the transferee is licensed to receive the source or byproduct material.

[45 FR 65532, Oct. 3, 1980]

Records, Reports, and Inspections

[Top of File]

§ 40.60 Reporting requirements.

(a) *Immediate report*. Each licensee shall notify the NRC as soon as possible but not later than 4 hours after the discovery of an event that

prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed regulatory limits or releases of licensed material that could exceed regulatory limits (events may include fires, explosions, toxic gas releases, etc.).

(b) *Twenty-four hour report*. Each licensee shall notify the NRC within 24 hours after the discovery of any of the following events involving licensed material:

(1) An unplanned contamination event that:

(i) Requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area;

(ii) Involves a quantity of material greater than five times the lowest annual limit on intake specified in appendix B of §§ 20.1001-20.2401 of 10 CFR part 20 for the material; and

(iii) Has access to the area restricted for a reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.

(2) An event in which equipment is disabled or fails to function as designed when:

(i) The equipment is required by regulation or license condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;

(ii) The equipment is required to be available and operable when it is disabled or fails to function; and

(iii) No redundant equipment is available and operable to perform the required safety function.

(3) An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body.

(4) An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:

(i) The quantity of material involved is greater than five times the lowest annual limit on intake specified in appendix B of §§ 20.1001-20.2401 of 10 CFR part 20 for the material; and

(ii) The damage affects the integrity of the licensed material or its container.

(c) *Preparation and submission of reports*. Reports made by licensees in response to the requirements of this section must be made as follows:

(1) Licensees shall make reports required by paragraphs (a) and (b) of this section by telephone to the NRC Operations Center.[1] To the extent that the information is available at the time of notification, the information provided in these reports must include:

(i) The caller's name and call back telephone number;

(ii) A description of the event, including date and time;

(iii) The exact location of the event;

(iv) The isotopes, quantities, and chemical and physical form of the licensed material involved; and

(v) Any personnel radiation exposure data available.

(2) *Written report*. Each licensee who makes a report required by paragraph (a) or (b) of this section shall submit a written follow-up report within 30 days of the initial report. Written reports prepared pursuant to other regulations may be submitted to fulfill this requirement if the reports contain all of the necessary information and the appropriate distribution is made. These written reports must be sent to the NRC's Document Control Desk by an appropriate method listed in § 40.5, with a copy to the appropriate NRC regional office listed in appendix D to part 20 of this chapter. The reports must include the following:

(i) A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

(ii) The exact location of the event;

(iii) The isotopes, quantities, and chemical and physical form of the licensed material involved;

(iv) Date and time of the event;

(v) Corrective actions taken or planned and the results of any evaluations or assessments; and

(vi) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

(3) The provisions of § 40.60 do not apply to licensees subject to the notification requirements in § 50.72. They do apply to those part 50 licensees possessing material licensed under part 40 who are not subject to the notification requirements in § 50.72.

[56 FR 40768, Aug. 16, 1991, as amended at 59 FR 14086, Mar. 25, 1994; 68 FR 58807, Oct. 10, 2003]

[1] The commercial telephone number for the NRC Operations Center is (301) 816-5100.

§ 40.61 Records.

[Top of File]

(a) Each person who receives source or byproduct material pursuant to a license issued pursuant to the regulations in this part shall keep records showing the receipt, transfer, and disposal of this source or byproduct material as follows:

(1) The licensee shall retain each record of receipt of source or byproduct material as long as the material is possessed and for three years following transfer or disposition of the source or byproduct material.

(2) The licensee who transferred the material shall retain each record of transfer or source or byproduct material until the Commission terminates each license that authorizes the activity that is subject to the recordkeeping requirement.

(3) The licensee shall retain each record of disposal of source or byproduct material until the Commission terminates each license that authorizes the activity that is subject to the recordkeeping requirement.

(4) If source or byproduct material is combined or mixed with other licensed material and subsequently treated in a manner that makes direct correlation of a receipt record with a transfer, export, or disposition record impossible, the licensee may use evaluative techniques (such as first-in-first-out), to make the records that are required by this Part account for 100 percent of the material received.

(b) The licensee shall retain each record that is required by the regulations in this part or by license condition for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified by regulation or license condition, each record must be maintained until the Commission terminates the license that authorizes the activity that is subject to the recordkeeping requirement.

(c)(1) Records which must be maintained pursuant to this part may be the original or reproduced copy or microform if the reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

(2) If there is a conflict between the Commission's regulations in this part, license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for such records shall apply unless the Commission, pursuant to § 40.14 of this part, has granted a specific exemption from the record retention requirements specified in the regulations in this part.

(d) Prior to license termination, each licensee authorized to possess source material, in an unsealed form, shall forward the following records to the appropriate NRC Regional Office:

(1) Records of disposal of licensed material made under § 20.2002 (including burials authorized before January 28, 1981[(1)]), 20.2003, 20.2004, 20.2005; and

(2) Records required by § 20.2103(b)(4).

(e) If licensed activities are transferred or assigned in accordance with § 40.41(b), each licensee authorized to possess source material, in an unsealed form, shall transfer the following records to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated:

(1) Records of disposal of licensed material made under § 20.2002 (including burials authorized before January 28, 1981[1]), 20.2003, 20.2004, 20.2005; and

(2) Records required by § 20.2103(b)(4).

(f) Prior to license termination, each licensee shall forward the records required by § 40.36(f) to the appropriate NRC Regional Office.

[45 FR 65532, Oct. 3, 1980, as amended at 53 FR 19248, May 27, 1988; 61 FR 24674, May 16, 1996]

[1] A previous § 20.304 permitted burial of small quantities of licensed materials in soil before January 28, 1981, without specific Commission authorization. See § 20.304 contained in the 10 CFR, parts 0 to 199, edition revised as of January 1, 1981.

§ 40.62 Inspections.

[Top of File]

(a) Each licensee shall afford to the Commission at all reasonable times opportunity to inspect source or byproduct material and the premises and facilities wherein source or byproduct material is used or stored.

(b) Each licensee shall make available to the Commission for inspection, upon reasonable notice, records kept by him pursuant to the regulations in this chapter.

[45 FR 65532, Oct. 3, 1980]

§ 40.63 Tests.

[Top of File]

Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part, including tests of:

(a) Source or byproduct material;

(b) Facilities wherein source or byproduct material is utilized or stored;

(c) Radiation detection and monitoring instruments; and

(d) Other equipment and devices used in connection with the utilization and storage of source or byproduct material.

[45 FR 65533, Oct. 3, 1980]

§ 40.64 Reports.

[Top of File]

(a) Except as specified in paragraphs (d) and (e) of this section, each specific licensee who transfers, receives, or adjusts the inventory in any manner, of uranium or thorium source material with foreign obligations by one kilogram or more; or who imports or exports one kilogram or more of uranium or thorium source material; or who uses one kilogram or more of any uranium or thorium source material in enrichment services, downblending uranium that has an initial enrichment of the U^{235} isotope of 10 percent or more, or in the fabrication of mixed-oxide fuels, shall complete a Nuclear Material Transaction Report in computer-readable format as specified in the instructions in NUREG/BR–0006 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees.'' Each licensee who exports one kilogram or more of uranium or thorium source material shall complete in the format listed above the licensee's portion of the Nuclear Material Transaction Report unless there is indication of loss, theft, or diversion as discussed under paragraph (d) of this section, in which case both the licensee's and the foreign facility's information must be reported. Licensees who import one kilogram or more of uranium or thorium source material shall complete the supplier's and the licensee's portion of the Nuclear Material Transaction Report. Copies of the instructions may be obtained either by writing the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to RidsNmssFcss@nrc.gov. Each licensee who transfers the material shall submit a Nuclear Material Transaction Report in computer-readable format as specified in the instructions no later than the close of business the next working day. Each licensee who receives the material shall submit a Nuclear Material Transaction Report in computer-readable format in accordance with instructions within ten (10) days after the material is received. The Commission's copy of the report must be submitted to the address specified in the instructions. These prescribed computer-readable forms replace the DOE/NRC Form 741 previously submitted in paper form.

(b) Except as specified in paragraphs (d) and (e) of this section, each licensee who:

(1) Possesses, or had possessed in the previous reporting period, at any one time and location, one kilogram or more of uranium or thorium source material with foreign obligations as defined in this part, shall document holdings as of September 30 of each year and submit to the Commission within 30 days, a statement of its source material inventory with foreign obligations as defined in this part. Alternatively, this information may be submitted with the licensee's material status reports on special nuclear material filed under part 72 or 74 of this chapter, as a statement of its source material inventory with foreign obligations as defined in this part. This statement must be submitted to the address specified in the reporting instructions in NUREG/BR–0007, and include the Reporting Identification Symbol (RIS) assigned by the Commission to the licensee.

(2) Possesses, or had possessed in the previous reporting period, one kilogram or more of uranium or thorium source material pursuant to the operation of enrichment services, downblending uranium that has an initial enrichment of the U^{235} isotope of 10

percent or more, or in the fabrication of mixed-oxide fuels shall complete and submit, in computer-readable format, Material Balance and Physical Inventory Listing Reports concerning all source material that the licensee has received, produced, possessed, transferred, consumed, disposed of, or lost. Reports must be submitted for each Reporting Identification Symbol (RIS) account including all holding accounts. Each licensee shall prepare and submit these reports as specified in the instructions in NUREG/BR–0007 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees.'' These reports must document holdings as of September 30 of each year and must be
submitted to the Commission within 30 days. Alternatively, these reports may be submitted with the licensee's material status reports on special nuclear material filed under parts 72 or 74 of this chapter. Copies of the reporting instructions may be obtained either by writing to the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. Each licensee required to report material balance, inventory, and/or foreign obligation information, as detailed in this part, shall resolve any discrepancies identified during the report review and reconciliation process within 30 calendar days of notification of a
discrepancy identified by the NRC.

(c)(1) Except as specified in paragraph (d) of this section, each licensee who is authorized to possess uranium or thorium pursuant to a specific license shall notify the NRC Headquarters Operations Center by telephone, at the numbers listed in appendix A of part 73 of this chapter, of any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of more than 6.8 kilograms (kg) [15 pounds] of such material at any one time or more than 68 kg [150 pounds] of such material in any one calendar year.

(2) The licensee shall notify the NRC as soon as possible, but within 4 hours, of discovery of any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of such material. A copy of the written followup notification should also be made to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, by an appropriate method listed in § 40.5.

(3) The initial notification shall be followed within a period of sixty (60) days by a written followup notification submitted in accordance with § 40.5. A copy of the written followup notification shall also be sent to: ATTN: Document Control Desk, Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(4) Subsequent to the submission of the written followup notification required by this paragraph, the licensee shall promptly update the written followup notification, in accordance with this paragraph, with any substantive additional information, which becomes available to the licensee, concerning an attempted or apparent theft or unlawful diversion of source material.

(d) The reports described in paragraphs (a), (b), and (c) of this section are not required for:

(1) Processed ores containing less than five (5) percent of uranium or thorium, or any combination of uranium or thorium, by dry weight;

(2) Thorium contained in magnesium-thorium and tungsten-thorium alloys, if the thorium content in the alloys does not exceed 4 percent by weight;

(3) Chemical catalysts containing uranium depleted in the U-235 isotope to 0.4 percent or less, if the uranium content of the catalyst does not exceed 15 percent by weight; or

(4) Any source material contained in non-nuclear end use devices or components, including but not limited to permanently installed shielding, teletherapy, radiography, X-ray, accelerator devices, or munitions.

(e) Any licensee who is required to submit inventory change reports and material status reports pursuant to part 75 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in §§ 75.34 and 75.35 of this chapter (instead of as provided in paragraphs (a) and (b) of this section).

[35 FR 12195, July 30, 1970, as amended at 36 FR 10938, June 5, 1971; 38 FR 1272, Jan. 11, 1973; 38 FR 2330, Jan. 24, 1973; 40 FR 8787, Mar. 3, 1975; 41 FR 16446, Apr. 19, 1976; 45 FR 50710, July 31, 1980; 49 FR 24707, June 15, 1984; 51 FR 9766, Mar. 21, 1986; 52 FR 31611, Aug. 21, 1987; 59 FR 35620, July 13, 1994; 68 FR 10364, Mar. 5, 2003; 68 FR 58807, Oct. 10, 2003; 73 FR 32461, Jun. 9, 2008]

§ 40.65 Effluent monitoring reporting requirements.

[Top of File]

(a) Each licensee authorized to possess and use source material in uranium milling, in production of uranium hexafluoride, or in a uranium enrichment facility shall:

(1) Within 60 days after January 1, 1976 and July 1, 1976, and within 60 days after January 1 and July 1 of each year thereafter, submit a report to the Director, Office of Federal and State Materials and Environmental Management Programs, using an appropriate method listed in § 40.5, with a copy to the appropriate NRC Regional Office shown in appendix D to part 20 of this chapter; the report must specify the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous six months of operation, and such other information as the Commission may require to estimate maximum potential annual radiation doses to the public
resulting from effluent releases. If quantities of radioactive materials released during the reporting period are
significantly above the licensee's design objectives previously reviewed as part of the licensing action, the report shall
cover this specifically. On the basis of such reports and any additional information the Commission may obtain from the licensee or others,

the Commission may from time to time require the licensee to take such action as the Commission deems appropriate.

(2) [Reserved]

(b) [Reserved]

[40 FR 53230, Nov. 17, 1975, as amended at 41 FR 21627, May 27, 1976; 42 FR 25721, May 19, 1977; 52 FR 31611, Aug. 21, 1987; 57 FR 18391, Apr. 30, 1992; 68 FR 58807, Oct. 10, 2003; 73 FR 5721, Jan. 31, 2008]

§ 40.66 Requirements for advance notice of export shipments of natural uranium.

[Top of File]

(a) Each licensee authorized to export natural uranium, other than in the form of ore or ore residue, in amounts exceeding 500 kilograms, shall notify the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, by an appropriate method listed in § 40.5.

The notification must be in writing and must be received at least 10 days before transport of the shipment commences at the shipping facility.

(b) The notification must include the following information:

(1) The name(s), address(es), and telephone number(s) of the shipper, receiver, and carrier(s);

(2) A physical description of the shipment;

(3) A listing of the mode(s) of shipment, transfer points, and routes to be used;

(4) The estimated date and time that shipment will commence and that each nation (other than the United States) along the route is scheduled to be entered; and

(5) A certification that arrangements have been made to notify the Division of Nuclear Safety, Office of Nuclear Security and Incident Response when the shipment is received at the receiving facility.

(c) A licensee who needs to amend a notification may do so by telephoning the Division of Nuclear Safety, Office of Nuclear Security and Incident Response at (301) 816-5100.

[52 FR 9651, Mar. 26, 1987, as amended at 53 FR 4110, Feb. 12, 1988; 60 FR 24551, May 9, 1995; 68 FR 58808, Oct. 10, 2003; 69 FR 76600, Dec. 22, 2004]

§ 40.67 Requirement for advance notice for importation of natural uranium from countries that are not party to the Convention on the Physical Protection of Nuclear Material.

[Top of File]

(a) Each licensee authorized to import natural uranium, other than in the form of ore or ore residue, in amounts exceeding 500 kilograms, from countries not party to the Convention on the Physical Protection of Nuclear Material (see appendix F to Part 73 of this chapter) shall notify the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, using an appropriate method listed in § 40.5. . The notification must be in writing and must be received at least 10 days before transport of the shipment commences at the shipping facility.

(b) The notification must include the following information:

(1) The name(s), address(es), and telephone number(s) of the shipper, receiver, and carrier(s);

(2) A physical description of the shipment;

(3) A listing of the mode(s) of shipment, transfer points, and routes to be used;

(4) The estimated date and time that shipment will commence and that each nation along the route is scheduled to be entered.

(c) The licensee shall notify the Division of Nuclear Security by telephone at (301) 816-5100 when the shipment is received in the receiving facility.

(d) A licensee who needs to amend a notification may do so by telephoning the Division of Nuclear Security at (301) 816-5100.

[52 FR 9652, Mar. 26, 1987, as amended at 53 FR 4110, Feb. 12, 1988; 60 FR 24551, May 9, 1995; 68 FR 58808, Oct. 10, 2003; 69 FR 76600, Dec. 22, 2004]

Modification and Revocation of Licenses

[Top of File]

§ 40.71 Modification and revocation of licenses.

(a) The terms and conditions of each license shall be subject to amendment, revision, or modification by reason of amendments to the Act, or by reason of rules, regulations, or orders issued in accordance with the Act.

(b) Any license may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or any statement of fact required under section 182 of the Act, or because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the Commission to refuse to grant a license on an original application, or for violation of, or failure to observe any of, the terms and conditions of the Act, or the license, or of any rule, regulation or order of the Commission.

(c) Except in cases of willfulness or those in which the public health, interest or safety requires otherwise, no license shall be modified, suspended, or revoked unless, prior to the institution of proceedings therefor, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded opportunity to demonstrate or achieve compliance with all lawful requirements.

[26 FR 284, Jan. 14, 1961, as amended at 35 FR 11460, July 17, 1970; 48 FR 32328, July 15, 1983]

Enforcement

[Top of File]

§ 40.81 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55074, Nov. 24, 1992]

§ 40.82 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 40 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 40 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§

40.1, 40.2, 40.2a, 40.4, 40.5, 40.6, 40.8, 40.11, 40.12, 40.13, 40.14, 40.20, 40.21, 40.31, 40.32, 40.34, 40.43, 40.44, 40.45, 40.71, 40.81, and 40.82.

[57 FR 55075, Nov. 24, 1992]

Appendix A to Part 40--Criteria Relating to the Operation of Uranium Mills and the Disposition of Tailings or Wastes Produced by the Extraction or Concentration of Source Material From Ores Processed Primarily for Their Source Material Content

[Top of File]

Introduction. Every applicant for a license to possess and use source material in conjunction with uranium or thorium milling, or byproduct material at sites formerly associated with such milling, is required by the provisions of § 40.31(h) to include in a license application proposed specifications relating to milling operations and the disposition of tailings or wastes resulting from such milling activities. This appendix establishes technical, financial, ownership, and long-term site surveillance criteria relating to the siting, operation, decontamination, decommissioning, and reclamation of mills and tailings or waste systems and sites at which such mills and systems are located. As used in this appendix, the term "as low as is reasonably achievable" has the same meaning as in § 20.1003 of this chapter.

In many cases, flexibility is provided in the criteria to allow achieving an optimum tailings disposal program on a site-specific basis. However, in such cases the objectives, technical alternatives and concerns which must be taken into account in developing a tailings program are identified. As provided by the provisions of § 40.31(h) applications for licenses must clearly demonstrate how the criteria have been addressed.

The specifications must be developed considering the expected full capacity of tailings or waste systems and the lifetime of mill operations. Where later expansions of systems or operations may be likely (for example, where large quantities of ore now marginally uneconomical may be stockpiled), the amenability of the disposal system to accommodate increased capacities without degradation in long-term stability and other performance factors must be evaluated.

Licensees or applicants may propose alternatives to the specific requirements in this appendix. The alternative proposals may take into account local or regional conditions, including geology, topography, hydrology, and meterology. The Commission may find that the proposed alternatives meet the Commission's requirements if the alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety, and the environment from radiological and nonradiological hazards associated with the sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by the requirements of this Appendix and the standards promulgated by the Environmental Protection Agency in 40 CFR Part 192, Subparts D and E.

All site specific licensing decisions based on the criteria in this Appendix or alternatives proposed by licensees or applicants will take into account the risk to the public health and safety and the environment with due consideration to the economic costs involved and any other factors the Commission determines to be appropriate. In implementing this Appendix, the Commission will consider "practicable" and "reasonably achievable" as equivalent terms. Decisions involved these terms will take into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to the utilization of atomic energy in the public interest.

The following definitions apply to the specified terms as used in this appendix:

Aquifer means a geologic formation, group of formations, or part of a formation capable of yielding a significant amount of ground water to wells or springs. Any saturated zone created by uranium or thorium recovery operations would not be considered an aquifer unless the zone is or potentially is (1) hydraulically interconnected to a natural aquifer, (2) capable of discharge to surface water, or (3) reasonably accessible because of migration beyond the vertical projection of the boundary of the land transferred for long-term government ownership and care in accordance with Criterion 11 of this appendix.

As expeditiously as practicable considering technological feasibility, for the purposes of Criterion 6A, means as quickly as possible considering: the physical characteristics of the tailings and the site; the limits of *available technology*; the need for consistency with mandatory requirements of other regulatory programs; and *factors beyond the control of the licensee*. The phrase permits consideration of the cost of compliance only to the extent specifically provided for by use of the term *available technology*.

Available technology means technologies and methods for emplacing a final radon barrier on uranium mill tailings piles or impoundments. This term shall not be construed to include extraordinary measures or techniques that would impose costs that are grossly excessive as measured by practice within the industry (or one that is reasonably analogous), (such as, by way of illustration only, unreasonable overtime, staffing, or transportation requirements, etc., considering normal practice in the industry; laser fusion of soils, etc.), provided there is reasonable progress toward emplacement of the final radon barrier. To determine grossly excessive costs, the relevant baseline against which cost shall be compared is the cost estimate for tailings impoundment closure contained in the licensee's approved reclamation plan, but costs beyond these estimates shall not automatically be considered grossly excessive.

Closure means the activities following operations to decontaminate and decommission the buildings and site used to produce byproduct materials and reclaim the tailings and/or waste disposal area.

Closure plan means the Commission approved plan to accomplish closure.

Compliance period begins when the Commission sets secondary ground-water protection standards and ends when the owner or operator's license is terminated and the site is transferred to the State or Federal agency for long-term care.

Dike means an embankment or ridge of either natural or man-made materials used to prevent the movement of liquids, sludges, solids or other materials.

Disposal area means the area containing byproduct materials to which the requirements of Criterion 6 apply.

Existing portion means that land surface area of an existing surface impoundment on which significant quantities of uranium or thorium byproduct materials had been placed prior to September 30, 1983.

Factors beyond the control of the licensee means factors proximately causing delay in meeting the schedule in the applicable reclamation plan for the timely emplacement of the final radon barrier notwithstanding the good faith efforts of the licensee to complete the barrier in compliance with paragraph (1) of Criterion 6A. These factors may include, but are not limited to:

(1) Physical conditions at the site;

(2) Inclement weather or climatic conditions;

(3) An act of God;

(4) An act of war;

(5) A judicial or administrative order or decision, or change to the statutory, regulatory, or other legal requirements applicable to the licensee's facility that would preclude or delay the performance of activities required for compliance;

(6) Labor disturbances;

(7) Any modifications, cessation or delay ordered by State, Federal, or local agencies;

(8) Delays beyond the time reasonably required in obtaining necessary government permits, licenses, approvals, or consent for activities described in the reclamation plan proposed by the licensee that result from agency failure to take final action after the licensee has made a good faith, timely effort to submit legally sufficient applications, responses to requests (including relevant data requested by the agencies), or other information, including approval of the reclamation plan; and

(9) An act or omission of any third party over whom the licensee has no control.

Final radon barrier means the earthen cover (or approved alternative cover) over tailings or waste constructed to comply with Criterion 6 of this appendix (excluding erosion protection features).

Ground water means water below the land surface in a zone of saturation. For purposes of this appendix, ground water is the water contained within an aquifer as defined above.

Leachate means any liquid, including any suspended or dissolved components in the liquid, that has percolated through or drained from the byproduct material.

Licensed site means the area contained within the boundary of a location under the control of persons generating or storing byproduct materials under a Commission license.

Liner means a continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment which restricts the downward or lateral escape of byproduct material, hazardous constituents, or leachate.

Milestone means an action or event that is required to occur by an enforceable date.

Operation means that a uranium or thorium mill tailings pile or impoundment is being used for the continued placement of byproduct material or is in standby status for such placement. A pile or impoundment is in operation from the day that byproduct material is first placed in the pile or impoundment until the day final closure begins.

Point of compliance is the site specific location in the uppermost aquifer where the ground-water protection standard must be met.

Reclamation plan, for the purposes of Criterion 6A, means the plan detailing activities to accomplish reclamation of the tailings or waste disposal area in accordance with the technical criteria of this appendix. The reclamation plan must include a schedule for reclamation milestones that are key to the completion of the final radon barrier including as appropriate, but not limited to, wind blown tailings retrieval and placement on the pile, interim stabilization (including dewatering or the removal of freestanding liquids and recontouring), and final radon barrier construction. (Reclamation of tailings must also be addressed in the closure plan; the detailed reclamation plan may be incorporated into the closure plan.)

Surface impoundment means a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well.

Uppermost aquifer means the geologic formation nearest the natural ground surface that is an aquifer, as well as lower aquifers that are hydraulically interconnected with this aquifer within the facility's property boundary.

I. Technical Criteria

Criterion 1--The general goal or broad objective in siting and design decisions is permanent isolation of tailings and associated contaminants by minimizing disturbance and dispersion by natural forces, and to do so without ongoing maintenance. For practical reasons, specific siting decisions and design standards must involve finite times (e.g., the longevity design standard in Criterion 6). The following site features which will contribute to such a goal or objective must be considered in selecting among alternative tailings disposal sites or judging the adequacy of existing tailings sites:

Remoteness from populated areas;

Hydrologic and other natural conditions as they contribute to continued immobilization and isolation of contaminants from ground-water sources; and

Potential for minimizing erosion, disturbance, and dispersion by natural forces over the long term.

The site selection process must be an optimization to the maximum extent reasonably achievable in terms of these features.

In the selection of disposal sites, primary emphasis must be given to isolation of tailings or wastes, a matter having long-term impacts, as opposed to consideration only of short-term convenience or benefits, such as minimization of transportation or land acquisition costs. While isolation of tailings will be a function of both site and engineering design, overriding consideration must be given to siting features given the long-term nature of the tailings hazards.

Tailings should be disposed of in a manner that no active maintenance is required to preserve conditions of the site.

Criterion 2--To avoid proliferation of small waste disposal sites and thereby reduce perpetual surveillance obligations, byproduct material from in situ extraction operations, such as residues from solution evaporation or contaminated control processes, and wastes from small remote above ground extraction operations must be disposed of at existing large mill tailings disposal sites; unless, considering the nature of the wastes, such as their volume and specific activity, and the costs and environmental impacts of transporting the wastes to a large disposal site, such offsite disposal is demonstrated to be impracticable or the advantages of onsite burial clearly outweigh the benefits of reducing the perpetual surveillance obligations.

Criterion 3--The "prime option" for disposal of tailings is placement below grade, either in mines or specially excavated pits (that is, where the need for any specially constructed retention structure is eliminated). The evaluation of alternative sites and disposal methods performed by mill operators in support of their proposed tailings disposal program (provided in applicants' environmental reports) must reflect serious consideration of this disposal mode. In some instances, below grade disposal may not be the most environmentally sound approach, such as might be the case if a ground-water formation is relatively close to the surface or not very well isolated by overlying soils and rock. Also, geologic and topographic conditions might make full below grade burial impracticable: For example, bedrock may be sufficiently near the surface that blasting would be required to excavate a disposal pit at excessive cost, and more suitable alternative sites are not available. Where full below grade burial is not practicable, the size of retention structures, and size and steepness of slopes associated exposed embankments must be minimized by excavation to the maximum extent reasonably achievable or appropriate given the geologic and hydrologic conditions at a site. In these cases, it must be demonstrated that an above grade disposal program will provide reasonably equivalent isolation of the tailings from natural erosional forces.

Criterion 4--The following site and design criteria must be adhered to whether tailings or wastes are disposed of above or below grade.

(a) Upstream rainfall catchment areas must be minimized to decrease erosion potential and the size of the floods which could erode or wash out sections of the tailings disposal area.

(b) Topographic features should provide good wind protection.

(c) Embankment and cover slopes must be relatively flat after final stabilization to minimize erosion potential and to provide conservative factors of safety assuring long-term stability. The broad objective should be to contour final slopes to grades which are as close as possible to those which would be provided if tailings were disposed of below grade; this could, for example, lead to slopes of about 10 horizontal to 1 vertical (10h:1v) or less steep. In general, slopes should not be steeper than about 5h:1v. Where steeper slopes are proposed, reasons why a slope less steep than 5h:1v would be impracticable should be provided, and compensating factors and conditions which make such slopes acceptable should be identified.

(d) A full self-sustaining vegetative cover must be established or rock cover employed to reduce wind and water erosion to negligible levels.

Where a full vegetative cover is not likely to be self-sustaining due to climatic or other conditions, such as in semi-arid and arid regions, rock cover must be employed on slopes of the impoundment system. The NRC will consider relaxing this requirement for extremely gentle slopes such as those which may exist on the top of the pile.

The following factors must be considered in establishing the final rock cover design to avoid displacement of rock particles by human and animal traffic or by natural process, and to preclude undercutting and piping:

Shape, size, composition, and gradation of rock particles (excepting bedding material average particles size must be at least cobble size or

greater);

Rock cover thickness and zoning of particles by size; and

Steepness of underlying slopes.

Individual rock fragments must be dense, sound, and resistant to abrasion, and must be free from cracks, seams, and other defects that would tend to unduly increase their destruction by water and frost actions. Weak, friable, or laminated aggregate may not be used.

Rock covering of slopes may be unnecessary where top covers are very thick (or less); bulk cover materials have inherently favorable erosion resistance characteristics; and, there is negligible drainage catchment area upstream of the pile and good wind protection as described in points (a) and (b) of this Criterion.

Furthermore, all impoundment surfaces must be contoured to avoid areas of concentrated surface runoff or abrupt or sharp changes in slope gradient. In addition to rock cover on slopes, areas toward which surface runoff might be directed must be well protected with substantial rock cover (rip rap). In addition to providing for stability of the impoundment system itself, overall stability, erosion potential, and geomorphology of surrounding terrain must be evaluated to assure that there are not ongoing or potential processes, such as gully erosion, which would lead to impoundment instability.

(e) The impoundment may not be located near a capable fault that could cause a maximum credible earthquake larger than that which the impoundment could reasonably be expected to withstand. As used in this criterion, the term "capable fault" has the same meaning as defined in section III(g) of Appendix A of 10 CFR Part 100. The term "maximum credible earthquake" means that earthquake which would cause the maximum vibratory ground motion based upon an evaluation of earthquake potential considering the regional and local geology and seismology and specific characteristics of local subsurface material.

(f) The impoundment, where feasible, should be designed to incorporate features which will promote deposition. For example, design features which promote deposition of sediment suspended in any runoff which flows into the impoundment area might be utilized; the object of such a design feature would be to enhance the thickness of cover over time.

Criterion 5--Criteria 5A-5D and new Criterion 13 incorporate the basic ground-water protection standards imposed by the Environmental Protection Agency in 40 CFR Part 192, Subparts D and E (48 FR 45926; October 7, 1983) which apply during operations and prior to the end of closure. Ground-water monitoring to comply with these standards is required by Criterion 7A.

5A(1)--The primary ground-water protection standard is a design standard for surface impoundments used to manage uranium and thorium byproduct material. Unless exempted under paragraph 5A(3) of this criterion, surface impoundments (except for an existing portion) must have a liner that is designed, constructed, and installed to prevent any migration of wastes out of the impoundment to the adjacent subsurface soil, ground water, or surface water at any time during the active life (including the closure period) of the impoundment. The liner may be constructed of materials that may allow wastes to migrate into the liner (but not into the adjacent subsurface soil, ground water, or surface water) during the active life of the facility, provided that impoundment closure includes removal or decontamination of all waste residues, contaminated containment system components (liners, etc.), contaminated subsoils, and structures and equipment contaminated with waste and leachate. For impoundments that will be closed with the liner material left in place, the liner must be constructed of materials that can prevent wastes from migrating into the liner during the active life of the facility.

5A(2)--The liner required by paragraph 5A(1) above must be--

(a) Constructed of materials that have appropriate chemical properties and sufficient strength and thickness to prevent failure due to pressure gradients (including static head and external hydrogeologic forces), physical contact with the waste or leachate to which they are exposed, climatic conditions, the stress of installation, and the stress of daily operation;

(b) Placed upon a foundation or base capable of providing support to the liner and resistance to pressure gradients above and below the liner to prevent failure of the liner due to settlement, compression, or uplift; and

(c) Installed to cover all surrounding earth likely to be in contact with the wastes or leachate.

5A(3)--The applicant or licensee will be exempted from the requirements of paragraph 5A(1) of this criterion if the Commission finds, based on a demonstration by the applicant or licensee, that alternate design and operating practices, including the closure plan, together with site characteristics will prevent the migration of any hazardous constituents into ground water or surface water at any future time. In deciding whether to grant an exemption, the Commission will consider--

(a) The nature and quantity of the wastes;

(b) The proposed alternate design and operation;

(c) The hydrogeologic setting of the facility, including the attenuative capacity and thickness of the liners and soils present between the impoundment and ground water or surface water; and

(d) All other factors which would influence the quality and mobility of the leachate produced and the potential for it to migrate to ground water or surface water.

5A(4)--A surface impoundment must be designed, constructed, maintained, and operated to prevent overtopping resulting from normal or

abnormal operations, overfilling, wind and wave actions, rainfall, or run-on; from malfunctions of level controllers, alarms, and other equipment; and from human error.

5A(5)--When dikes are used to form the surface impoundment, the dikes must be designed, constructed, and maintained with sufficient structural integrity to prevent massive failure of the dikes. In ensuring structural integrity, it must not be presumed that the liner system will function without leakage during the active life of the impoundment.

5B(1)--Uranium and thorium byproduct materials must be managed to conform to the following secondary ground-water protection standard: Hazardous constituents entering the ground water from a licensed site must not exceed the specified concentration limits in the uppermost aquifer beyond the point of compliance during the compliance period. Hazardous constituents are those constituents identified by the Commission pursuant to paragraph 5B(2) of this criterion. Specified concentration limits are those limits established by the Commission as indicated in paragraph 5B(5) of this criterion. The Commission will also establish the point of compliance and compliance period on a site specific basis through license conditions and orders. The objective in selecting the point of compliance is to provide the earliest practicable warning that the impoundment is releasing hazardous constituents to the ground water. The point of compliance must be selected to provide prompt indication of ground-water contamination on the hydraulically downgradient edge of the disposal area. The Commission shall identify hazardous constituents, establish concentration limits, set the compliance period, and may adjust the point of compliance if needed to accord with developed data and site information as to the flow of ground water or contaminants, when the detection monitoring established under Criterion 7A indicates leakage of hazardous constituents from the disposal area.

5B(2)--A constituent becomes a hazardous constituent subject to paragraph 5B(5) only when the constituent meets all three of the following tests:

(a) The constituent is reasonably expected to be in or derived from the byproduct material in the disposal area;

(b) The constituent has been detected in the ground water in the uppermost aquifer; and

(c) The constituent is listed in Criterion 13 of this appendix.

5B(3)--Even when constituents meet all three tests in paragraph 5B(2) of this criterion, the Commission may exclude a detected constituent from the set of hazardous constituents on a site specific basis if it finds that the constituent is not capable of posing a substantial present or potential hazard to human health or the environment. In deciding whether to exclude constituents, the Commission will consider the following:

(a) Potential adverse effects on ground-water quality, considering--

(i) The physical and chemical characteristics of the waste in the licensed site, including its potential for migration;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity of ground water and the direction of ground-water flow;

(iv) The proximity and withdrawal rates of ground-water users;

(v) The current and future uses of ground water in the area;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(ix) The persistence and permanence of the potential adverse effects.

(b) Potential adverse effects on hydraulically-connected surface water quality, considering--

(i) The volume and physical and chemical characteristics of the waste in the licensed site;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground-water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the licensed site to surface waters;

(vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water, including other sources of contamination and the cumulative impact on surface-water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

5B(4)--In making any determinations under paragraphs 5B(3) and 5B(6) of this criterion about the use of ground water in the area around the facility, the Commission will consider any identification of underground sources of drinking water and exempted aquifers made by the Environmental Protection Agency.

5B(5)--At the point of compliance, the concentration of a hazardous constituent must not exceed--

(a) The Commission approved background concentration of that constituent in the ground water;

(b) The respective value given in the table in paragraph 5C if the constituent is listed in the table and if the background level of the constituent is below the value listed; or

(c) An alternate concentration limit established by the Commission.

5B(6)--Conceptually, background concentrations pose no incremental hazards and the drinking water limits in paragraph 5C state acceptable hazards but these two options may not be practically achievable at a specific site. Alternate concentration limits that present no significant hazard may be proposed by licensees for Commission consideration. Licensees must provide the basis for any proposed limits including consideration of practicable corrective actions, that limits are as low as reasonably achievable, and information on the factors the Commission must consider. The Commission will establish a site specific alternate concentration limit for a hazardous constituent as provided in paragraph 5B(5) of this criterion if it finds that the proposed limit is as low as reasonably achievable, after considering practicable corrective actions, and that the constituent will not pose a substantial present or potential hazard to human health or the environment as long as the alternate concentration limit is not exceeded. In making the present and potential hazard finding, the Commission will consider the following factors:

(a) Potential adverse effects on ground-water quality, considering--

(i) The physical and chemical characteristics of the waste in the licensed site including its potential for migration;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity of ground water and the direction of ground-water flow;

(iv) The proximity and withdrawal rates of ground-water users;

(v) The current and future uses of ground water in the area;

(vi) The existing quality of ground water, including other sources of contamination and their cumulative impact on the ground-water quality;

(vii) The potential for health risks caused by human exposure to waste constituents;

(viii) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents;

(ix) The persistence and permanence of the potential adverse effects.

(b) Potential adverse effects on hydraulically-connected surface water quality, considering--

(i) The volume and physical and chemical characteristics of the waste in the licensed site;

(ii) The hydrogeological characteristics of the facility and surrounding land;

(iii) The quantity and quality of ground water, and the direction of ground-water flow;

(iv) The patterns of rainfall in the region;

(v) The proximity of the licensed site to surface waters; (vi) The current and future uses of surface waters in the area and any water quality standards established for those surface waters;

(vii) The existing quality of surface water including other sources of contamination and the cumulative impact on surface water quality;

(viii) The potential for health risks caused by human exposure to waste constituents;

(ix) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to waste constituents; and

(x) The persistence and permanence of the potential adverse effects.

5C-Maximum Values for Ground-Water Protection

Constituent or property	Maximum concentration
Milligrams per liter:	
Arsenic	0.05
Barium	1.0
Cadmium	0.01
Chromium	0.05
Lead	0.05
Mercury	0.002
Selenium	0.01
Silver	0.05
Endrin (1,2,3,4,10,10-hexachloro-1,7 -expoxy-1,4,4a,5,6,7,8,9a-octahydro-1, 4-endo, endo-5, 8-dimethano napthalene)	0.0002
Lindane (1,2,3,4,5,6-hexachlorocyclohexane, gamma isomer)	0.004
Methoxychlor (1,1,1-Trichloro-2,2-bis (p-methoxyphenylethane)	0.1
Toxaphene (C_{10} H_{10} $C1_6$, Technical chlorinated camphene, 67-69 percent chlorine)	0.005
2, 4-D(2,4-Dichlorophenoxyacetic acid)	0.1
2, 4,5-TP Silvex (2,4,5-Trichlorophenoxypropionic acid)	
Picocuries per liter:	
Combined radium-226 and radium-228	5
Gross alpha-particle activity (excluding radon and uranium when producing uranium byproduct material or radon and thorium when producing thorium byproduct material)	15

5D-If the ground-water protection standards established under paragraph 5B(1) of this criterion are exceeded at a licensed site, a corrective action program must be put into operation as soon as is practicable, and in no event later than eighteen (18) months after the Commission finds that the standards have been exceeded. The licensee shall submit the proposed corrective action program and supporting rationale for Commission approval prior to putting the program into operation, unless otherwise agreed to by the Commission. The objective of the program is to return hazardous constituent concentration levels in ground water to the concentration levels set as standards. The licensee's proposed program must address removing hazardous constituents that have entered the ground water at the point of compliance or treating them in place. The program must also address removing or treating any hazardous constituents that exceed concentration limits in ground water between the point of compliance and the downgradient facility property boundary. The licensee shall continue corrective action measures to the extent necessary to achieve and maintain compliance with the groundwater standard. The Commission will determine when the licensee may terminate corrective action measures based on data from the ground-water monitoring program and other information that provide reasonable assurance that the ground-water protection standard will not be exceeded.

5E-In developing and conducting ground-water protection programs, applicants and licensees shall also consider the following:

(1) Installation of bottom liners(Where synthetic liners are used, a leakage detection system must be installed immediately below the liner to ensure major failures are detected if they occur. This is in addition to the ground-water monitoring program conducted as provided in Criterion 7. Where clay liners are proposed or relatively thin, in-situ clay soils are to be relied upon for seepage control, tests must be conducted with representative tailings solutions and clay materials to confirm that no significant deterioration of permeability or stability properties will occur with continuous exposure of clay to tailings solutions. Tests must be run for a sufficient period of time to reveal any effects if they are going to occur (in some cases deterioration has been observed to occur rather rapidly after about nine months of exposure)).

(2) Mill process designs which provide the maximum practicable recycle of solutions and conservation of water to reduce the net input of liquid to the tailings impoundment.

(3) Dewatering of tailings by process devices and/or in-situ drainage systems (At new sites, tailings must be dewatered by a drainage system installed at the bottom of the impoundment to lower the phreatic surface and reduce the driving head of seepage, unless tests show tailings are not amenable to such a system. Where in-situ dewatering is to be conducted, the impoundment bottom must be graded to assure that the drains are at a low point. The drains must be protected by suitable filter materials to assure that drains remain free running. The drainage system must also be adequately sized to assure good drainage).

(4) Neutralization to promote immobilization of hazardous constituents.

5F--Where ground-water impacts are occurring at an existing site due to seepage, action must be taken to alleviate conditions that lead to excessive seepage impacts and restore ground-water quality. The specific seepage control and ground-water protection method, or combination of methods, to be used must be worked out on a site-specific basis. Technical specifications must be prepared to control installation of seepage control systems. A quality assurance, testing, and inspection program, which includes supervision by a qualified engineer or scientist, must be established to assure the specifications are met.

5G--In support of a tailings disposal system proposal, the applicant/operator shall supply information concerning the following:

(1) The chemical and radioactive characteristics of the waste solutions.

(2) The characteristics of the underlying soil and geologic formations particularly as they will control transport of contaminants and solutions. This includes detailed information concerning extent, thickness, uniformity, shape, and orientation of underlying strata. Hydraulic gradients and conductivities of the various formations must be determined. This information must be gathered from borings and field survey methods taken within the proposed impoundment area and in surrounding areas where contaminants might migrate to ground water. The information gathered on boreholes must include both geologic and geophysical logs in sufficient number and degree of sophistication to allow determining significant discontinuities, fractures, and channeled deposits of high hydraulic conductivity. If field survey methods are used, they should be in addition to and calibrated with borehole logging. Hydrologic parameters such as permeability may not be determined on the basis of laboratory analysis of samples alone; a sufficient amount of field testing (e.g., pump tests) must be conducted to assure actual field properties are adequately understood. Testing must be conducted to allow estimating chemi-sorption attenuation properties of underlying soil and rock.

(3) Location, extent, quality, capacity and current uses of any ground water at and near the site.

5H--Steps must be taken during stockpiling of ore to minimize penetration of radionuclides into underlying soils; suitable methods include lining and/or compaction of ore storage areas.

Criterion 6--(1) In disposing of waste byproduct material, licensees shall place an earthen cover (or approved alternative) over tailings or wastes at the end of milling operations and shall close the waste disposal area in accordance with a design[1] which provides reasonable assurance of control of radiological hazards to (i) be effective for 1,000 years, to the extent reasonably achievable, and, in any case, for at least 200 years, and (ii) limit releases of radon-222 from uranium byproduct materials, and radon-220 from thorium byproduct materials, to the atmosphere so as not to exceed an average[2] release rate of 20 picocuries per square meter per second (pCi/m^2s) to the extent practicable throughout the effective design life determined pursuant to (1)(i) of this Criterion. In computing required tailings cover thicknesses, moisture in soils in excess of amounts found normally in similar soils in similar circumstances may not be considered. Direct gamma exposure from the tailings or wastes should be reduced to background levels. The effects of any thin synthetic layer may not be taken into account in determining the calculated radon exhalation level. If non-soil materials are proposed as cover materials, it must be demonstrated that these materials will not crack or degrade by differential settlement, weathering, or other mechanism, over long-term intervals.

(2) As soon as reasonably achievable after emplacement of the final cover to limit releases of radon-222 from uranium byproduct material and prior to placement of erosion protection barriers or other features necessary for long-term control of the tailings, the licensee shall verify through appropriate testing and analysis that the design and construction of the final radon barrier is effective in limiting releases of radon-222 to a level not exceeding 20 pCi/m^2s averaged over the entire pile or impoundment using the procedures described in 40 CFR part 61, appendix B, Method 115, or another method of verification approved by the Commission as being at least as effective in demonstrating the effectiveness of the final radon barrier.

(3) When phased emplacement of the final radon barrier is included in the applicable reclamation plan, the verification of radon-222 release rates required in paragraph (2) of this criterion must be conducted for each portion of the pile or impoundment as the final radon barrier for that portion is emplaced.

(4) Within ninety days of the completion of all testing and analysis relevant to the required verification in paragraphs (2) and (3) of this criterion, the uranium mill licensee shall report to the Commission the results detailing the actions taken to verify that levels of release of radon-222 do not exceed 20 pCi/m^2s when averaged over the entire pile or impoundment. The licensee shall maintain records until termination of the license documenting the source of input parameters including the results of all measurements on which they are based, the calculations and/or analytical methods used to derive values for input parameters, and the procedure used to determine compliance. These records shall be kept in a form suitable for transfer to the custodial agency at the time of transfer of the site to DOE or a State for long-term care if requested.

(5) Near surface cover materials (i.e., within the top three meters) may not include waste or rock that contains elevated levels of radium; soils used for near surface cover must be essentially the same, as far as radioactivity is concerned, as that of surrounding surface soils. This is to ensure that surface radon exhalation is not significantly above background because of the cover material itself.

(6) The design requirements in this criterion for longevity and control of radon releases apply to any portion of a licensed and/or disposal site unless such portion contains a concentration of radium in land, averaged over areas of 100 square meters, which, as a result of byproduct material, does not exceed the background level by more than: (i) 5 picocuries per gram (pCi/g) of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over the first 15 centimeters (cm) below the surface, and (ii) 15 pCi/g of radium-226, or, in the case of thorium byproduct material, radium-228, averaged over 15-cm thick layers more than 15 cm below the surface.

Byproduct material containing concentrations of radionuclides other than radium in soil, and surface activity on remaining structures, must not result in a total effective dose equivalent (TEDE) exceeding the dose from cleanup of radium contaminated soil to the above standard (benchmark dose), and must be at levels which are as low as is reasonably achievable. If more than one residual radionuclide is present in the same 100-square-meter area, the sum of the ratios for each radionuclide of concentration present to the concentration limit will not

exceed "1" (unity). A calculation of the potential peak annual TEDE within 1000 years to the average member of the critical group that would result from applying the radium standard (not including radon) on the site must be submitted for approval. The use of decommissioning plans with benchmark doses which exceed 100 mrem/yr, before application of ALARA, requires the approval of the Commission after consideration of the recommendation of the NRC staff. This requirement for dose criteria does not apply to sites that have decommissioning plans for soil and structures approved before June 11, 1999.

(7) The licensee shall also address the nonradiological hazards associated with the wastes in planning and implementing closure. The licensee shall ensure that disposal areas are closed in a manner that minimizes the need for further maintenance. To the extent necessary to prevent threats to human health and the environment, the licensee shall control, minimize, or eliminate post-closure escape of nonradiological hazardous constituents, leachate, contaminated rainwater, or waste decomposition products to the ground or surface waters or to the atmosphere.

Criterion 6A--(1) For impoundments containing uranium byproduct materials, the final radon barrier must be completed *as expeditiously as practicable considering technological feasibility* after the pile or impoundment ceases operation in accordance with a written, Commission-approved reclamation plan. (The term *as expeditiously as practicable considering technological feasibility* as specifically defined in the Introduction of this appendix includes factors beyond the control of the licensee.) Deadlines for completion of the final radon barrier and, if applicable, the following interim milestones must be established as a condition of the individual license: windblown tailings retrieval and placement on the pile and interim stabilization (including dewatering or the removal of freestanding liquids and recontouring). The placement of erosion protection barriers or other features necessary for long-term control of the tailings must also be completed in a timely manner in accordance with a written, Commission-approved reclamation plan.

(2) The Commission may approve a licensee's request to extend the time for performance of milestones related to emplacement of the final radon barrier if, after providing an opportunity for public participation, the Commission finds that the licensee has adequately demonstrated in the manner required in paragraph (2) of Criterion 6 that releases of radon-222 do not exceed an average of 20 pCi/m^2s. If the delay is approved on the basis that the radon releases do not exceed 20 pCi/m^2s, a verification of radon levels, as required by paragraph (2) of Criterion 6, must be made annually during the period of delay. In addition, once the Commission has established the date in the reclamation plan for the milestone for completion of the final radon barrier, the Commission may extend that date based on cost if, after providing an opportunity for public participation, the Commission finds that the licensee is making good faith efforts to emplace the final radon barrier, the delay is consistent with the definition of available technology, and the radon releases caused by the delay will not result in a significant incremental risk to the public health.

(3) The Commission may authorize by license amendment, upon licensee request, a portion of the impoundment to accept uranium byproduct material or such materials that are similar in physical, chemical, and radiological characteristics to the uranium mill tailings and associated wastes already in the pile or impoundment, from other sources, during the closure process. No such authorization will be made if it results in a delay or impediment to emplacement of the final radon barrier over the remainder of the impoundment in a manner that will achieve levels of radon-222 releases not exceeding 20 pCi/m^2s averaged over the entire impoundment. The verification required in paragraph (2) of Criterion 6 may be completed with a portion of the impoundment being used for further disposal if the Commission makes a final finding that the impoundment will continue to achieve a level of radon-222 releases not exceeding 20 pCi/m^2s averaged over the entire impoundment. In this case, after the final radon barrier is complete except for the continuing disposal area, (a) only byproduct material will be authorized for disposal, (b) the disposal will be limited to the specified existing disposal area, and (c) this authorization will only be made after providing opportunity for public participation. Reclamation of the disposal area, as appropriate, must be completed in a timely manner after disposal operations cease in accordance with paragraph (1) of Criterion 6; however, these actions are not required to be complete as part of meeting the deadline for final radon barrier construction.

Criterion 7--At least one full year prior to any major site construction, a preoperational monitoring program must be conducted to provide complete baseline data on a milling site and its environs. Throughout the construction and operating phases of the mill, an operational monitoring program must be conducted to measure or evaluate compliance with applicable standards and regulations; to evaluate performance of control systems and procedures; to evaluate environmental impacts of operation; and to detect potential long-term effects.

7A--The licensee shall establish a detection monitoring program needed for the Commission to set the site-specific ground-water protection standards in paragraph 5B(1) of this appendix. For all monitoring under this paragraph the licensee or applicant will propose for Commission approval as license conditions which constituents are to be monitored on a site specific basis. A detection monitoring program has two purposes.The initial purpose of the program is to detect leakage of hazardous constituents from the disposal area so that the need to set ground-water protection standards is monitored. If leakage is detected, the second purpose of the program is to generate data and information needed for the Commission to establish the standards under Criterion 5B. The data and information must provide a sufficient basis to identify those hazardous constituents which require concentration limit standards and to enable the Commission to set the limits for those constituents and the compliance period. They may also need to provide the basis for adjustments to the point of compliance. For licenses in effect September 30, 1983, the detection monitoring programs must have been in place by October 1, 1984. For licenses issued after September 30, 1983, the detection monitoring programs must be in place when specified by the Commission in orders or license conditions. Once ground-water protection standards have been established pursuant to paragraph 5B(1), the licensee shall establish and implement a compliance monitoring program. The purpose of the compliance monitoring program is to determine that the hazardous constituent concentrations in ground water continue to comply with the standards set by the Commission. In conjunction with a corrective action program, the licensee shall establish and implement a corrective action monitoring program. The purpose of the corrective action monitoring program is to demonstrate the effectiveness of the corrective actions. Any monitoring program required by this paragraph may be based on existing monitoring programs to the extent the existing programs can meet the stated objective for the program.

Criterion 8--Milling operations must be conducted so that all airborne effluent releases are reduced to levels as low as is reasonably achievable. The primary means of accomplishing this must be by means of emission controls. Institutional controls, such as extending the site boundary and exclusion area, may be employed to ensure that offsite exposure limits are met, but only after all practicable measures have been taken to control emissions at the source. Notwithstanding the existence of individual dose standards, strict control of emissions is necessary to assure that population exposures are reduced to the maximum extent reasonably achievable and to avoid site contamination. The greatest potential sources of offsite radiation exposure (aside from radon exposure) are dusting from dry surfaces of the tailings disposal area not covered by tailings solution and emissions from yellowcake drying and packaging operations. During operations and prior to closure, radiation doses from radon emissions from surface impoundments of uranium or thorium byproduct materials must be kept as

low as is reasonably achievable.

Checks must be made and logged hourly of all parameters (e.g., differential pressures and scrubber water flow rates) that determine the efficiency of yellowcake stack emission control equipment operation. The licensee shall retain each log as a record for three years after the last entry in the log is made. It must be determined whether or not conditions are within a range prescribed to ensure that the equipment is operating consistently near peak efficiency; corrective action must be taken when performance is outside of prescribed ranges. Effluent control devices must be operative at all times during drying and packaging operations and whenever air is exhausting from the yellowcake stack. Drying and packaging operations must terminate when controls are inoperative. When checks indicate the equipment is not operating within the range prescribed for peak efficiency, actions must be taken to restore parameters to the prescribed range. When this cannot be done without shutdown and repairs, drying and packaging operations must cease as soon as practicable. Operations may not be restarted after cessation due to off-normal performance until needed corrective actions have been identified and implemented. All these cessations, corrective actions, and restarts must be reported to the appropriate NRC regional office as indicated in Criterion 8A, in writing, within ten days of the subsequent restart.

To control dusting from tailings, that portion not covered by standing liquids must be wetted or chemically stabilized to prevent or minimize blowing and dusting to the maximum extent reasonably achievable. This requirement may be relaxed if tailings are effectively sheltered from wind, such as may be the case where they are disposed of below grade and the tailings surface is not exposed to wind. Consideration must be given in planning tailings disposal programs to methods which would allow phased covering and reclamation of tailings impoundments because this will help in controlling particulate and radon emissions during operation. To control dusting from diffuse sources, such as tailings and ore pads where automatic controls do not apply, operators shall develop written operating procedures specifying the methods of control which will be utilized.

Milling operations producing or involving thorium byproduct material must be conducted in such a manner as to provide reasonable assurance that the annual dose equivalent does not exceed 25 millirems to the whole body, 75 millirems to the thyroid, and 25 millirems to any other organ of any member of the public as a result of exposures to the planned discharge of radioactive materials, radon-220 and its daughters excepted, to the general environment.

Uranium and thorium byproduct materials must be managed so as to conform to the applicable provisions of Title 40 of the Code of Federal Regulations, Part 440, "Ore Mining and Dressing Point Source Category: Effluent Limitations Guidelines and New Source Performance Standards, Subpart C, Uranium, Radium, and Vanadium Ores Subcategory," as codified on January 1, 1983.

Criterion 8A--Daily inspections of tailings or waste retention systems must be conducted by a qualified engineer or scientist and documented. The licensee shall retain the documentation for each daily inspection as a record for three years after the documentation is made. The appropriate NRC regional office as indicated in Appendix D to 10 CFR Part 20 of this chapter, or the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC, 20555, must be immediately notified of any failure in a tailings or waste retention system that results in a release of tailings or waste into unrestricted areas, or of any unusual conditions (conditions not contemplated in the design of the retention system) that is not corrected could indicate the potential or lead to failure of the system and result in a release of tailings or waste into unrestricted areas.

II. Financial Criteria

Criterion 9--Financial surety arrangements must be established by each mill operator prior to the commencement of operations to assure that sufficient funds will be available to carry out the decontamination and decommissioning of the mill and site and for the reclamation of any tailings or waste disposal areas. The amount of funds to be ensured by such surety arrangements must be based on Commission-approved cost estimates in a Commission-approved plan for (1) decontamination and decommissioning of mill buildings and the milling site to levels which allow unrestricted use of these areas upon decommissioning, and (2) the reclamation of tailings and/or waste areas in accordance with technical criteria delineated in Section I of this Appendix. The licensee shall submit this plan in conjunction with an environmental report that addresses the expected environmental impacts of the milling operation, decommissioning and tailings reclamation, and evaluates alternatives for mitigating these impacts. The surety must also cover the payment of the charge for long-term surveillance and control required by Criterion 10. In establishing specific surety arrangements, the licensee's cost estimates must take into account total costs that would be incurred if an independent contractor were hired to perform the decommissioning and reclamation work. In order to avoid unnecessary duplication and expense, the Commission may accept financial sureties that have been consolidated with financial or surety arrangements established to meet requirements of other Federal or state agencies and/or local governing bodies for such decommissioning, decontamination, reclamation, and long-term site surveillance and control, provided such arrangements are considered adequate to satisfy these requirements and that the portion of the surety which covers the decommissioning and reclamation of the mill, mill tailings site and associated areas, and the long-term funding charge is clearly identified and committed for use in accomplishing these activities. The licensees's surety mechanism will be reviewed annually by the Commission to assure, that sufficient funds would be available for completion of the reclamation plan if the work had to be performed by an independent contractor. The amount of surety liability should be adjusted to recognize any increases or decreases resulting from inflation, changes in engineering plans, activities performed, and any other conditions affecting costs. Regardless of whether reclamation is phased through the life of the operation or takes place at the end of operations, an appropriate portion of surety liability must be retained until final compliance with the reclamation plan is determined.

This will yield a surety that is at least sufficient at all times to cover the costs of decommissioning and reclamation of the areas that are expected to be disturbed before the next license renewal. The term of the surety mechanism must be open ended, unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. This assurance would be provided with a surety instrument which is written for a specified period of time (e.g., 5 years) yet which must be automatically renewed unless the surety notifies the beneficiary (the Commission or the State regulatory agency) and the principal (the licensee) some reasonable time (e.g., 90 days) prior to the renewal date of their intention not to renew. In such a situation the surety requirement still exists and the licensee would be required to submit an acceptable replacement surety within a brief period of time to allow at least 60 days for the regulatory agency to collect.

Proof of forfeiture must not be necessary to collect the surety so that in the event that the licensee could not provide an acceptable replacement surety within the required time, the surety shall be automatically collected prior to its expiration. The conditions described above would have to be clearly stated on any surety instrument which is not open-ended, and must be agreed to by all parties. Financial surety arrangements generally acceptable to the Commission are:

(a) Surety bonds;

(b) Cash deposits;

(c) Certificates of deposits;

(d) Deposits of government securities;

(e) Irrevocable letters or lines of credit; and

(f) Combinations of the above or such other types of arrangements as may be approved by the Commission. However, self insurance, or any arrangement which essentially constitutes self insurance (e.g., a contract with a State or Federal agency), will not satisfy the surety requirement since this provides no additional assurance other than that which already exists through license requirements.

Criterion 10--A minimum charge of $250,000 (1978 dollars) to cover the costs of long-term surveillance must be paid by each mill operator to the general treasury of the United States or to an appropriate State agency prior to the termination of a uranium or thorium mill license.

If site surveillance or control requirements at a particular site are determined, on the basis of a site-specific evaluation, to be significantly greater than those specified in Criterion 12 (e.g., if fencing is determined to be necessary), variance in funding requirements may be specified by the Commission. In any case, the total charge to cover the costs of long-term surveillance must be such that, with an assumed 1 percent annual real interest rate, the collected funds will yield interest in an amount sufficient to cover the annual costs of site surveillance. The total charge will be adjusted annually prior to actual payment to recognize inflation. The inflation rate to be used is that indicated by the change in the Consumer Price Index published by the U.S. Department of Labor, Bureau of Labor Statistics.

III. Site and Byproduct Material Ownership

Criterion 11--A. These criteria relating to ownership of tailings and their disposal sites become effective on November 8, 1981, and apply to all licenses terminated, issued, or renewed after that date.

B. Any uranium or thorium milling license or tailings license must contain such terms and conditions as the Commission determines necessary to assure that prior to termination of the license, the licensee will comply with ownership requirements of this criterion for sites used for tailings disposal.

C. Title to the byproduct material licensed under this Part and land, including any interests therein (other than land owned by the United States or by a State) which is used for the disposal of any such byproduct material, or is essential to ensure the long term stability of such disposal site, must be transferred to the United States or the State in which such land is located, at the option of such State. In view of the fact that physical isolation must be the primary means of long-term control, and Government land ownership is a desirable supplementary measure, ownership of certain severable subsurface interests (for example, mineral rights) may be determined to be unnecessary to protect the public health and safety and the environment. In any case, however, the applicant/operator must demonstrate a serious effort to obtain such subsurface rights, and must, in the event that certain rights cannot be obtained, provide notification in local public land records of the fact that the land is being used for the disposal of radioactive material and is subject to either an NRC general or specific license prohibiting the disruption and disturbance of the tailings. In some rare cases, such as may occur with deep burial where no ongoing site surveillance will be required, surface land ownership transfer requirements may be waived. For licenses issued before November 8, 1981, the Commission may take into account the status of the ownership of such land, and interests therein, and the ability of a licensee to transfer title and custody thereof to the United States or a State.

D. If the Commission subsequent to title transfer determines that use of the surface or subsurface estates, or both, of the land transferred to the United States or to a State will not endanger the public health, safety, welfare, or environment, the Commission may permit the use of the surface or subsurface estates, or both, of such land in a manner consistent with the provisions provided in these criteria. If the Commission permits such use of such land, it will provide the person who transferred such land with the right of first refusal with respect to such use of such land.

E. Material and land transferred to the United States or a State in accordance with this Criterion must be transferred without cost to the United States or a State other than administrative and legal costs incurred in carrying out such transfer.

F. The provisions of this part respecting transfer of title and custody to land and tailings and wastes do not apply in the case of lands held in trust by the United States for any Indian tribe or lands owned by such Indian tribe subject to a restriction against alienation imposed by the United States. In the case of such lands which are used for the disposal of byproduct material, as defined in this Part, the licensee shall enter into arrangements with the Commission as may be appropriate to assure the long-term surveillance of such lands by the United States.

IV. Long-Term Site Surveillance

Criterion 12--The final disposition of tailings, residual radioactive material, or wastes at milling sites should be such that ongoing active maintenance is not necessary to preserve isolation. As a minimum, annual site inspections must be conducted by the government agency responsible for long-term care of the disposal site to confirm its integrity and to determine the need, if any, for maintenance and/or monitoring. Results of the inspections for all the sites under the licensee's jurisdiction will be reported to the Commission annually within 90 days of the last site inspection in that calendar year. Any site where unusual damage or disruption is discovered during the inspection, however, will require a preliminary site inspection report to be submitted within 60 days. On the basis of a site specific evaluation, the Commission may require more frequent site inspections if necessary due to the features of a particular disposal site. In this case, a

preliminary inspection report is required to be submitted within 60 days following each inspection.

V. Hazardous Constituents

Criterion 13--Secondary ground-water protection standards required by Criterion 5 of this appendix are concentration limits for individual hazardous constituents. The following list of constituents identifies the constituents for which standards must be set and complied with if the specific constituent is reasonably expected to be in or derived from the byproduct material and has been detected in ground water. For purposes of this appendix, the property of gross alpha activity will be treated as if it is a hazardous constituent. Thus, when setting standards under paragraph 5B(5) of Criterion 5, the Commission will also set a limit for gross alpha activity. The Commission does not consider the following list imposed by 40 CFR Part 192 to be exhaustive and may determine other constituents to be hazardous on a case-by-case basis, independent of those specified by the U.S. Environmental Protection Agency in Part 192.

Hazardous Constituents

Acetonitrile (Ethanenitrile)

Acetophenone (Ethanone, 1-phenyl)

3-(alpha-Acetonylbenzyl)-4-hydroxycoumarin and salts (Warfarin)

2-Acetylaminofluorene (Acetamide, N-(9H-fluoren-2-yl)-)

Acetyl chloride (Ethanoyl chloride)

1-Acetyl-2-thiourea (Acetamide, N-(aminothioxomethyl)-)

Acrolein (2-Propenal)

Acrylamide (2-Propenamide)

Acrylonitrile (2-Propenenitrile)

Aflatoxins

Aldrin (1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a,8b-hexahydro-endo, exo-1,4:5,8-Dimethanonaphthalene)

Allyl alcohol (2-Propen-1-ol)

Aluminum phosphide

4-Aminobiphenyl ([1,1'-Biphenyl]-4-amine)

6-Amino-1,1a,2,8,8a,8b-hexahydro-8-(hydroxymethyl)-8a-methoxy-5-methyl-carbamate azirino[2',3'3,4]pyrrolo[1,2-a]indole-4,7-dione, (ester) (Mitomycin C) (Azirino[2'3'3,4]pyrrolo(1,2-a)indole-4,7-dione, 6-amino-8-[((amino-cabonyl)oxy)methyl]-1,1a,2,8,8a,8b-hexa-hydro-8a methoxy-5-methy-)

5-(Aminomethyl)-3-isoxazolol (3(2H)-Isoxazolone, 5-(aminomethyl)-) 4-Aminopyridine (4-Pyridinamine)

Amitrole (1H-1,2,4-Triazol-3-amine)

Aniline (Benzenamine)

Antimony and compounds, N.O.S.[(3)]

Aramite (Sulfurous acid, 2-chloroethyl-, 2-[4-(1,1-dimethylethyl) phenoxy]-1-methylethyl ester)

Arsenic and compounds, N.O.S.[3]

Arsenic acid (Orthoarsenic acid)

Arsenic pentoxide (Arsenic (V) oxide)

Arsenic trioxide (Arsenic (III) oxide)

Auramine (Benzenamine, 4,4'-carbonimidoylbis[N,N-Dimethyl-, monohydrochloride)

Azaserine (L-Serine, diazoacetate (ester))

Barium and compounds, N.O.S.[3]

Barium cyanide

Benz[c]acridine (3,4-Benzacridine)

Benz[a]anthracene (1,2-Benzanthracene)

Benzene (Cyclohexatriene)

Benzenearsonic acid (Arsonic acid, phenyl-)

Benzene, dichloromethyl- (Benzal chloride)

Benzenethiol (Thiophenol)

Benzidine ([1,1'-Biphenyl]-4,4'diamine)

Benzo[b]fluoranthene (2,3-Benzofluoranthene)

Benzo[j]fluoranthene (7,8-Benzofluoranthene)

Benzo[a]pyrene (3,4-Benzopyrene)

p-Benzoquinone (1,4-Cyclohexadienedione)

Benzotrichloride (Benzene, trichloromethyl)

Benzyl chloride (Benzene, (chloromethyl)-)

Beryllium and compounds, N.O.S.[3]

Bis(2-chloroethoxy)methane (Ethane, 1,1'-[methylenebis(oxy)]bis[2-chloro-])

Bis(2-chloroethyl) ether (Ethane, 1,1'-oxybis[2-chloro-])

N,N-Bis(2-chloroethyl)-2-naphthylamine (Chlornaphazine)

Bis(2-chloroisopropyl) ether (Propane, 2,2'-oxybis[2-chloro-])

Bis(chloromethyl) ether (Methane, oxybis[chloro-])

Bis(2-ethylhexyl) phthalate (1,2-Benzenedicarboxylic acid, bis(2-ethylhexyl) ester)

Bromoacetone (2-Propanone, 1-bromo-)

Bromomethane (Methyl bromide)

4-Bromophenyl phenyl ether (Benzene, 1-bromo-4-phenoxy-)

Brucine (Strychnidin-10-one, 2,3-dimethoxy-)

2-Butanone peroxide (Methyl ethyl ketone, peroxide)

Butyl benzyl phthalate (1,2-Benzenedicarboxylic acid, butyl phenylmethyl ester)

2-sec-Butyl-4,6-dinitrophenol (DNBP) (Phenol, 2,4-dinitro-6-(1-methylpropyl)-)

Cadmium and compounds, N.O.S.[3]

Calcium chromate (Chromic acid, calcium salt)

Calcium cyanide

Carbon disulfide (Carbon bisulfide)

Carbon oxyfluoride (Carbonyl fluoride)

Chloral (Acetaldehyde, trichloro-)

Chlorambucil (Butanoic acid, 4-[bis(2-chloroethyl)amino]benzene-)

Chlordane (alpha and gamma isomers) (4,7-Methanoindan, 1,2,4,5,6,7,8,8-octachloro-3,4,7,7a-tetrahydro-) (alpha and gamma isomers)

Chlorinated benzenes, N.O.S.[3]

Chlorinated ethane, N.O.S.[3]

Chlorinated fluorocarbons, N.O.S.[3]

Chlorinated naphthalene, N.O.S.[3]

Chlorinated phenol, N.O.S.[3]

Chloroacetaldehyde (Acetaldehyde, chloro-)

Chloroalkyl ethers, N.O.S.[3]

p-Chloroaniline (Benzenamine, 4-chloro-)

Chlorobenzene (Benzene, chloro-)

Chlorobenzilate (Benzeneacetic acid, 4-chloro-alpha-(4-chlorophenyl)-alpha-hydroxy-,ethyl ester)

p-Chloro-m-cresol (Phenol, 4-chloro-3-methyl)

1-Chloro-2,3-epoxypropane (Oxirane, 2-(chloromethyl)-)

2-Chloroethyl vinyl ether (Ethene, (2-chloroethoxy)-)

Chloroform (Methane, trichloro-)

Chloromethane (Methyl chloride)

Chloromethyl methyl ether (Methane, chloromethoxy-)

2-Chloronaphthalene (Naphthalene, betachloro-)

2-Chlorophenol (Phenol, o-chloro-)

1-(o-Chlorophenyl)thiourea (Thiourea, (2-chlorophenyl)-)

3-Chloropropionitrile (Propanenitrile, 3-chloro-)

Chromium and compounds, N.O.S.[3]

Chrysene (1,2-Benzphenanthrene)

Citrus red No. 2 (2-Naphthol, 1-[(2,5-dimethoxyphenyl)azo]-)

Coal tars

Copper cyanide

Creosote (Creosote, wood)

Cresols (Cresylic acid) (Phenol, methyl-)

Crotonaldehyde (2-Butenal)

Cyanides (soluble salts and complexes), N.O.S.[3]

Cyanogen (Ethanedinitrile)

Cyanogen bromide (Bromine cyanide)

Cyanogen chloride (Chlorine cyanide)

Cycasin (beta-D-Glucopyranoside, (methyl-ONN-azoxy)methyl-)

2-Cyclohexyl-4,6-dinitrophenol (Phenol, 2-cyclohexyl-4,6-dinitro-)

Cyclophosphamide (2H-1,3,2,-Oxazaphosphorine, [bis(2-chloroethyl) amino]-tetrahydro-,2-oxide)

Daunomycin (5,12-Naphthacenedione, (8S-cis)-8-acetyl-10-[(3-amino-2,3,6-trideoxy)-alpha-L-lyxo-hexopyranosyl)oxy]-7,8,9,10-tetrahydro-6,8,11-trihydroxy-1-methoxy-)

DDD (Dichlorodiphenyldichloroethane) (Ethane, 1,1-dichloro-2,2-bis(p-chlorophenyl)-)

DDE (Ethylene, 1,1-dichloro-2,2-bis(4-chlorophenyl)-)

DDT (Dichlorodiphenyltrichloroethane) (Ethane, 1,1,1-trichloro-2,2-bis (p-chlorophenyl)-)

Diallate (S-(2,3-dichloroallyl) diisopropylthiocarbamate)

Dibenz[a,h]acridine (1,2,5,6-Dibenzacridine)

Dibenz[a,j]acridine (1,2,7,8-Dibenzacridine)

Dibenz[a,h]anthracene (1,2,5,6-Dibenzanthracene)

7H-Dibenzo[c,g]carbazole (3,4,5,6-Dibenzcarbazole)

Dibenzo[a,e]pyrene (1,2,4,5-Dibenzpyrene)

Dibenzo[a,h]pyrene (1,2,5,6-Dibenzpyrene)

Dibenzo[a,i]pyrene (1,2,7,8-Dibenzpyrene)

1,2-Dibromo-3-chloropropane (Propane, 1,2-dibromo-3-chloro-)

1,2-Dibromoethane (Ethylene dibromide)

Dibromomethane (Methylene bromide)

Di-n-butyl phthalate (1,2-Benzenedicarboxylic acid, dibutyl ester)

o-Dichlorobenzene (Benzene, 1,2-dichloro-)

m-Dichlorobenzene (Benzene, 1,3-dichloro-)

p-Dichlorobenzene (Benzene, 1,4-dichlor-)

Dichlorobenzene, N.O.S.[3] (Benzene, dichloro-, N.O.S.[3])

3,3'-Dichlorobenzidine ([1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-)

1,4-Dichloro-2-butene (2-Butene, 1,4-dichloro-)

Dichlorodifluoromethane (Methane, dichlorodifluoro-)

1,1-Dichloroethane (Ethylidene dichloride)

1,2-Dichloroethane (Ethylene dichloride)

trans-1,2-Dichloroethene (1,2-Dichloroethylene)

Dichloroethylene, N.O.S.[3] (Ethene, dichloro-, N.O.S.[3])

1,1-Dichloroethylene (Ethene, 1,1-dichloro-)

Dichloromethane (Methylene chloride)

2,4-Dichlorophenol (Phenol, 2,4-dichloro-)

2,6-Dichlorophenol (Phenol, 2,6-dichloro-)

2,4-Dichlorophenoxyacetic acid (2,4-D), salts and esters (Acetic acid, 2,4-dichlorophenoxy-, salts and esters)

Dichlorophenylarsine (Phenyl dichloroarsine)

Dichloropropane, N.O.S.[3] (Propane, dichloro-, N.O.S.[3])

1,2-Dichloropropane (Propylene dichloride)

Dichloropropanol, N.O.S.[3] (Propanol, dichloro-, N.O.S.[3])

Dichloropropene, N.O.S.[3] (Propene, dichloro-, N.O.S.[3])

1,3-Dichloropropene (1-Propene, 1,3-dichloro-)

Dieldin (1,2,3,4,10.10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octa-hydro-endo, exo- 1,4:5,8-Dimethanonaphthalene)

1,2:3,4-Diepoxybutane (2,2'-Bioxirane)

Diethylarsine (Arsine, diethyl-)

N,N-Diethylhydrazine (Hydrazine, 1,2-diethyl)

O,O-Diethyl S-methyl ester of phosphorodithioic acid (Phosphorodithioic acid, O,O-diethyl S-methyl ester)

O,O-Diethylphosphoric acid, O-p-nitrophenyl ester (Phosphoric acid, diethyl p-nitrophenyl ester)

Diethyl phthalate (1,2-Benzenedicarboxylic acid, diethyl ester)

O,O-Diethyl O-2-pyrazinyl phosphorothioate (Phosphorothioic acid, O,O-diethyl O-pyrazinyl ester)

Diethylstilbesterol (4,4'-Stilbenediol,alpha,alpha-diethyl, bis(dihydrogen phosphate, (E)-)

Dihydrosafrole (Benzene, 1,2-methylenedioxy-4-propyl-)

3,4-Dihydroxy-alpha-(methylamino)methyl benzyl alcohol (1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-)

Dilsopropylfluorophosphate (DFP) (Phosphorofluoridic acid, bis(1-methylethyl) ester)

Dimethoate (Phosphorodithioic acid, O,O-dimethyl S-[2-(methylamino)-2-oxoethyl] ester)

3,3'-Dimethoxybenzidine ([1,1'-Biphenyl]- 4,4'-diamine, 3-3'-dimethoxy-)

p-Dimethylaminoazobenzene (Benzenamine, N,N-dimethyl-4-(phenylazo)-)

7,12-Dimethylbenz[a]anthracene (1,2-Benzanthracene, 7,12-dimethyl-)

3,3'-Dimethylbenzidine ([1,1'-Biphenyl]-4,4'-diamine, 3,3'-dimethyl-)

Dimethylcarbamoyl chloride (Carbamoyl chloride, dimethyl-)

1,1-Dimethylhydrazine (Hydrazine, 1,1-dimethyl-)

1,2-Dimethylhydrazine (Hydrazine, 1,2-dimethyl-)

3,3-Dimethyl-1-(methylthio)-2-butanone, O-[(methylamino) carbonyl] oxime (Thiofanox)

alpha,alpha-Dimethylphenethylamine (Ethanamine, 1,1-dimethyl-2-phenyl-)

2,4-Dimethylphenol (Phenol, 2,4-dimethyl-)

Dimethyl phthalate (1,2-Benzenedicarboxylic acid, dimethyl ester)

Dimethyl sulfate (Sulfuric acid, dimethyl ester)

Dinitrobenzene, N.O.S.[3] (Benzene, dinitro-, N.O.S.[3])

4,6-Dinitro-o-cresol and salts (Phenol, 2,4-dinitro-6-methyl-, and salts)

2,4-Dinitrophenol (Phenol, 2,4-dinitro-)

2,4-Dinitrotoluene (Benzene, 1-methyl-2,4-dinitro-)

2,6-Dinitrotoluene (Benzene, 1-methyl-2,6-dinitro-)

Di-n-octyl phthalate (1,2-Benzenedicarboxylic acid, dioctyl ester)

1,4-Dioxane (1,4-Diethylene oxide)

Diphenylamine (Benzenamine, N-phenyl-)

1,2-Diphenylhydrazine (Hydrazine, 1,2-diphenyl-)

Di-n-propylnitrosamine (N-Nitroso-di-n-propylamine)

Disulfoton (O,O-diethyl S-[2-(ethylthio)ethyl] phosphorodithioate)

2,4-Dithiobiuret (Thioimidodicarbonic diamide)

Endosulfan (5-Norbornene, 2,3-dimethanol, 1,4,5,6,7,7-hexachloro-, cyclic sulfite)

Endrin and metabolites (1,2,3,4,10,10-hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-endo,endo-1,4:5,8-dimethanonaphthalene, and metabolites)

Ethyl carbamate (Urethan) (Carbamic acid, ethyl ester)

Ethyl cyanide (propanenitrile)

Ethylenebisdithiocarbamic acid, salts and esters (1,2-Ethanediyl-biscarbamodithioic acid, salts and esters)

Ethyleneimine (Aziridine)

Ethylene oxide (Oxirane)

Ethylenethiourea (2-Imidazolidinethione)

Ethyl methacrylate (2-Propenoic acid, 2-methyl-, ethyl ester)

Ethyl methanesulfonate (Methanesulfonic acid, ethyl ester)

Fluoranthene (Benzo[j,k]fluorene)

Fluorine

2-Fluoroacetamide (Acetamide, 2-fluoro-)

Fluoroacetic acid, sodium salt (Acetic acid, fluoro-, sodium salt)

Formaldehyde (Methylene oxide)

Formic acid (Methanoic acid)

Glycidylaldehyde (1-Propanol-2,3-epoxy)

Halomethane, N.O.S.[3]

Heptachlor (4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-3a,4,7,7a-tetrahydro-)

Heptachlor epoxide (alpha, beta, and gamma isomers) (4,7-Methano-1H-indene, 1,4,5,6,7,8,8-heptachloro-2,3-epoxy-3a,4,7,7-tetrahydro-, alpha, beta, and gamma isomers)

Hexachlorobenzene (Benzene, hexachloro-)

Hexachlorobutadiene (1,3-Butadiene, 1,1,2,3,4,4-hexachloro-)

Hexachlorocyclohexane (all isomers) (Lindane and isomers)

Hexachlorocyclopentadiene (1,3-Cyclopentadiene, 1,2,3,4,5,5-hexachloro-)

Hexachloroethane (Ethane, 1,1,1,2,2,2-hexachloro-)

1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4:5,8-endo,endo-dimethanonaphthalene (Hexachlorohexa-hydro-endo,endo-dimethanonaphthalene)

Hexachlorophene (2,2'-Methylenebis(3,4,6-trichlorophenol)

Hexachloropropene (1-Propene, 1,1,2,3,3,3-hexachloro-)

Hexaethyl tetraphosphate (Tetraphosphoric acid, hexaethyl ester)

Hydrazine (Diamine)

Hydrocyanic acid (Hydrogen cyanide)

Hydrofluoric acid (Hydrogen fluoride)

Hydrogen sulfide (Sulfur hydride)

Hydroxydimethylarsine oxide (Cacodylic acid)

Indeno (1,2,3-cd)pyrene (1,10-(1,2-phenylene)pyrene)

Iodomethane (Methyl iodide)

Iron dextran (Ferric dextran)

Isocyanic acid, methyl ester (Methyl isocyanate)

Isobutyl alcohol (1-Propanol, 2-methyl-)

Isosafrole (Benzene, 1,2-methylenedioxy-4-allyl-)

Kepone (Decachlorooctahydro-1,3,4-Methano-2H-cyclobuta[cd]pentalen-2-one)

Lasiocarpine (2-Butenoic acid, 2-methyl-, 7-[(2,3-dihydroxy-2-(1-methoxyethyl)-3-methyl-1-oxobutoxy)methyl]-2,3,5,7a- tetrahydro-1H-pyrrolizin-1-yl ester)

Lead and compounds, N.O.S.[3]

Lead acetate (Acetic acid, lead salt)

Lead phosphate (Phosphoric acid, lead salt)

Lead subacetate (Lead, bis(acetato-0)tetrahydroxytri-)

Maleic anhydride (2,5-Furandione)

Maleic hydrazide (1,2-Dihydro-3,6-pyridazinedione)

Malononitrile (Propanedinitrile)

Melphalan (Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-,L-)

Mercury fulminate (Fulminic acid, mercury salt)

Mercury and compounds, N.O.S.[3]

Methacrylonitrile (2-Propenenitrile, 2-methyl-)

Methanethiol (Thiomethanol)

Methapyrilene (Pyridine. 2-[(2-dimethylamino)ethyl]-2-thenylamino-)

Metholmyl (Acetimidic acid, N-[(methylcarbamoyl)oxy]thio-, methyl ester)

Methoxychlor (Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-)

2-Methylaziridine (1,2-Propylenimine)

3-Methylcholanthrene (Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-)

Methyl chlorocarbonate (Carbonochloridic acid, methyl ester)

4,4-Methylenebis(2-chloroaniline) (Benzenamine, 4,4-methylenebis- (2-chloro-)

Methyl ethyl ketone (MEK) (2-Butanone)

Methyl hydrazine (Hydrazine, methyl-)

2-Methyllactonitrile (Propanenitrile, 2-hydroxy-2-methyl-)

Methyl methacrylate (2-Propenoic acid, 2-methyl-, methyl ester)

Methyl methanesulfonate (Methanesulfonic acid, methyl ester)

2-Methyl-2-(methylthio)propionaldehyde-o-(methylcarbonyl) oxime (Propanal, 2-methyl-2-(methylthio)-, 0-[(methylamino)carbonyl]oxime)

N-Methyl-N-nitro-N-nitrosoguanidine (Guanidine, N-nitroso-N-methyl-N- nitro-)

Methyl parathion (0,0-dimethyl 0-(4-nitrophenyl) phosphorothioate)

Methylthiouracil (4-IH-Pyrimidinone, 2,3-dihydro-6-methyl-2-thioxo-)

Molybdenum and compounds, N.O.S.[3]

Mustard gas (Sulfide, bis(2-chloroethyl)-)

Naphthalene

1,4-Naphthoquinone (1,4-Naphthalenedione)

1-Naphthylamine (alpha-Naphthylamine)

2-Naphthylamine (beta-Naphthylamine)

1-Naphthyl-2-thiourea (Thiourea, 1-naphthalenyl-)

Nickel and compounds, N.O.S.[3]

Nickel carbonyl (Nickel tetracarbonyl)

Nickel cyanide (Nickel (II) cyanide)

Nicotine and salts (Pyridine, (S)-3-(1-methyl-2-pyrrolidinyl)-, and salts)

Nitric oxide (Nitrogen (II) oxide)

p-Nitroaniline (Benzenamine, 4-nitro-)

Nitrobenzine (Benzene, nitro-)

Nitrogen dioxide (Nitrogen (IV) oxide)

Nitrogen mustard and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)- N-methyl-, and hydrochloride salt)

Nitrogen mustard N-Oxide and hydrochloride salt (Ethanamine, 2-chloro-, N-(2-chloroethyl)-N-methyl-, and hydrochloride salt)

Nitroglycerine (1,2,3-Propanetriol, trinitrate)

4-Nitrophenol (Phenol, 4-nitro-)

4-Nitroquinoline-1-oxide (Quinoline, 4-nitro-1-oxide-)

Nitrosamine, N.O.S.[3]

N-Nitrosodi-n-butylamine (1-Butanamine, N-butyl-N-nitroso-)

N-Nitrosodiethanolamine (Ethanol, 2,2-(nitrosoimino)bis-)

N-Nitrosodiethylamine (Ethanamine, N-ethyl-N-nitroso-)

N-Nitrosodimethylamine (Dimethylnitrosamine)

N-Nitroso-N-ethylurea (Carbamide, N-ethyl-N-nitroso-)

N-Nitrosomethylethylamine (Ethanamine, N-methyl-N-nitroso-)

N-Nitroso-N-methylurea (Carbamide, N-methyl-N-nitroso-)

N-Nitroso-N-methylurethane (Carbamic acid, methylnitroso-, ethyl ester)

N-Nitrosomethylvinylamine (Ethenamine, N-methyl-N-nitroso-)

N-Nitrosomorpholine (Morpholine, N-nitroso-)

N-Nitrosonornicotine (Nornicotine, N-nitroso-)

N-Nitrosopiperidine (Pyridine, hexahydro-, N-nitroso-)

Nitrosopyrrolidine (Pyrrole, tetrahydro-, N-nitroso-)

N-Nitrososarcosine (Sarcosine, N-nitroso-)

5-Nitro-o-toluidine (Benzenamine, 2-methyl-5-nitro-)

Octamethylpyrophosphoramide (Diphosphoramide, octamethyl-)

Osmium tetroxide (Osmium (VIII) oxide)

7-Oxabicyclo[2.2.1]heptane-2,3-dicarboxylic acid (Endothal)

Paraldehyde (1,3,5-Trioxane, 2,4,6-trimethyl-)

Parathion (Phosphorothioic acid, O,O-diethyl O-(p-nitrophenyl)ester)

Pentachlorobenzene (Benzene, pentachloro-)

Pentachloroethane (Ethane, pentachloro-)

Pentachloronitrobenzene (PCNB) (Benzene, pentachloronitro-)

Pentachlorophenol (Phenol, pentachloro-)

Phenacetin (Acetamide, N-(4-ethoxyphenyl)-)

Phenol (Benzene, hydroxy-)

Phenylenediamine (Benzenediamine)

Phenylmercury acetate (Mercury, acetatophenyl-)

N-Phenylthiourea (Thiourea, phenyl-)

Phosgene (Carbonyl chloride)

Phosphine (Hydrogen phosphide)

Phosphorodithioic acid, O,O-diethyl S-[(ethylthio)methyl] ester (Phorate)

Phosphorothioic acid, O,O-dimethyl O-[p-((dimethylamino)sulfonyl)phenyl] ester (Famphur)

Phthalic acid esters, N.O.S.[3] (Benzene, 1,2-dicarboxylic acid, esters, N.O.S.[3])

Phthalic anhydride (1,2-Benzenedicarboxylic acid anhydride)

2-Picoline (Pyridine, 2-methyl-)

Polychlorinated biphenyl, N.O.S.[3]

Potassium cyanide

Potassium silver cyanide (Argentate(1-), dicyano-, potassium)

Pronamide (3,5-Dichloro-N-(1,1-dimethyl-2-propynyl)benzamide)

1,3-Propane sultone (1,2-Oxathiolane, 2,2-dioxide)

n-Propylamine (1-Propanamine)

Propylthiouracil (Undecamethylenediamine, N,N'-bis(2-chlorobenzyl-), dihydrochloride)

2-Propyn-1-ol (Propargyl alcohol)

Pyridine

Radium -226 and -228

Reserpine (Yohimban-16-carboxylic acid, 11,17-dimethoxy-18-[3,4,5- trimethoxybenzoyl)oxy]-, methyl ester)

Resorcinol (1,3-Benzenediol)

Saccharin and salts (1,2-Benzoisothiazolin-3-one, 1,1-dioxide, and salts)

Safrole (Benzene, 1,2-methylenedioxy-4-allyl-)

Selenious acid (Selenium dioxide)

Selenium and compounds, N.O.S.[3]

Selenium sulfide (Sulfur selenide)

Selenourea (Carbamimidoselenoic acid)

Silver and compounds, N.O.S.[3]

Silver cyanide

Sodium cyanide

Streptozotocin (D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-)

Strontium sulfide

Strychnine and salts (Strychnidin-10-one, and salts)

1,2,4,5-Tetrachlorobenzene (Benzene, 1,2,4,5-tetrachloro-)

2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD) (Dibenzo-p-dioxin, 2,3,7,8-tetrachloro-)

Tetrachloroethane, N.O.S.[3] (Ethane, tetrachloro-, N.O.S.[3])

1,1,1,2-Tetrachlorethane (Ethane, 1,1,1,2-tetrachloro-)

1,1,2,2-Tetrachlorethane (Ethane, 1,1,2,2-tetrachloro-)

Tetrachloroethane (Ethene, 1,1,2,2-tetrachloro-)

Tetrachloromethane (Carbon tetrachloride)

2,3,4,6,-Tetrachlorophenol (Phenol, 2,3,4,6-tetrachloro-)

Tetraethyldithiopyrophosphate (Dithiopyrophosphoric acid, tetraethyl-ester)

Tetraethyl lead (Plumbane, tetraethyl-)

Tetraethylpyrophosphate (Pyrophosphoric acide, tetraethyl ester)

Tetranitromethane (Methane, tetranitro-)

Thallium and compounds, N.O.S.[3]

Thallic oxide (Thallium (III) oxide)

Thallium (I) acetate (Acetic acid, thallium (I) salt)

Thallium (I) carbonate (Carbonic acid, dithallium (I) salt)

Thallium (I) chloride

Thallium (I) nitrate (Nitric acid, thallium (I) salt)

Thallium selenite

Thallium (I) sulfate (Sulfuric acid, thallium (I) salt)

Thioacetamide (Ethanethioamide)

Thiosemicarbazide (Hydrazinecarbothioamide)

Thiourea (Carbamide thio-)

Thiuram (Bis(dimethylthiocarbamoyl) disulfide)

Thorium and compounds, N.O.S.,[3] when producing thorium byproduct material

Toluene (Benzene, methyl-)

Toluenediamine (Diaminotoluene)

o-Toluidine hydrochloride (Benzenamine, 2-methyl-, hydrochloride)

Tolylene diisocyanate (Benzene, l,3-diisocyanatomethyl-)

Toxaphene (Camphene, octachloro-)

Tribromomethane (Bromoform)

1,2,4-Trichlorobenzene (Benzene, 1,2,4-trichloro-)

1,1,1-Trichloroethane (Methyl chloroform)

1,1,2-Trichloroethane (Ethane, 1,1,2-trichloro-)

Trichloroethene (Trichloroethylene)

Trichloromethanethiol (Methanethiol, trichloro-)

Trichloromonofluoromethane (Methane, trichlorofluoro-)

2,4,5-Trichlorophenol (Phenol, 2,4,5-trichloro-)

2,4,6-Trichlorophenol (Phenol, 2,4,6-trichloro-)

2,4,5-Trichlorophenoxyacetic acid (2,4,5-T) (Acetic acid, 2,4,5-trichlorophenoxy-)

2,4,5-Trichlorophenoxypropionic acid (2,4,5-TP) (Silvex) (Propionoic acid, 2-(2,4,5-trichlorophenoxy)-)

Trichloropropane, N.O.S.[3] (Propane, trichloro-, N.O.S.[3])

1,2,3-Trichloropropane (Propane, 1,2,3-trichloro-)

O,O,O-Triethyl phosphorothioate (Phosphorothioic acid, O,O,O-triethyl ester)

sym-Trinitrobenzene (Benzene, 1,3,5-trinitro-)

Tris(1-azridinyl) phosphine sulfide (Phosphine sulfide, tris(1-aziridinyl-)

Tris(2,3-dibromopropyl) phosphate (1-Propanol, 2,3-dibromo-, phosphate)

Trypan blue (2,7-Naphthalenedisulfonic acid, 3,3'-[(3,3'-dimethyl (1,1'-biphenyl)- 4,4'-diyl)bis(azo)]bis(5-amino-4-hydroxy-, tetrasodium salt)

Uracil mustard (Uracil 5-[bis(2-chloroethyl)amino]-)

Uranium and compounds, N.O.S.[3]

Vanadic acid, ammonium salt (ammonium vanadate)

Vanadium pentoxide (Vanadium (V) oxide)

Vinyl chloride (Ethene, chloro-)

Zinc cyanide

Zinc phosphide

[50 FR 41862, Oct. 16, 1985, as amended at 52 FR 31611, Aug. 21, 1987; 52 FR 43562, Nov. 13, 1987; 53 FR 19248, May 27, 1988; 55 FR 45600, Oct. 30, 1990; 56 FR 23473, May 21, 1991; 58 FR 67661, Dec. 22, 1993; 59 FR 28229, June 1, 1994; 64 FR 17510, Apr. 12, 1999]

1. In the case of thorium byproduct materials, the standard applies only to design. Monitoring for radon emissions from thorium byproduct materials after installation of an appropriately designed cover is not required.

2. This average applies to the entire surface of each disposal area over a period of a least one year, but a period short compared to 100 years. Radon will come from both byproduct materials and from covering materials. Radon emissions from covering materials should be estimated as part of developing a closure plan for each site. The standard, however, applies only to emissions from byproduct materials to the atmosphere.

3. The abbreviation N.O.S. (not otherwise specified) signifies those members of the general class not specifically listed by name in this list.

PART 50--DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

[Top of File]

General Provisions

[Top of File]

§ 50.1 Basis, purpose, and procedures applicable.

The regulations in this part are promulgated by the Nuclear Regulatory Commission pursuant to the Atomic Energy Act of 1954, as amended (68 Stat. 919), and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242), to provide for the licensing of production and utilization facilities. This part also gives notice to all persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 50.5.

[63 FR 1897, Jan 13, 1998]

§ 50.2 Definitions.

[Top of File]

As used in this part,

Act means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

Alternate ac source means an alternating current (ac) power source that is available to and located at or nearby a nuclear power plant and meets the following requirements:

(1) Is connectable to but not normally connected to the offsite or onsite emergency ac power systems;

(2) Has minimum potential for common mode failure with offsite power or the onsite emergency ac power sources;

(3) Is available in a timely manner after the onset of station blackout; and

(4) Has sufficient capacity and reliability for operation of all systems required for coping with station blackout and for the time required to bring and maintain the plant in safe shutdown (non-design basis accident).

Applicant means a person or an entity applying for a license, permit, or other form of Commission permission or approval under this part or part 52 of this chapter.

Atomic energy means all forms of energy released in the course of nuclear fission or nuclear transformation.

Atomic weapon means any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device), the prinicipal purpose of which is for use as, or for development of, a weapon, a weapon prototype, or a weapon test device.

Basic component means, for the purposes of § 50.55(e) of this chapter:

(1) When applied to nuclear power reactors, any plant structure, system, component, or part thereof necessary to assure

(i) The integrity of the reactor coolant pressure boundary,

(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition, or

(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

(2) When applied to other types of facilities or portions of such facilities for which construction permits are issued under § 50.23, a component, structure, system or part thereof that is directly procured by the construction permit holder for the facility subject to the regulations of this part and in which a defect or failure to comply with any applicable regulation in this chapter, order, or license issued by the Commission could create a substantial safety hazard.

(3) In all cases, *basic component* includes safety related design, analysis, inspection, testing, fabrication, replacement parts, or consulting services that are associated with the component hardware, whether these services are performed by the component supplier or other

supplier.

Byproduct material means—

(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(2)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that—

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(3) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

Certified fuel handler means, for a nuclear power reactor facility, a non-licensed operator who has qualified in accordance with a fuel handler training program approved by the Commission.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Committed dose equivalent means the dose equivalent to organs or tissues of reference that will be received from an intake of radioactive material by an individual during the 50-year period following the intake.

Committed effective dose equivalent is the sum of the products of the weighting factors applicable to each of the body organs or tissues that are irradiated and the committed dose equivalent to these organs or tissues.

Common defense and security means the common defense and security of the United States.

Construction or constructing means, for the purposes of § 50.55(e), the analysis, design, manufacture, fabrication, quality assurance, placement, erection, installation, modification, inspection, or testing of a facility or activity which is subject to the regulations in this part and consulting services related to the facility or activity that are safety related.

Controls when used with respect to nuclear reactors means apparatus and mechanisms, the manipulation of which directly affects the reactivity or power level of the reactor.

Controls when used with respect to any other facility means apparatus and mechanisms, the manipulation of which could affect the chemical, physical, metallurgical, or nuclear process of the facility in such a manner as to affect the protection of health and safety against radiation.

Cost of service regulation means the traditional system of rate regulation, or similar regulation, including "price cap" or "incentive" regulation, in which a rate regulatory authority generally allows an electric utility to charge its customers the reasonable and prudent costs of providing electricity services, including capital, operations, maintenance, fuel, decommissioning, and other costs required to provide such services.

Decommission means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits--

(1) Release of the property for unrestricted use and termination of the license; or

(2) Release of the property under restricted conditions and termination of the license.

Deep-dose equivalent, which applies to external whole-body exposure, is the dose equivalent at a tissue depth of 1 cm (1000mg/cm^2).

Defect means, for the purposes of § 50.55(e) of this chapter:

(1) A deviation in a basic component delivered to a purchaser for use in a facility or activity subject to a construction permit under this part, if on the basis of an evaluation, the deviation could create a substantial safety hazard; or

(2) The installation, use, or operation of a basic component containing, a defect as defined in paragraph (1) of this definition; or

(3) A deviation in a portion of a facility subject to the construction permit of this part provided the deviation could, on the basis of an evaluation, create a substantial safety hazard.

Department and Department of Energy means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 et seq.), to the extent that the department, or its duly authorized representatives, exercises functions formerly vested in the Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104 (b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

Design bases means that information which identifies the specific functions to be performed by a structure, system, or component of a facility, and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be (1) restraints derived from generally accepted "state of the art" practices for achieving functional goals, or (2) requirements derived from analysis (based on calculation and/or experiments) of the effects of a postulated accident for which a structure, system, or component must meet its functional goals.

Deviation means, for the purposes of § 50.55(e) of this chapter, a departure from the technical or quality assurance requirements defined in procurement documents, safety analysis report, construction permit, or other documents provided for basic components installed in a facility subject to the regulations of this part.

Director means, for the purposes of § 50.55(e) of this chapter, an individual, appointed or elected according to law, who is authorized to manage and direct the affairs of a corporation, partnership or other entity.

Discovery means, for the purposes of § 50.55(e) of this chapter, the completion of the documentation first identifying the existence of a deviation or failure to comply potentially associated with a substantial safety hazard within the evaluation procedures discussed in § 50.55 (e)(1).

Electric utility means any entity that generates or distributes electricity and which recovers the cost of this electricity, either directly or indirectly, through rates established by the entity itself or by a separate regulatory authority. Investor-owned utilities, including generation or distribution subsidiaries, public utility districts, municipalities, rural electric cooperatives, and State and Federal agencies, including associations of any of the foregoing, are included within the meaning of "electric utility."

Evaluation means, for the purposes of § 50.55(e) of this chapter, the process of determining whether a particular deviation could create a substantial safety hazard or determining whether a failure to comply is associated with a substantial safety hazard.

Exclusion area means that area surrounding the reactor, in which the reactor licensee has the authority to determine all activities including exclusion or removal of personnel and property from the area. This area may be traversed by a highway, railroad, or waterway, provided these are not so close to the facility as to interfere with normal operations of the facility and provided appropriate and effective arrangements are made to control traffic on the highway, railroad, or waterway, in case of emergency, to protect the public health and safety. Residence within the exclusion area shall normally be prohibited. In any event, residents shall be subject to ready removal in case of necessity. Activities unrelated to operation of the reactor may be permitted in an exclusion area under appropriate limitations, provided that no significant hazards to the public health and safety will result.

Federal Government funding for conversion means funds appropriated to the Department of Energy or to any other Federal Agency to pay directly to or to reimburse non-power reactor licensees for costs attendant to conversion.

Federal licensee means any NRC licensee, the obligations of which are guaranteed by and supported by the full faith and credit of the United States Government.

Fuel acceptable to the Commission means that the fuel replacing the existing HEU fuel in a specific non-power reactor (1) meets the operating requirements of the existing license or, through appropriate NRC safety review and approval, can be used in a manner which protects public health and safety and promotes the common defense and security; and (2) meets the Commission's policy of limiting, to the maximum extent possible, the use of HEU fuel in that reactor.

Government agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

Highly enriched uranium (HEU) fuel means fuel in which the weight percent of U-235 in the uranium is 20% or greater. Target material, special instrumentation, or experimental devices using HEU are not included.

Historical site assessment means the identification of potential, likely, or known sources of radioactive material and radioactive contamination based on existing or derived information for the purpose of classifying a facility or site, or parts thereof, as impacted or non-impacted.

Impacted areas mean the areas with some reasonable potential for residual radioactivity in excess of natural background or fallout levels.

Incentive regulation means the system of rate regulation in which a rate regulatory authority establishes rates that an electric generator

may charge its customers that are based on specified performance factors, in addition to cost-of-service factors.

License means a license, including a construction permit or operating license under this part, an early site permit, combined license or manufacturing license under part 52 of this chapter, or a renewed license issued by the Commission under this part, part 52, or part 54 of this chapter.

Licensee means a person who is authorized to conduct activities under a license issued by the Commission.

Low enriched uranium (LEU) fuel means fuel in which the weight percent of U-235 in the uranium is less than 20%.

Low population zone means the area immediately surrounding the exclusion area which contains residents, the total number and density of which are such that there is a reasonable probability that appropriate protective measures could be taken in their behalf in the event of a serious accident. These guides do not specify a permissible population density or total population within this zone because the situation may vary from case to case. Whether a specific number of people can, for example, be evacuated from a specific area, or instructed to take shelter, on a timely basis will depend on many factors such as location, number and size of highways, scope and extent of advance planning, and actual distribution of residents within the area.

Major decommissioning activity means, for a nuclear power reactor facility, any activity that results in permanent removal of major radioactive components, permanently modifies the structure of the containment, or results in dismantling components for shipment containing greater than class C waste in accordance with § 61.55 of this chapter.

Major radioactive components means, for a nuclear power reactor facility, the reactor vessel and internals, steam generators, pressurizers, large bore reactor coolant system piping, and other large components that are radioactive to a comparable degree.

Non-bypassable charges mean those charges imposed over an established time period by a Government authority that affected persons or entities are required to pay to cover costs associated with the decommissioning of a nuclear power plant. Such charges include, but are not limited to, wire charges, stranded cost charges, transition charges, exit fees, other similar charges, or the securitized proceeds of a revenue stream.

Non-impacted areas mean the areas with no reasonable potential for residual radioactivity in excess of natural background or fallout levels.

Non-power reactor means a research or test reactor licensed under §§ 50.21(c) or 50.22 of this part for research and development.

Notification means the telephonic communication to the NRC Operations Center or written transmittal of information to the NRC Document Control Desk.

Nuclear reactor means an apparatus, other than an atomic weapon, designed or used to sustain nuclear fission in a self-supporting chain reaction.

Permanent cessation of operation(s) means, for a nuclear power reactor facility, a certification by a licensee to the NRC that it has permanently ceased or will permanently cease reactor operation(s), or a final legally effective order to permanently cease operation(s) has come into effect.

Permanent fuel removal means, for a nuclear power reactor facility, a certification by the licensee to the NRC that it has permanently removed all fuel assemblies from the reactor vessel.

Person means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the Department, except that the Department shall be considered a person to the extent that its facilities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974, any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

Price-cap regulation means the system of rate regulation in which a rate regulatory authority establishes rates that an electric generator may charge its customers that are based on a specified maximum price of electricity.

Procurement document means, for the purposes of § 50.55(e) of this chapter, a contract that defines the requirements which facilities or basic components must meet in order to be considered acceptable by the purchaser.

Produce, when used in relation to special nuclear material, means (1) to manufacture, make, produce, or refine special nuclear material; (2) to separate special nuclear material from other substances in which such material may be contained; or (3) to make or to produce new special nuclear material.

Production facility means:

(1) Any nuclear reactor designed or used primarily for the formation of plutonium or uranium-233; or

(2) Any facility designed or used for the separation of the isotopes of plutonium, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(3) Any facility designed or used for the processing of irradiated materials containing special nuclear material, except (i) laboratory scale facilities designed or used for experimental or analytical purposes, (ii) facilities in which the only special nuclear materials contained in the irradiated material to be processed are uranium enriched in the isotope U-235 and plutonium produced by the irradiation, if the material processed contains not more than 106 grams of plutonium per gram of U-235 and has fission product activity not in excess of 0.25 millicuries of fission products per gram of U-235, and (iii) facilities in which processing is conducted pursuant to a license issued under parts 30 and 70 of this chapter, or equivalent regulations of an Agreement State, for the receipt, possession, use, and transfer of irradiated special nuclear material, which authorizes the processing of the irradiated material on a batch basis for the separation of selected fission products and limits the process batch to not more than 100 grams of uranium enriched in the isotope 235 and not more than 15 grams of any other special nuclear material.

Prototype plant means a nuclear reactor that is used to test design features, such as the testing required under § 50.43(e). The prototype plant is similar to a first-of-a-kind or standard plant design in all features and size, but may include additional safety features to protect the public and the plant staff from the possible consequences of accidents during the testing period.

Reactor coolant pressure boundary means all those pressure-containing components of boiling and pressurized water-cooled nuclear power reactors, such as pressure vessels, piping, pumps, and valves, which are:

(1) Part of the reactor coolant system, or

(2) Connected to the reactor coolant system, up to and including any and all of the following:

(i) The outermost containment isolation valve in system piping which penetrates primary reactor containment,

(ii) The second of two valves normally closed during normal reactor operation in system piping which does not penetrate primary reactor containment,

(iii) The reactor coolant system safety and relief valves.

For nuclear power reactors of the direct cycle boiling water type, the reactor coolant system extends to and includes the outermost containment isolation valve in the main steam and feedwater piping.

Research and development means (1) theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes.

Responsible officer means, for the purposes of § 50.55(e) of this chapter, the president, vice-president, or other individual in the organization of a corporation, partnership, or other entity who is vested with executive authority over activities subject to this part.

Restricted Data means all data concerning (1) design, manufacture, or utilization of atomic weapons; (2) the production of special nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Act.

Safe shutdown (non-design basis accident (non-DBA)) for station blackout means bringing the plant to those shutdown conditions specified in plant technical specifications as Hot Standby or Hot Shutdown, as appropriate (plants have the option of maintaining the RCS at normal operating temperatures or at reduced temperatures).

Safety-related structures, systems and components means those structures, systems and components that are relied upon to remain functional during and following design basis events to assure:

(1) The integrity of the reactor coolant pressure boundary

(2) The capability to shut down the reactor and maintain it in a safe shutdown condition; or

(3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the applicable guideline exposures set forth in § 50.34(a)(1) or § 100.11 of this chapter, as applicable.

Source material means source material as defined in subsection 11z. of the Act and in the regulations contained in part 40 of this chapter.

Source term refers to the magnitude and mix of the radionuclides released from the fuel, expressed as fractions of the fission product inventory in the fuel, as well as their physical and chemical form, and the timing of their release.

Special nuclear material means (1) plutonium, uranium-233, uranium enriched in the isotope-233 or in the isotope-235, and any other material which the Commission, pursuant to the provisions of section 51 of the act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing, but does not include source material.

Station blackout means the complete loss of alternating current (ac) electric power to the essential and nonessential switchgear buses in a nuclear power plant (i.e., loss of offsite electric power system concurrent with turbine trip and unavailability of the onsite emergency ac power system). Station blackout does not include the loss of available ac power to buses fed by station batteries through inverters or by alternate ac sources as defined in this section, nor does it assume a concurrent single failure or design basis accident. At single unit sites,

any emergency ac power source(s) in excess of the number required to meet minimum redundancy requirements (i.e., single failure) for safe shutdown (non-DBA) is assumed to be available and may be designated as an alternate power source(s) provided the applicable requirements are met. At multi-unit sites, where the combination of emergency ac power sources exceeds the minimum redundancy requirements for safe shutdown (non-DBA) of all units, the remaining emergency ac power sources may be used as alternate ac power sources provided they meet the applicable requirements. If these criteria are not met, station blackout must be assumed on all the units.

Substantial safety hazard means, for the purposes of § 50.55(e) of this chapter, a loss of safety function to the extent that there is a major reduction in the degree of protection provided to public health and safety for any facility or activity authorized by the construction permit issued under this part.

Testing facility means a nuclear reactor which is of a type described in § 50.21(c) of this part and for which an application has been filed for a license authorizing operation at:

(1) A thermal power level in excess of 10 megawatts; or

(2) A thermal power level in excess of 1 megawatt, if the reactor is to contain:

(i) A circulating loop through the core in which the applicant proposes to conduct fuel experiments; or

(ii) A liquid fuel loading; or

(iii) An experimental facility in the core in excess of 16 square inches in cross-section.

Total effective dose equivalent (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

Unique purpose means a project, program, or commercial activity which cannot reasonably be accomplished without the use of HEU fuel, and may include: (1) A specific experiment, program, or commercial activity (typically long-term) that significantly serves the U.S. national interest and cannot be accomplished without the use of HEU fuel; (2) Reactor physics or reactor development based explicitly on the use of HEU fuel; (3) Research projects based on neutron flux levels or spectra attainable only with HEU fuel; or (4) A reactor core of special design that could not perform its intended function without using HEU fuel.

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

Utilization facility means any nuclear reactor other than one designed or used primarily for the formation of plutonium or U-233.

Note: Pursuant to subsections 11v. and 11cc., respectively, of the Act, the Commission may from time to time add to, or otherwise alter, the foregoing definitions of production and utilization facility. It may also include as a facility an important component part especially designed for a facility, but has not at this time included any component parts in the definitions.

[21 FR 355, Jan. 19, 1956; 72 FR 49489, Aug. 28, 2007; 72 FR 55932 Oct. 1, 2007; 72 FR 68059, Dec. 4, 2007]

Editorial Note: For Federal Register citations affecting § 50.2, see the list of CFR Sections Affected.

§ 50.3 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 50.4 Written communications.

[Top of File]

(a) *General requirements.* All correspondence, reports, applications, and other written communications from the applicant or licensee to the Nuclear Regulatory Commission concerning the regulations in this part or individual license conditions must be sent either by mail addressed: ATTN: Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland, between the hours of 8:15 a.m. and 4 p.m. eastern time; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, e-mail, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail at *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. If the communication is on paper, the signed original must be sent. If a submission due date falls on a Saturday, Sunday, or Federal holiday, the next Federal working day becomes the official due date.

(b) *Distribution requirements.* Copies of all correspondence, reports, and other written communications concerning the regulations in this part or individual license conditions must be submitted to the persons listed below (addresses for the NRC Regional Offices are listed in appendix D to part 20 of this chapter).

(1) *Applications for amendment of permits and licenses; reports; and other communications.* All written communications (including responses to: generic letters, bulletins, information notices, regulatory information summaries, inspection reports, and miscellaneous requests for additional information) that are required of holders of operating licenses or construction permits issued pursuant to this part, must be submitted as follows, except as otherwise specified in paragraphs (b)(2) through (b)(7) of this section: to the NRC's Document Control Desk (if on paper, the signed original), with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector, if one has been assigned to the site of the facility.

(2) *Applications for permits and licenses, and amendments to applications.* Applications for construction permits, applications for operating licenses and amendments to either type of application must be submitted as follows, except as otherwise specified in paragraphs (b)(3) through (b)(7) in this section.

(i) Applications for licenses for facilities described in § 50.21 (a) and (c) and amendments to these applications must be sent to the NRC's Document Control Desk, with a copy to the appropriate Regional Office. If the application or amendment is on paper, the submission to the Document Control Desk must be the signed original.

(ii) Applications for permits and licenses for facilities described in § 50.21(b) or § 50.22, and amendments to these applications must be sent to the NRC's Document Control Desk, with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector, if one has been assigned to the site of the facility. If the application or amendment is on paper, the submission to the Document Control Desk must be the signed original.

(3) *Acceptance review application.* Written communications required for an application for determination of suitability for docketing under § 50.30(a)(6) must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office. If the communication is on paper, the submission to the Document Control Desk must be the signed original.

(4) *Security plan and related submissions.* Written communications, as defined in paragraphs (b)(4)(i) through (iv) of this section, must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office. If the communication is on paper, the submission to the Document Control Desk must be the signed original.

(i) Physical security plan under § 50.34;

(ii) Safeguards contingency plan under § 50.34;

(iii) Change to security plan, guard training and qualification plan, or safeguards contingency plan made without prior Commission approval under § 50.54(p);

(iv) Application for amendment of physical security plan, guard training and qualification plan, or safeguards contingency plan under § 50.90.

(5) *Emergency plan and related submissions.* Written communications as defined in paragraphs (b)(5)(i) through (iii) of this section must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector if one has been assigned to the site of the facility. If the communication is on paper, the submission to the Document Control Desk must be the signed original.

(i) Emergency plan under § 50.34;

(ii) Change to an emergency plan under § 50.54(q);

(iii) Emergency implementing procedures under appendix E.V of this part.

(6) *Updated FSAR.* An updated Final Safety Analysis Report (FSAR) or replacement pages, under § 50.71(e) must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector if one has been assigned to the site of the facility. Paper copy submissions may be made using replacement pages; however, if a licensee chooses to use electronic submission, all subsequent updates or submissions must be performed electronically on a total replacement basis. If the communication is on paper, the submission to the Document Control Desk must be the signed original. If the communications are submitted electronically, see Guidance for Electronic Submissions to the Commission.

(7) *Quality assurance related submissions.* (i) A change to the Safety Analysis Report quality assurance program description under § 50.54 (a)(3) or § 50.55(f)(3), or a change to a licensee's NRC-accepted quality assurance topical report under § 50.54(a)(3) or § 50.55(f)(3), must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector if one has been assigned to the site of the facility. If the communication is on paper, the submission to the Document Control Desk must be the signed original.

(ii) A change to an NRC-accepted quality assurance topical report from nonlicensees (i.e., architect/engineers, NSSS suppliers, fuel suppliers, constructors, etc.) must be submitted to the NRC's Document Control Desk. If the communication is on paper, the signed original must be sent.

(8) *Certification of permanent cessation of operations.* The licensee's certification of permanent cessation of operations, under § 50.82(a)(1), must state the date on which operations have ceased or will cease, and must be submitted to the NRC's Document Control Desk. This submission must be under oath or affirmation.

(9) *Certification of permanent fuel removal.* The licensee's certification of permanent fuel removal, under § 50.82(a)(1), must state the date on which the fuel was removed from the reactor vessel and the disposition of the fuel, and must be submitted to the NRC's Document Control Desk. This submission must be under oath or affirmation.

(c) *Form of communications.* All paper copies submitted to meet the requirements set forth in paragraph (b) of this section must be typewritten, printed or otherwise reproduced in permanent form on unglazed paper. Exceptions to these requirements imposed on paper submissions may be granted for the submission of micrographic, photographic, or similar forms.

(d) *Regulation governing submission.* Licensees and applicants submitting correspondence, reports, and other written communications under the regulations of this part are requested but not required to cite whenever practical, in the upper right corner of the first page of the submission, the specific regulation or other basis requiring submission.

(e) *Conflicting requirements.* The communications requirements contained in this section and §§ 50.12, 50.30, 50.36, 50.36a. 50.44, 50.49, 50.54, 50.55, 50.55a, 50.59, 50.62, 50.71, 50.73, 50.82, 50.90, and 50.91 supersede and replace all existing requirements in any license conditions or technical specifications in effect on January 5, 1987. Exceptions to these requirements must be approved by the Office of Information Services, Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-7233, e-mail *INFOCOLLECTS@nrc.gov*.

[51 FR 40306, Nov. 6, 1986, as amended at 52 FR 31611, Aug. 21, 1987; 53 FR 6139, Mar. 1, 1988; 60 FR 24551, May 9, 1995; 61 FR 39298, July 29, 1996; 68 FR 58808, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 50.5 Deliberate misconduct.

[Top of File]

(a) Any licensee, applicant for a license, employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

[63 FR 1897, Jan 13, 1998]

§ 50.7 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in paragraph (a) introductory text of this section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) introductory text or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) introductory text.

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a), (e), or (f) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant may be grounds for--

(1) Denial, revocation, or suspension of the license.

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant.

(3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) Each licensee and each applicant for a license shall prominently post the revision of NRC Form 3, "Notice to Employees," referenced in 10 CFR 19.11(c). This form must be posted at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(2) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[58 FR 52410, Oct. 8, 1993, as amended at 60 FR 24551, May 9, 1995; 61 FR 6765, Feb. 22, 1996; 68 FR 58809, Oct. 10, 2003; 72 FR 63974, Nov. 14, 2007]

§ 50.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0011.

(b) The approved information collection requirements contained in this Part appear in §§ 50.30, 50.33, 50.33a, 50.34, 50.34a, 50.35, 50.36, 50.36a, 50.36b, 50.44, 50.46, 50.47, 50.48, 50.49, 50.54, 50.55, 50.55a, 50.59, 50.60, 50.61, 50.62, 50.63, 50.64, 50.65, 50.66, 50.68, 50.71, 50.72, 50.73, 50.74, 50.75, 50.78, 50.80, 50.82, 50.83, 50.90, 50.91, and 50.120 and Appendices A, B, E, G, H, I, J, K, M, N, O, Q, R, and S to this Part.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirement and the control numbers under which they are approved are as follows:

(1) In § 50.73, NRC Form 366 is approved under control number 3150-0104.

(2) In § 50.78, Form N–71 and associated forms are approved under control number 3150–0056.

(3) In § 50.78, DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control numbers 0694–0135.

[49 FR 19627, May 9, 1984, as amended at 58 FR 68731, Dec. 29, 1993; 60 FR 65468, Dec. 19, 1995; 61 FR 65172, Dec. 11, 1996; 62 FR 52187, Oct. 6, 1997; 67 FR 67099, Nov. 4, 2002; 68 FR 19727, Apr. 22, 2003; 69 FR 68046, Nov. 22, 2004; 70 FR 81887, Oct. 17, 2005; 73 FR 78605, Dec. 23, 2008]

§ 50.9 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[52 FR 49372, Dec. 31, 1987]

Requirement of License, Exceptions

[Top of File]

§ 50.10 License required; limited work authorization.

(a) *Definitions*. As used in this section, *construction* means the activities in paragraph (a)(1) of this section, and does not mean the activities in paragraph (a)(2) of this section.

(1) Activities constituting construction are the driving of piles, subsurface preparation, placement of backfill, concrete, or permanent retaining walls within an excavation, installation of foundations, or in-place assembly, erection, fabrication, or testing, which are for:

(i) Safety-related structures, systems, or components (SSCs) of a facility, as defined in 10 CFR 50.2;

(ii) SSCs relied upon to mitigate accidents or transients or used in plant emergency operating procedures;

(iii) SSCs whose failure could prevent safety-related SSCs from fulfilling their safety-related function;

(iv) SSCs whose failure could cause a reactor scram or actuation of a safety-related system;

(v) SSCs necessary to comply with 10 CFR part 73;

(vi) SSCs necessary to comply with 10 CFR 50.48 and criterion 3 of 10 CFR part 50, appendix A; and

(vii) Onsite emergency facilities, that is, technical support and operations support centers, necessary to comply with 10 CFR 50.47 and 10 CFR part 50, appendix E.

(2) Construction does not include:

(i) Changes for temporary use of the land for public recreational purposes;

(ii) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;

(iii) Preparation of a site for construction of a facility, including clearing of the site, grading, installation of drainage, erosion and other

environmental mitigation measures, and construction of temporary roads and borrow areas;

(iv) Erection of fences and other access control measures;

(v) Excavation;

(vi) Erection of support buildings (such as, construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility;

(vii) Building of service facilities, such as paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, and transmission lines;

(viii) Procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility;

(ix) Manufacture of a nuclear power reactor under a manufacturing license under subpart F of part 52 of this chapter to be installed at the proposed site and to be part of the proposed facility; or

(x) With respect to production or utilization facilities, other than testing facilities and nuclear power plants, required to be licensed under Section 104.a or Section 104.c of the Act, the erection of buildings which will be used for activities other than operation of a facility and which may also be used to house a facility (*e.g.*, the construction of a college laboratory building with space for installation of a training reactor).

(b) *Requirement for license*. Except as provided in § 50.11 of this chapter, no person within the United States shall transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, or use any production or utilization facility except as authorized by a license issued by the Commission.

(c) *Requirement for construction permit, early site permit authorizing limited work authorization activities, combined license, or limited work authorization*. No person may begin the construction of a production or utilization facility on a site on which the facility is to be operated until that person has been issued either a construction permit under this part, a combined license under part 52 of this chapter, an early site permit authorizing the activities under paragraph (d) of this section, or a limited work authorization under paragraph (d) of this section.

(d) *Request for limited work authorization*. (1) Any person to whom the Commission may otherwise issue either a license or permit under Sections 103, 104.b, or 185 of the Act for a facility of the type specified in §§ 50.21(b)(2), (b)(3), or 50.22 of this chapter, or a testing facility, may request a limited work authorization allowing that person to perform the driving of piles, subsurface preparation, placement of backfill, concrete, or permanent retaining walls within an excavation, installation of the foundation, including placement of concrete, any of which are for an SSC of the facility for which either a construction permit or combined license is otherwise required under paragraph (c) of this section.

(2) An application for a limited work authorization may be submitted as part of a complete application for a construction permit or combined license in accordance with 10 CFR 2.101(a)(1) through (a)(5), or as a partial application in accordance with 10 CFR 2.101(a)(9). An application for a limited work authorization must be submitted by an applicant for or holder of an early site permit as a complete application in accordance with 10 CFR 2.101(a)(1) through (a)(4).

(3) The application must include:

(i) A safety analysis report required by 10 CFR 50.34, 10 CFR 52.17 or 10 CFR 52.79 of this chapter, as applicable, a description of the activities requested to be performed, and the design and construction information otherwise required by the Commission's rules and regulations to be submitted for a construction permit or combined license, but limited to those portions of the facility that are within the scope of the limited work authorization. The safety analysis report must demonstrate that activities conducted under the limited work authorization will be conducted in compliance with the technically-relevant Commission requirements in 10 CFR Chapter I applicable to the design of those portions of the facility within the scope of the limited work authorization;

(ii) An environmental report in accordance with § 51.49 of this chapter; and

(iii) A plan for redress of activities performed under the limited work authorization, should limited work activities be terminated by the holder or the limited work authorization be revoked by the NRC, or upon effectiveness of the Commission's final decision denying the associated construction permit or combined license application, as applicable.

(e) *Issuance of limited work authorization*. (1) The Director of New Reactors or the Director of Nuclear Reactor Regulation may issue a limited work authorization only after:

(i) The NRC staff issues the final environmental impact statement for the limited work authorization in accordance with subpart A of part 51 of this chapter;

(ii) The presiding officer makes the finding in § 51.105(c) or § 51.107(d) of this chapter, as applicable;

(iii) The Director determines that the applicable standards and requirements of the Act, and the Commission's regulations applicable to the activities to be conducted under the limited work authorization, have been met. The

applicant is technically qualified to engage in the activities authorized. Issuance of the limited work authorization will provide reasonable assurance of adequate protection to public health and safety and will not be inimical to the common defense and security; and

(iv) The presiding officer finds that there are no unresolved safety issues relating to the activities to be conducted under the limited work authorization that would constitute good cause for withholding the authorization.

(2) Each limited work authorization will specify the activities that the holder is authorized to perform.

(f) *Effect of limited work authorization*. Any activities undertaken under a limited work authorization are entirely at the risk of the applicant and, except as to the matters determined under paragraph (e)(1) of this section, the issuance of the limited work authorization has no bearing on the issuance of a construction permit or combined license with respect to the requirements of the Act, and rules, regulations, or orders issued under the Act. The environmental impact statement for a construction permit or combined license application for which a limited work authorization was previously issued will not address, and the presiding officer will not consider, the sunk costs of the holder of limited work authorization in determining the proposed action (*i.e.*, issuance of the construction permit or combined license).

(g) *Implementation of redress plan*. If construction is terminated by the holder, the underlying application is withdrawn by the applicant or denied by the NRC, or the limited work authorization is revoked by the NRC, then the holder must begin implementation of the redress plan in a reasonable time. The holder must also complete the redress of the site no later than 18 months after termination of construction, revocation of the limited work authorization, or upon effectiveness of the Commission's final decision denying the associated construction permit application or the underlying combined license application, as applicable.

[21 FR 355, Jan. 19, 1956, as amended at 25 FR 8712, Sept. 9, 1960; 33 FR 2381, Jan. 31, 1968; 35 FR 11460, July 7, 1970; 37 FR 5748, Mar. 21, 1972; 39 FR 14508, Apr. 24, 1974; 39 FR 26279, July 18, 1974; 39 FR 33202, Sept. 16, 1974; 43 FR 6924, Feb. 17, 1978; 49 FR 9403, Mar. 12, 1984; 72 FR 49489, Aug. 28, 2007; 72 FR 57441, Oct. 9, 2007]

§ 50.11 Exceptions and exemptions from licensing requirements.

[Top of File]

Nothing in this part shall be deemed to require a license for:

(a) The manufacture, production, or acquisition by the Department of Defense of any utilization facility authorized pursuant to section 91 of the Act, or the use of such facility by the Department of Defense or by a person under contract with and for the account of the Department of Defense;

(b) Except to the extent that Administration facilities of the types subject to licensing pursuant to section 202 of the Energy Reorganization Act of 1974 are involved;

(1)(i) The processing, fabrication or refining of special nuclear material or the separation of special nuclear material, or the separation of special nuclear material from other substances by a prime contractor of the Department under a prime contract for:

(A) The performance of work for the Department at a United States government-owned or controlled site;

(B) Research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof; or

(C) The use or operation of a production or utilization facility in a United States owned vehicle or vessel; or

(ii) By a prime contractor or subcontractor of the Commission or the Department under a prime contract or subcontract when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety;

(2)(i) The construction or operation of a production or utilization facility for the Department at a United States government-owned or controlled site, including the transportation of the production or utilization facility to or from such site and the performance of contract services during temporary interruptions of such transportation; or the construction or operation of a production or utilization facility for the Department in the performance of research in, or development, manufacture, storage, testing, or transportation of, atomic weapons or components thereof; or the use or operation of a production or utilization facility for the Department in a United States government-owned vehicle or vessel: Provided, That such activities are conducted by a prime contractor of the Department under a prime contract with the Department.

(ii) The construction or operation of a production or utilization facility by a prime contractor or subcontractor of the Commission or the Department under his prime contract or subcontract when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract, there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

(c) The transportation or possession of any production or utilization facility by a common or contract carrier or warehousemen in the regular course of carriage for another or storage incident thereto.

[40 FR 8788, Mar. 3, 1975, as amended at 65 FR 54950, Sept. 12, 2000]

§ 50.12 Specific exemptions.

[Top of File]

(a) The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, which are--

(1) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security.

(2) The Commission will not consider granting an exemption unless special circumstances are present. Special circumstances are present whenever--

(i) Application of the regulation in the particular circumstances conflicts with other rules or requirements of the Commission; or

(ii) Application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule; or

(iii) Compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated; or

(iv) The exemption would result in benefit to the public health and safety that compensates for any decrease in safety that may result from the grant of the exemption; or

(v) The exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation; or

(vi) There is present any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such condition is relied on exclusively for satisfying paragraph (a)(2) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

(b) Any person may request an exemption permitting the conduct of activities prior to the issuance of a construction permit prohibited by § 50.10. The Commission may grant such an exemption upon considering and balancing the following factors:

(1) Whether conduct of the proposed activities will give rise to a significant adverse impact on the environment and the nature and extent of such impact, if any;

(2) Whether redress of any adverse environment impact from conduct of the proposed activities can reasonably be effected should such redress be necessary;

(3) Whether conduct of the proposed activities would foreclose subsequent adoption of alternatives; and

(4) The effect of delay in conducting such activities on the public interest, including the power needs to be used by the proposed facility, the availability of alternative sources, if any, to meet those needs on a timely basis and delay costs to the applicant and to consumers.

Issuance of such an exemption shall not be deemed to constitute a commitment to issue a construction permit. During the period of any exemption granted pursuant to this paragraph (b), any activities conducted shall be carried out in such a manner as will minimize or reduce their environmental impact.

[37 FR 5748, Mar. 21, 1972, as amended at 40 FR 8789, Mar. 3, 1975; 50 FR 50777, Dec. 12, 1985]

§ 50.13 Attacks and destructive acts by enemies of the United States; and defense activities.

[Top of File]

An applicant for a license to construct and operate a production or utilization facility, or for an amendment to such license, is not required to provide for design features or other measures for the specific purpose of protection against the effects of (a) attacks and destructive acts, including sabotage, directed against the facility by an enemy of the United States, whether a foreign government or other person, or (b) use or deployment of weapons incident to U.S. defense activities.

[32 FR 13445, Sept. 26, 1967]

Classification and Description of Licenses

[Top of File]

§ 50.20 Two classes of licenses.

Licenses will be issued to named persons applying to the Commission therefore, and will be either class 104 or class 103.

§ 50.21 Class 104 licenses; for medical therapy and research and development facilities.

[Top of File]

A class 104 license will be issued, to an applicant who qualifies, for any one or more of the following: to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, or use.

(a) A utilization facility for use in medical therapy; or

(b)(1) A production or utilization facility the construction or operation of which was licensed pursuant to subsection 104b of the Act prior to December 19, 1970;

(2) A production or utilization facility for industrial or commercial purposes constructed or operated under an arrangement with the Administration entered into under the Cooperative Power Reactor Demonstration Program, except as otherwise specifically required by applicable law; and

(3) A production or utilization facility for industrial or commercial purposes, when specifically authorized by law.

(c) A production or utilization facility, which is useful in the conduct of research and development activities of the types specified in section 31 of the Act, and which is not a facility of the type specified in paragraph (b) of this section or in § 50.22.

[21 FR 355, Jan. 19, 1956, as amended at 31 FR 15145 Dec. 2, 1966; 35 FR 19659, Dec. 29, 1970; 38 FR 11446, May 8, 1973; 43 FR 6924, Feb. 17, 1978]

§ 50.22 Class 103 licenses; for commercial and industrial facilities.

[Top of File]

A class 103 license will be issued, to an applicant who qualifies, for any one or more of the following: To transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, or use a production or utilization facility for industrial or commercial purposes; *Provided, however*, That in the case of a production or utilization facility which is useful in the conduct of research and development activities of the types specified in section 31 of the Act, such facility is deemed to be for industrial or commercial purposes if the facility is to be used so that more than 50 percent of the annual cost of owning and operating the facility is devoted to the production of materials, products, or energy for sale or commercial distribution, or to the sale of services, other than research and development or education or training.

[38 FR 11446, May 8, 1973, as amended at 43 FR 6924, Feb. 17, 1978]

§ 50.23 Construction permits.

[Top of File]

A construction permit for the construction of a production or utilization facility will be issued before the issuance of a license if the application is otherwise acceptable, and will be converted upon completion of the facility and Commission action, into a license as provided in § 50.56. However, if a combined license for a nuclear power reactor is issued under part 52 of this chapter, the construction permit and operating license are deemed to be combined in a single license. A construction permit for the alteration of a production or utilization facility will be issued before the issuance of an amendment of a license, if the application for amendment is otherwise acceptable, as provided in § 50.91.

[21 FR 355, June 19, 1956, as amended at 35 FR 11461, July 17, 1970; 72 FR 49490, Aug. 28, 2007]

Applications for Licenses, Certifications, and Regulatory Approvals; Form; Contents; Ineligibility of Certain Applicants

[Top of File]

§ 50.30 Filing of application for licenses; oath or affirmation.

(a) *Serving of applications*. (1) Each filing of an application for a standard design approval or license to construct and/or operate, or manufacture, a production or utilization facility (including an early site permit, combined license, and manufacturing license under part 52 of this chapter), and any amendments to the applications, must be submitted to the U.S. Nuclear Regulatory Commission in accordance with § 50.4 or § 52.3 of this chapter, as applicable.

(2) The applicant shall maintain the capability to generate additional copies of the general information and the safety analysis report, or part thereof or amendment thereto, for subsequent distribution in accordance with the written instructions of the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate.

(3) Each applicant for a construction permit under this part, or an early site permit, combined license, or manufacturing license under part 52 of this chapter, shall, upon notification by the Atomic Safety and Licensing Board appointed to conduct the public hearing required by the Atomic Energy Act, update the application and serve the updated copies of the application or parts of it, eliminating all superseded information, together with an index of the updated application, as directed by the Atomic Safety and Licensing Board. Any subsequent amendment to the application must be served on those served copies of the application and must be submitted to the U.S. Nuclear Regulatory Commission as specified in § 50.4 or § 52.3 of this chapter, as applicable.

(4) The applicant must make a copy of the updated application available at the public hearing for the use of any other parties to the proceeding, and shall certify that the updated copies of the application contain the current contents of the application submitted in accordance with the requirements of this part.

(5) At the time of filing an application, the Commission will make available at the NRC Web site, *http:// www.nrc.gov*, a copy of the application, subsequent amendments, and other records pertinent to the matter which is the subject of the application for public inspection and copying.

(6) The serving of copies required by this section must not occur until the application has been docketed under § 2.101(a) of this chapter. Copies must be submitted to the Commission, as specified in § 50.4 or § 52.3 of this chapter, as applicable, to enable the Director, Office of New Reactors, or the Director, Office of Nuclear Reactor Regulation, or the Director, Office of Nuclear Material Safety and Safeguards, as appropriate, to determine whether the application is sufficiently complete to permit docketing.

(b) *Oath or affirmation*. Each application for a standard design approval or license, including, whenever appropriate, a construction permit or early site permit, or amendment of it, and each amendment of each application must be executed in a signed original by the applicant or duly authorized officer thereof under oath or affirmation.

(c) [Reserved]

(d) *Application for operating licenses*. The holder of a construction permit for a production or utilization facility shall, at the time of submission of the final safety analysis report, file an application for an operating license or an amendment to an application for a license to construct and operate a production or utilization facility for the issuance of an operating license, as appropriate. The application or amendment shall state the name of the applicant, the name, location and power level, if any, of the facility and the time when the facility is expected to be ready for operation, and may incorporate by reference any pertinent information submitted in accordance with § 50.33 with the application for a construction permit.

(e) *Filing fees*. Each application for a standard design approval or production or utilization facility license, including, whenever appropriate, a construction permit or early site permit, other than a license exempted from part 170 of this chapter, shall be accompanied by the fee prescribed in part 170 of this chapter. No fee will be required to accompany an application for renewal, amendment, or termination of a construction permit, operating license, combined license, or manufacturing license, except as provided in § 170.21 of this chapter.

(f) *Environmental report*. An application for a construction permit, operating license, early site permit, combined license, or manufacturing license for a nuclear power reactor, testing facility, fuel reprocessing plant, or other production or utilization facility whose construction or operation may be determined by the Commission to have a significant impact in the environment, shall be accompanied by an Environmental Report required under subpart A of part 51 of this chapter.

[23 FR 3115, May 10, 1958, as amended at 33 FR 10924, Aug. 1, 1968; 34 FR 6307, Apr. 3, 1969; 35 FR 19660, Dec. 29, 1970; 37 FR 5749, Mar. 21, 1972; 51 FR 40307, Nov 6. 1986; 64 FR 48951, Sept. 9, 1999; 68 FR 58809, Oct. 10, 2003; 72 FR 49490, Aug. 28, 2007; 73 FR 5721, Jan. 31, 2008]

§ 50.31 Combining applications.

[Top of File]

An applicant may combine in one his several applications for different kinds of licenses under the regulations in this chapter.

§ 50.32 Elimination of repetition.

[Top of File]

In his application, the applicant may incorporate by reference information contained in previous applications, statements or reports filed with the Commission: *Provided*, That such references are clear and specific.

§ 50.33 Contents of applications; general information.

Each application shall state:

(a) Name of applicant;

(b) Address of applicant;

(c) Description of business or occupation of applicant;

(d)(1) If applicant is an individual, state citizenship.

(2) If applicant is a partnership, state name, citizenship and address of each partner and the principal location where the partnership does business.

(3) If applicant is a corporation or an unincorporated association, state:

(i) The state where it is incorporated or organized and the principal location where it does business;

(ii) The names, addresses and citizenship of its directors and of its principal officers;

(iii) Whether it is owned, controlled, or dominated by an alien, a foreign corporation, or foreign government, and if so, give details.

(4) If the applicant is acting as agent or representative of another person in filing the application, identify the principal and furnish information required under this paragraph with respect to such principal.

(e) The class of license applied for, the use to which the facility will be put, the period of time for which the license is sought, and a list of other licenses, except operator's licenses, issued or applied for in connection with the proposed facility.

(f) Except for an electric utility applicant for a license to operate a utilization facility of the type described in § 50.21(b) or § 50.22, information sufficient to demonstrate to the Commission the financial qualification of the applicant to carry out, in accordance with regulations in this chapter, the activities for which the permit or license is sought. As applicable, the following should be provided:

(1) If the application is for a construction permit, the applicant shall submit information that demonstrates that the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated construction costs and related fuel cycle costs. The applicant shall submit estimates of the total construction costs of the facility and related fuel cycle costs, and shall indicate the source(s) of funds to cover these costs.

(2) If the application is for an operating license, the applicant shall submit information that demonstrates the applicant possesses or has reasonable assurance of obtaining the funds necessary to cover estimated operation costs for the period of the license. The applicant shall submit estimates for total annual operating costs for each of the first five years of operation of the facility. The applicant shall also indicate the source(s) of funds to cover these costs. An applicant seeking to renew or extend the term of an operating license for a power reactor need not submit the financial information that is required in an application for an initial license. Applicants to renew or extend the term of an operating license for a nonpower reactor shall include the financial information that is required in an application for an initial license.

(3) If the application is for a combined license under subpart C of part 52 of this chapter, the applicant shall submit the information described in paragraphs (f)(1) and (f)(2) of this section.

(4) Each application for a construction permit, operating license, or combined license submitted by a newly-formed entity organized for the primary purpose of constructing and/or operating a facility must also include information showing:

(i) The legal and financial relationships it has or proposes to have with its stockholders or owners;

(ii) The stockholders' or owners' financial ability to meet any contractual obligation to the entity which they have incurred or proposed to incur; and

(iii) Any other information considered necessary by the Commission to enable it to determine the applicant's financial qualification.

(5) The Commission may request an established entity or newly-formed entity to submit additional or more detailed information respecting its financial arrangements and status of funds if the Commission considers this information appropriate. This may include information regarding a licensee’s ability to continue the conduct of the activities authorized by the license and to decommission the facility.

(g) If the application is for an operating license or combined license for a nuclear power reactor, or if the application is for an early site permit and contains plans for coping with emergencies under § 52.17(b)(2)(ii) of this chapter, the applicant shall submit radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within the plume

exposure pathway emergency planning zone (EPZ),[4] as well as the plans of State governments wholly or partially within the ingestion pathway EPZ.[5] If the application is for an early site permit that, under 10 CFR 52.17(b)(2)(i), proposes major features of the emergency plans describing the EPZs, then the descriptions of the EPZs must meet the requirements of this paragraph. Generally, the plume exposure pathway
EPZ for nuclear power reactors shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway
EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs
surrounding a particular nuclear power reactor shall be determined in relation to the local emergency response needs
and capabilities as they are affected by such conditions as demography, topography, land characteristics, access
routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for
gas-cooled reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.

(h) If the applicant, other than an applicant for a combined license, proposes to construct or alter a production or utilization facility, the application shall state the earliest and latest dates for completion of the construction or alteration.

(i) If the proposed activity is the generation and distribution of electric energy under a class 103 license, a list of the names and addresses of such regulatory agencies as may have jurisdiction over the rates and services incident to the proposed activity, and a list of trade and news publications which circulate in the area where the proposed activity will be conducted and which are considered appropriate to give reasonable notice of the application to those municipalities, private utilities, public bodies, and cooperatives, which might have a potential interest in the facility.

(j) If the application contains Restricted Data or other defense information, it shall be prepared in such manner that all Restricted Data and other defense information are separated from the unclassified information.

(k) (1) For an application for an operating license or combined license for a production or utilization facility, information in the form of a report, as described in § 50.75, indicating how reasonable assurance will be provided that funds will be available to decommission the facility.

(2) On or before July 26, 1990, each holder of an operating license for a production or utilization facility in effect on July 27, 1990, shall submit information in the form of a report as described in § 50.75 of this part, indicating how reasonable assurance will be provided that funds will be available to decommission the facility.

[21 FR 355, Jan. 19, 1956, as amended at 35 FR 19660, Dec. 29, 1970; 38 FR 3956, Feb. 9, 1973; 45 FR 55408, Aug. 19, 1980; 49 FR 35752, Sept. 12, 1984; 53 FR 24049, June 27, 1988; 69 FR 4448, Jan. 30, 2004; 72 FR 49490, Aug. 28, 2007]

[4] Emergency planning zones (EPZs) are discussed in NUREG–0396, EPA 520/1–78–016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light-Water Nuclear Power Plants," December 1978.

[5] If the State and local emergency response plans have been previously provided to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet this requirement.

§ 50.34 Contents of applications; technical information.

[Top of File]

(a) *Preliminary safety analysis report*. Each application for a construction permit shall include a preliminary safety analysis report. The minimum information[5] to be included shall consist of the following:

(1) Stationary power reactor applicants for a construction permit who apply on or after January 10, 1997, shall comply with paragraph (a)(1)(ii) of this section. All other applicants for a construction permit shall comply with paragraph (a)(1)(i) of this section.

(i) A description and safety assessment of the site on which the facility is to be located, with appropriate attention to features affecting facility design. Special attention should be directed to the site evaluation factors identified in part 100 of this chapter. The assessment must contain an analysis and evaluation of the major structures, systems and components of the facility which bear significantly on the acceptability of the site under the site evaluation factors identified in part 100 of this chapter, assuming that the facility will be operated at the ultimate power level which is contemplated by the applicant. With respect to operation at the projected initial power level, the applicant is required to submit information prescribed in paragraphs (a)(2) through (a)(8) of this section, as well as the information required by this paragraph, in support of the application for a construction permit, or a design approval.

(ii) A description and safety assessment of the site and a safety assessment of the facility. It is expected that reactors will reflect through their design, construction and operation an extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products. The following power reactor design characteristics and proposed operation will be taken into consideration by the Commission:

(A) Intended use of the reactor including the proposed maximum power level and the nature and inventory of contained radioactive materials;

(B) The extent to which generally accepted engineering standards are applied to the design of the reactor;

(C) The extent to which the reactor incorporates unique, unusual or enhanced safety features having a significant bearing on the probability or consequences of accidental release of radioactive materials;

(D) The safety features that are to be engineered into the facility and those barriers that must be breached as a result of an accident before a release of radioactive material to the environment can occur. Special attention must be directed to plant design features intended to mitigate the radiological consequences of accidents. In performing this assessment, an applicant shall assume a fission product release[6] from the core into the containment assuming that the facility is operated at the ultimate power level contemplated. The applicant shall perform an evaluation and analysis of the postulated fission product release, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents, together with applicable site characteristics, including site meteorology, to evaluate the offsite radiological consequences. Site characteristics must comply with part 100 of this chapter. The evaluation must determine that:

(1) An individual located at any point on the boundary of the exclusion area for any 2 hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem[7] total effective dose equivalent (TEDE).

(2) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a radiation dose in excess of 25 rem total effective dose equivalent (TEDE);

(E) With respect to operation at the projected initial power level, the applicant is required to submit information prescribed in paragraphs (a)(2) through (a)(8) of this section, as well as the information required by paragraph (a)(1)(i) of this section, in support of the application for a construction permit.

(2) A summary description and discussion of the facility, with special attention to design and operating characteristics, unusual or novel design features, and principal safety considerations.

(3) The preliminary design of the facility including:

(i) The principal design criteria for the facility.[8] Appendix A, General Design Criteria for Nuclear Power Plants, establishes minimum requirements for the principal design criteria for water-cooled nuclear power plants similar in design and location to plants for which construction permits have previously been issued by the Commission and provides guidance to applicants for construction permits in establishing principal design criteria for other types of nuclear power units;

(ii) The design bases and the relation of the design bases to the principal design criteria;

(iii) Information relative to materials of construction, general arrangement, and approximate dimensions, sufficient to provide reasonable assurance that the final design will conform to the design bases with adequate margin for safety.

(4) A preliminary analysis and evaluation of the design and performance of structures, systems, and components of the facility with the objective of assessing the risk to public health and safety resulting from operation of the facility and including determination of the margins of safety during normal operations and transient conditions anticipated during the life of the facility, and the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents. Analysis and evaluation of ECCS cooling performance and the need for high point vents following postulated loss-of-coolant accidents must be performed in accordance with the requirements of § 50.46 and § 50.46a of this part for facilities for which construction permits may be issued after December 28, 1974.

(5) An identification and justification for the selection of those variables, conditions, or other items which are determined as the result of preliminary safety analysis and evaluation to be probable subjects of technical specifications for the facility, with special attention given to those items which may significantly influence the final design: *Provided, however*, That this requirement is not applicable to an application for a construction permit filed prior to January 16, 1969.

(6) A preliminary plan for the applicant's organization, training of personnel, and conduct of operations.

(7) A description of the quality assurance program to be applied to the design, fabrication, construction, and testing of the structures, systems, and components of the facility. Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," sets forth the requirements for quality assurance programs for nuclear power plants and fuel reprocessing plants. The description of the quality assurance program for a nuclear power plant or a fuel reprocessing plant shall include a discussion of how the applicable requirements of appendix B will be satisfied.

(8) An identification of those structures, systems, or components of the facility, if any, which require research and development to confirm the adequacy of their design; and identification and description of the research and development program which will be conducted to resolve any safety questions associated with such structures, systems or components; and a schedule of the research and development program showing that such safety questions will be resolved at or before the latest date stated in the application for completion of construction of the facility.

(9) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter.

(10) A discussion of the applicant's preliminary plans for coping with emergencies. Appendix E sets forth items which shall be included in these plans.

(11) On or after February 5, 1979, applicants who apply for construction permits for nuclear powerplants to be built on multiunit sites shall identify potential hazards to the structures, systems and components important to safety of operating nuclear facilities from construction activities. A discussion shall also be included of any managerial and administrative controls that will be used during construction to assure the safety of the operating unit.

(12) On or after January 10, 1997, stationary power reactor applicants who apply for a construction permit, as partial conformance to General Design Criterion 2 of appendix A to this part, shall comply with the earthquake engineering criteria in appendix S to this part.

(b) *Final safety analysis report*. Each application for an operating license shall include a final safety analysis report. The final safety analysis report shall include information that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole, and shall include the following:

(1) All current information, such as the results of environmental and meteorological monitoring programs, which has been developed since issuance of the construction permit, relating to site evaluation factors identified in part 100 of this chapter.

(2) A description and analysis of the structures, systems, and components of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which such requirements have been established, and the evaluations required to show that safety functions will be accomplished. The description shall be sufficient to permit understanding of the system designs and their relationship to safety evaluations.

(i) For nuclear reactors, such items as the reactor core, reactor coolant system, instrumentation and control systems, electrical systems, containment system, other engineered safety features, auxiliary and emergency systems, power conversion systems, radioactive waste handling systems, and fuel handling systems shall be discussed insofar as they are pertinent.

(ii) For facilities other than nuclear reactors, such items as the chemical, physical, metallurgical, or nuclear process to be performed, instrumentation and control systems, ventilation and filter systems, electrical systems, auxiliary and emergency systems, and radioactive waste handling systems shall be discussed insofar as they are pertinent.

(3) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in part 20 of this chapter.

(4) A final analysis and evaluation of the design and performance of structures, systems, and components with the objective stated in paragraph (a)(4) of this section and taking into account any pertinent information developed since the submittal of the preliminary safety analysis report. Analysis and evaluation of ECCS cooling performance following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of § 50.46 for facilities for which a license to operate may be issued after December 28, 1974.

(5) A description and evaluation of the results of the applicant's programs, including research and development, if any, to demonstrate that any safety questions identified at the construction permit stage have been resolved.

(6) The following information concerning facility operation:

(i) The applicant's organizational structure, allocations or responsibilities and authorities, and personnel qualifications requirements.

(ii) Managerial and administrative controls to be used to assure safe operation. Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," sets forth the requirements for such controls for nuclear power plants and fuel reprocessing plants. The information on the controls to be used for a nuclear power plant or a fuel reprocessing plant shall include a discussion of how the applicable requirements of appendix B will be satisfied.

(iii) Plans for preoperational testing and initial operations.

(iv) Plans for conduct of normal operations, including maintenance, surveillance, and periodic testing of structures, systems, and components.

(v) Plans for coping with emergencies, which shall include the items specified in appendix E.

(vi) Proposed technical specifications prepared in accordance with the requirements of § 50.36.

(vii) On or after February 5, 1979, applicants who apply for operating licenses for nuclear powerplants to be operated on multiunit sites shall include an evaluation of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multiunit sites.

(7) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter.

(8) A description and plans for implementation of an operator requalification program. The operator requalification program must as a minimum, meet the requirements for those programs contained in § 55.59 of part 55 of this chapter.

(9) A description of protection provided against pressurized thermal shock events, including projected values of the reference temperature

for reactor vessel beltline materials as defined in § 50.61 (b)(1) and (b)(2).

(10) On or after January 10, 1997, stationary power reactor applicants who apply for an operating license, as partial conformance to General Design Criterion 2 of appendix A to this part, shall comply with the earthquake engineering criteria of appendix S to this part. However, for those operating license applicants and holders whose construction permit was issued before January 10, 1997, the earthquake engineering criteria in Section VI of appendix A to part 100 of this chapter continues to apply.

(11) On or after January 10, 1997, stationary power reactor applicants who apply for an operating license, shall provide a description and safety assessment of the site and of the facility as in § 50.34(a)(1)(ii). However, for either an operating license applicant or holder whose construction permit was issued before January 10, 1997, the reactor site criteria in part 100 of this chapter and the seismic and geologic siting criteria in appendix A to part 100 of this chapter continues to apply.

(c) *Physical Security Plan*. Each application for an operating license for a production or utilization facility must include a physical security plan. The plan must describe how the applicant will meet the requirements of part 73 of this chapter (and part 11 of this chapter, if applicable, including the identification and description of jobs as required by § 11.11(a) of this chapter, at the proposed facility). The plan must list tests, inspections, audits, and other means to be used to demonstrate compliance with the requirements of 10 CFR parts 11 and 73, if applicable.

(d) *Safeguards contingency plan*. Each application for an operating license for a production or utilization facility that will be subject to §§ 73.50, 73.55, or § 73.60 of this chapter, must include a licensee safeguards contingency plan in accordance with the criteria set forth in appendix C to 10 CFR part 73. The safeguards contingency plan shall include plans for dealing with threats, thefts, and radiological sabotage, as defined in part 73 of this chapter, relating to the special nuclear material and nuclear facilities licensed under this chapter and in the applicant's possession and control. Each application for such a license shall include the first four categories of information contained in the applicant's safeguards contingency plan. (The first four categories of information as set forth in appendix C to 10 CFR part 73 of this chapter are Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix. The fifth category of information, Procedures, does not have to be submitted for approval.)[9]

(e) Each applicant for a license to operate a production or utilization facility shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements in § 73.22 or § 73.23 of this chapter, as applicable.

(f) *Additional TMI-related requirements*. In addition to the requirements of paragraph (a) of this section, each applicant for a light-water-reactor construction permit or manufacturing license whose application was pending as of February 16, 1982, shall meet the requirements in paragraphs (f)(1) through (3) of this section. This regulation applies to the pending applications by Duke Power Company (Perkins Nuclear Station, Units 1, 2, and 3), Houston Lighting & Power Company (Allens Creek Nuclear Generating Station, Unit 1), Portland General Electric Company (Pebble Springs Nuclear Plant, Units 1 and 2), Public Service Company of Oklahoma (Black Fox Station, Units 1 and 2), Puget Sound Power & Light Company (Skagit/Hanford Nuclear Power Project, Units 1 and 2), and Offshore Power Systems (License to Manufacture Floating Nuclear Plants). The number of units that will be specified in the manufacturing license above, if issued, will be that number whose start of manufacture, as defined in the license application, can practically begin within a 10-year period commencing on the date of issuance of the manufacturing license, but in no event will that number be in excess of ten. The manufacturing license will require the plant design to be updated no later than 5 years after its approval. Paragraphs (f)(1)(xii), (2)(ix), and (3)(v) of this section, pertaining to hydrogen control measures, must be met by all applicants covered by this regulation. However, the Commission may decide to impose additional requirements and the issue of whether compliance with these provisions, together with 10 CFR 50.44 and criterion 50 of appendix A to 10 CFR part 50, is sufficient for issuance of that manufacturing license which may be considered in the manufacturing license proceeding. In addition, each applicant for a design certification, design approval, combined license, or manufacturing license under part 52 of this chapter shall demonstrate compliance with the technically relevant portions of the requirements in paragraphs (f)(1) through (3) of this section, except for paragraphs (f)(1)(xii), (f)(2)(ix), and (f)(3)(v).

(1) To satisfy the following requirements, the application shall provide sufficient information to describe the nature of the studies, how they are to be conducted, estimated submittal dates, and a program to ensure that the results of these studies are factored into the final design of the facility. For licensees identified in the introduction to paragraph (f) of this section, all studies must be completed no later than 2 years following the issuance of the construction permit or manufacturing license.[10] For all other applicants, the studies must be submitted as part of the final safety analysis report.

(i) Perform a plant/site specific probabilistic risk assessment, the aim of which is to seek such improvements in the reliability of core and containment heat removal systems as are significant and practical and do not impact excessively on the plant. (II.B.8)

(ii) Perform an evaluation of the proposed auxiliary feedwater system (AFWS), to include (applicable to PWR's only) (II.E.1.1):

(A) A simplified AFWS reliability analysis using event-tree and fault-tree logic techniques.

(B) A design review of AFWS.

(C) An evaluation of AFWS flow design bases and criteria.

(iii) Perform an evaluation of the potential for and impact of reactor coolant pump seal damage following small-break LOCA with loss of offsite power. If damage cannot be precluded, provide an analysis of the limiting small-break loss-of-coolant accident with subsequent reactor coolant pump seal damage. (II.K.2.16 and II.K.3.25)

(iv) Perform an analysis of the probability of a small-break loss-of-coolant accident (LOCA) caused by a stuck-open power-operated relief

valve (PORV). If this probability is a significant contributor to the probability of small-break LOCA's from all causes, provide a description and evaluation of the effect on small-break LOCA probability of an automatic PORV isolation system that would operate when the reactor coolant system pressure falls after the PORV has opened. (Applicable to PWR's only). (II.K.3.2)

(v) Perform an evaluation of the safety effectiveness of providing for separation of high pressure coolant injection (HPCI) and reactor core isolation cooling (RCIC) system initiation levels so that the RCIC system initiates at a higher water level than the HPCI system, and of providing that both systems restart on low water level. (For plants with high pressure core spray systems in lieu of high pressure coolant injection systems, substitute the words, "high pressure core spray" for "high pressure coolant injection" and "HPCS" for "HPCI") (Applicable to BWR's only). (II.K.3.13)

(vi) Perform a study to identify practicable system modifications that would reduce challenges and failures of relief valves, without compromising the performance of the valves or other systems. (Applicable to BWR's only). (II.K.3.16)

(vii) Perform a feasibility and risk assessment study to determine the optimum automatic depressurization system (ADS) design modifications that would eliminate the need for manual activation to ensure adequate core cooling. (Applicable to BWR's only). (II.K.3.18)

(viii) Perform a study of the effect on all core-cooling modes under accident conditions of designing the core spray and low pressure coolant injection systems to ensure that the systems will automatically restart on loss of water level, after having been manually stopped, if an initiation signal is still present. (Applicable to BWR's only). (II.K.3.21)

(ix) Perform a study to determine the need for additional space cooling to ensure reliable long-term operation of the reactor core isolation cooling (RCIC) and high-pressure coolant injection (HPCI) systems, following a complete loss of offsite power to the plant for at least two (2) hours. (For plants with high pressure core spray systems in lieu of high pressure coolant injection systems, substitute the words, "high pressure core spray" for "high pressure coolant injection" and "HPCS" for "HPCI") (Applicable to BWR's only). (II.K.3.24)

(x) Perform a study to ensure that the Automatic Depressurization System, valves, accumulators, and associated equipment and instrumentation will be capable of performing their intended functions during and following an accident situation, taking no credit for non-safety related equipment or instrumentation, and accounting for normal expected air (or nitrogen) leakage through valves. (Applicable to BWR's only). (II.K.3.28)

(xi) Provide an evaluation of depressurization methods, other than by full actuation of the automatic depressurization system, that would reduce the possibility of exceeding vessel integrity limits during rapid cooldown. (Applicable to BWR's only) (II.K.3.45)

(xii) Perform an evaluation of alternative hydrogen control systems that would satisfy the requirements of paragraph (f)(2)(ix) of this section. As a minimum include consideration of a hydrogen ignition and post-accident inerting system. The evaluation shall include:

(A) A comparison of costs and benefits of the alternative systems considered.

(B) For the selected system, analyses and test data to verify compliance with the requirements of (f)(2)(ix) of this section.

(C) For the selected system, preliminary design descriptions of equipment, function, and layout.

(2) To satisfy the following requirements, the application shall provide sufficient information to demonstrate that the required actions will be satisfactorily completed by the operating license stage. This information is of the type customarily required to satisfy 10 CFR 50.35(a)(2) or to address unresolved generic safety issues.

(i) Provide simulator capability that correctly models the control room and includes the capability to simulate small-break LOCA's. (Applicable to construction permit applicants only) (I.A.4.2.)

(ii) Establish a program, to begin during construction and follow into operation, for integrating and expanding current efforts to improve plant procedures. The scope of the program shall include emergency procedures, reliability analyses, human factors engineering, crisis management, operator training, and coordination with INPO and other industry efforts. (Applicable to construction permit applicants only) (I. C.9)

(iii) Provide, for Commission review, a control room design that reflects state-of-the-art human factor principles prior to committing to fabrication or revision of fabricated control room panels and layouts. (I.D.1)

(iv) Provide a plant safety parameter display console that will display to operators a minimum set of parameters defining the safety status of the plant, capable of displaying a full range of important plant parameters and data trends on demand, and capable of indicating when process limits are being approached or exceeded. (I.D.2)

(v) Provide for automatic indication of the bypassed and operable status of safety systems. (I.D.3)

(vi) Provide the capability of high point venting of noncondensible gases from the reactor coolant system, and other systems that may be required to maintain adequate core cooling. Systems to achieve this capability shall be capable of being operated from the control room and their operation shall not lead to an unacceptable increase in the probability of loss-of-coolant accident or an unacceptable challenge to containment integrity. (II.B.1)

(vii) Perform radiation and shielding design reviews of spaces around systems that may, as a result of an accident, contain accident source

term1A[11] radioactive materials, and design as necessary to permit adequate access to important areas and to protect safety equipment from the radiation environment. (II.B.2)

(viii) Provide a capability to promptly obtain and analyze samples from the reactor coolant system and containment that may contain accident source term1A[11] radioactive materials without radiation exposures to any individual exceeding 5 rems to the whole body or 50 rems to the extremities. Materials to be analyzed and quantified include certain radionuclides that are indicators of the degree of core damage (e.g., noble gases, radioiodines and cesiums, and nonvolatile isotopes), hydrogen in the containment atmosphere, dissolved gases, chloride, and boron concentrations. (II.B.3)

(ix) Provide a system for hydrogen control that can safely accommodate hydrogen generated by the equivalent of a 100% fuel-clad metal water reaction. Preliminary design information on the tentatively preferred system option of those being evaluated in paragraph (f)(1)(xii) of this section is sufficient at the construction permit stage. The hydrogen control system and associated systems shall provide, with reasonable assurance, that: (II.B.8)

(A) Uniformly distributed hydrogen concentrations in the containment do not exceed 10% during and following an accident that releases an equivalent amount of hydrogen as would be generated from a 100% fuel clad metal-water reaction, or that the post-accident atmosphere will not support hydrogen combustion.

(B) Combustible concentrations of hydrogen will not collect in areas where unintended combustion or detonation could cause loss of containment integrity or loss of appropriate mitigating features.

(C) Equipment necessary for achieving and maintaining safe shutdown of the plant and maintaining containment integrity will perform its safety function during and after being exposed to the environmental conditions attendant with the release of hydrogen generated by the equivalent of a 100% fuel-clad metal water reaction including the environmental conditions created by activation of the hydrogen control system.

(D) If the method chosen for hydrogen control is a post-accident inerting system, inadvertent actuation of the system can be safely accommodated during plant operation.

(x) Provide a test program and associated model development and conduct tests to qualify reactor coolant system relief and safety valves and, for PWR's, PORV block valves, for all fluid conditions expected under operating conditions, transients and accidents. Consideration of anticipated transients without scram (ATWS) conditions shall be included in the test program. Actual testing under ATWS conditions need not be carried out until subsequent phases of the test program are developed. (II.D.1)

(xi) Provide direct indication of relief and safety valve position (open or closed) in the control room. (II.D.3)

(xii) Provide automatic and manual auxiliary feedwater (AFW) system initiation, and provide auxiliary feedwater system flow indication in the control room. (Applicable to PWR's only) (II.E.1.2)

(xiii) Provide pressurizer heater power supply and associated motive and control power interfaces sufficient to establish and maintain natural circulation in hot standby conditions with only onsite power available. (Applicable to PWR's only) (II.E.3.1)

(xiv) Provide containment isolation systems that: (II.E.4.2)

(A) Ensure all non-essential systems are isolated automatically by the containment isolation system,

(B) For each non-essential penetration (except instrument lines) have two isolation barriers in series,

(C) Do not result in reopening of the containment isolation valves on resetting of the isolation signal,

(D) Utilize a containment set point pressure for initiating containment isolation as low as is compatible with normal operation,

(E) Include automatic closing on a high radiation signal for all systems that provide a path to the environs.

(xv) Provide a capability for containment purging/venting designed to minimize the purging time consistent with ALARA principles for occupational exposure. Provide and demonstrate high assurance that the purge system will reliably isolate under accident conditions. (II. E.4.4)

(xvi) Establish a design criterion for the allowable number of actuation cycles of the emergency core cooling system and reactor protection system consistent with the expected occurrence rates of severe overcooling events (considering both anticipated transients and accidents). (Applicable to B&W designs only). (II.E.5.1)

(xvii) Provide instrumentation to measure, record and readout in the control room: (A) containment pressure, (B) containment water level, (C) containment hydrogen concentration, (D) containment radiation intensity (high level), and (E) noble gas effluents at all potential, accident release points. Provide for continuous sampling of radioactive iodines and particulates in gaseous effluents from all potential accident release points, and for onsite capability to analyze and measure these samples. (II.F.1)

(xviii) Provide instruments that provide in the control room an unambiguous indication of inadequate core cooling, such as primary coolant saturation meters in PWR's, and a suitable combination of signals from indicators of coolant level in the reactor vessel and in-core

thermocouples in PWR's and BWR's. (II.F.2)

(xix) Provide instrumentation adequate for monitoring plant conditions following an accident that includes core damage. (II.F.3)

(xx) Provide power supplies for pressurizer relief valves, block valves, and level indicators such that: (A) Level indicators are powered from vital buses; (B) motive and control power connections to the emergency power sources are through devices qualified in accordance with requirements applicable to systems important to safety and (C) electric power is provided from emergency power sources. (Applicable to PWR's only). (II.G.1)

(xxi) Design auxiliary heat removal systems such that necessary automatic and manual actions can be taken to ensure proper functioning when the main feedwater system is not operable. (Applicable to BWR's only). (II.K.1.22)

(xxii) Perform a failure modes and effects analysis of the integrated control system (ICS) to include consideration of failures and effects of input and output signals to the ICS. (Applicable to B&W-designed plants only). (II.K.2.9)

(xxiii) Provide, as part of the reactor protection system, an anticipatory reactor trip that would be actuated on loss of main feedwater and on turbine trip. (Applicable to B&W-designed plants only). (II.K.2.10)

(xxiv) Provide the capability to record reactor vessel water level in one location on recorders that meet normal post-accident recording requirements. (Applicable to BWR's only). (II.K.3.23)

(xxv) Provide an onsite Technical Support Center, an onsite Operational Support Center, and, for construction permit applications only, a nearsite Emergency Operations Facility. (III.A.1.2).

(xxvi) Provide for leakage control and detection in the design of systems outside containment that contain (or might contain) accident source term1A[11] radioactive materials following an accident. Applicants shall submit a leakage control program, including an initial test program, a schedule for re-testing these systems, and the actions to be taken for minimizing leakage from such systems. The goal is to minimize potential exposures to workers and public, and to provide reasonable assurance that excessive leakage will not prevent the use of systems needed in an emergency. (III.D.1.1)

(xxvii) Provide for monitoring of inplant radiation and airborne radioactivity as appropriate for a broad range of routine and accident conditions. (III.D.3.3)

(xxviii) Evaluate potential pathways for radioactivity and radiation that may lead to control room habitability problems under accident conditions resulting in an accident source term[11] release, and make necessary design provisions to preclude such problems. (III.D.3.4)

(3) To satisfy the following requirements, the application shall provide sufficient information to demonstrate that the requirement has been met. This information is of the type customarily required to satisfy paragraph (a)(1) of this section or to address the applicant's technical qualifications and management structure and competence.

(i) Provide administrative procedures for evaluating operating, design and construction experience and for ensuring that applicable important industry experiences will be provided in a timely manner to those designing and constructing the plant. (I.C.5)

(ii) Ensure that the quality assurance (QA) list required by Criterion II, app. B, 10 CFR part 50 includes all structures, systems, and components important to safety. (I.F.1)

(iii) Establish a quality assurance (QA) program based on consideration of: (A) Ensuring independence of the organization performing checking functions from the organization responsible for performing the functions; (B) performing quality assurance/quality control functions at construction sites to the maximum feasible extent; (C) including QA personnel in the documented review of and concurrence in quality related procedures associated with design, construction and installation; (D) establishing criteria for determining QA programmatic requirements; (E) establishing qualification requirements for QA and QC personnel; (F) sizing the QA staff commensurate with its duties and responsibilities; (G) establishing procedures for maintenance of "as-built" documentation; and (H) providing a QA role in design and analysis activities. (I.F.2)

(iv) Provide one or more dedicated containment penetrations, equivalent in size to a single 3-foot diameter opening, in order not to preclude future installation of systems to prevent containment failure, such as a filtered vented containment system. (II.B.8)

(v) Provide preliminary design information at a level of detail consistent with that normally required at the construction permit stage of review sufficient to demonstrate that: (II.B.8)

(A)(1) Containment integrity will be maintained (i.e., for steel containments by meeting the requirements of the ASME Boiler and Pressure Vessel Code, Section III, Division 1, Subsubarticle NE-3220, Service Level C Limits, except that evaluation of instability is not required, considering pressure and dead load alone. For concrete containments by meeting the requirements of the ASME Boiler Pressure Vessel Code, Section III, Division 2 Subsubarticle CC-3720, Factored Load Category, considering pressure and dead load alone) during an accident that releases hydrogen generated from 100% fuel clad metal-water reaction accompanied by either hydrogen burning or the added pressure from post-accident inerting assuming carbon dioxide is the inerting agent. As a minimum, the specific code requirements set forth above appropriate for each type of containment will be met for a combination of dead load and an internal pressure of 45 psig. Modest deviations from these criteria will be considered by the staff, if good cause is shown by an applicant. Systems necessary to ensure containment integrity shall also be demonstrated to perform their function under these conditions.

(2) Subarticle NE-3220, Division 1, and subarticle CC-3720, Division 2, of section III of the July 1, 1980 ASME Boiler and Pressure Vessel Code, which are referenced in paragraphs (f)(3)(v)(A)(1) and (f)(3)(v)(B)(1) of this section, were approved for incorporation by reference by the Director of the Office of the Federal Register. A notice of any changes made to the material incorporated by reference will be published in the Federal Register. Copies of the ASME Boiler and Pressure Vessel Code may be purchased from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th St., New York, NY 10017. It is also available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738.

(B)(1) Containment structure loadings produced by an inadvertent full actuation of a post-accident inerting hydrogen control system (assuming carbon dioxide), but not including seismic or design basis accident loadings will not produce stresses in steel containments in excess of the limits set forth in the ASME Boiler and Pressure Vessel Code, Section III, Division 1, Subsubarticle NE-3220, Service Level A Limits, except that evaluation of instability is not required (for concrete containments the loadings specified above will not produce strains in the containment liner in excess of the limits set forth in the ASME Boiler and Pressure Vessel Code, Section III, Division 2, Subsubarticle CC-3720, Service Load Category, (2) The containment has the capability to safely withstand pressure tests at 1.10 and 1.15 times (for steel and concrete containments, respectively) the pressure calculated to result from carbon dioxide inerting.

(vi) For plant designs with external hydrogen recombiners, provide redundant dedicated containment penetrations so that, assuming a single failure, the recombiner systems can be connected to the containment atmosphere. (II.E.4.1)

(vii) Provide a description of the management plan for design and construction activities, to include: (A) The organizational and management structure singularly responsible for direction of design and construction of the proposed plant; (B) technical resources director by the applicant; (C) details of the interaction of design and construction within the applicant's organization and the manner by which the applicant will ensure close integration of the architect engineer and the nuclear steam supply vendor; (D) proposed procedures for handling the transition to operation; (E) the degree of top level management oversight and technical control to be exercised by the applicant during design and construction, including the preparation and implementation of procedures necessary to guide the effort. (II.J.3.1)

(g) *Combustible gas control.* All applicants for a reactor construction permit or operating license whose application is submitted after October 16, 2003, shall include the analyses, and the descriptions of the equipment and systems required by § 50.44 as a part of their application.

(h) *Conformance with the Standard Review Plan (SRP).* (1)(i) Applications for light water cooled nuclear power plant operating licenses docketed after May 17, 1982 shall include an evaluation of the facility against the Standard Review Plan (SRP) in effect on May 17, 1982 or the SRP revision in effect six months prior to the docket date of the application, whichever is later.

(ii) Applications for light-watercooled nuclear power plant construction permits docketed after May 17, 1982, shall include an evaluation of the facility against the SRP in effect on May 17, 1982, or the SRP revision in effect six months before the docket date of the application, whichever is later.

(2) The evaluation required by this section shall include an identification and description of all differences in design features, analytical techniques, and procedural measures proposed for a facility and those corresponding features, techniques, and measures given in the SRP acceptance criteria. Where such a difference exists, the evaluation shall discuss how the alternative proposed provides an acceptable method of complying with those rules or regulations of Commission, or portions thereof, that underlie the corresponding SRP acceptance criteria.

(3) The SRP was issued to establish criteria that the NRC staff intends to use in evaluating whether an applicant/licensee meets the Commission's regulations. The SRP is not a substitute for the regulations, and compliance is not a requirement. Applicants shall identify differences from the SRP acceptance criteria and evaluate how the proposed alternatives to the SRP criteria provide an acceptable method of complying with the Commission's regulations.

[33 FR 18612, Dec. 17, 1968; 72 FR 49491, Aug. 28, 2007; 73 FR 63571, Oct. 24, 2008]

Editorial Note: For Federal Register citations affecting § 50.34, see the List of CFR Sections Affected.

[5] The applicant may provide information required by this paragraph in the form of a discussion, with specific references, of similarities to and differences from, facilities of similar design for which applications have previously been filed with the Commission.

[6] The fission product release assumed for this evaluation should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events. Such accidents have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products.

[7] A whole body dose of 25 rem has been stated to correspond numerically to the once in a lifetime accidental or emergency dose for radiation workers which, according to NCRP recommendations at the time could be disregarded in the determination of their radiation exposure status (see NBS Handbook 69 dated June 5, 1959). However, its use is not intended to imply that this number constitutes an acceptable limit for an emergency dose to the public under accident conditions. Rather, this dose value has been set forth in this section as a reference value, which can be used in the evaluation of plant design features with respect to postulated reactor accidents, in order to assure that such designs provide assurance of low risk of public exposure to radiation, in the event of such accidents.

[8] General design criteria for chemical processing facilities are being developed.

[9] A physical security plan that contains all the information required in both § 73.55 and appendix C to part 73 of this chapter satisfies the requirement for a contingency plan.

[10]Alphanumeric designations correspond to the related action plan items in NUREG 0718 and NUREG–0660, "NRC Action Plan Developed as a Result of the TMI–2 Accident." They are provided herein for information only.

[11] The fission product release assumed for these calculations should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events, that would result in potential hazards not exceeded by those from any accident considered credible. Such accidents have generally been assumed to result in substantial meltdown of the core with subsequent release of appreciable quantities of fission products.

§ 50.34a Design objectives for equipment to control releases of radioactive material in effluents—nuclear power reactors.

[Top of File]

(a) An application for a construction permit shall include a description of the preliminary design of equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, including expected operational occurrences. In the case of an application filed on or after January 2, 1971, the application shall also identify the design objectives, and the means to be employed, for keeping levels of radioactive material in effluents to unrestricted areas as low as is reasonably achievable. The term "as low as is reasonably achievable" as used in this part means as low as is reasonably achievable taking into account the state of technology, and the economics of improvements in relation to benefits to the public health and safety and other societal and socioeconomic considerations, and in relation to the use of atomic energy in the public interest. The guides set out in appendix I to this part provide numerical guidance on design objectives for light-water-cooled nuclear power reactors to meet the requirements that radioactive material in effluents released to unrestricted areas be kept as low as is reasonably achievable. These numerical guides for design objectives and limiting conditions for operation are not to be construed as radiation protection standards.

(b) Each application for a construction permit shall include:

(1) A description of the preliminary design of equipment to be installed under paragraph (a) of this section;

(2) An estimate of:

(i) The quantity of each of the principal radionuclides expected to be released annually to unrestricted areas in liquid effluents produced during normal reactor operations; and

(ii) The quantity of each of the principal radionuclides of the gases, halides, and particulates expected to be released annually to unrestricted areas in gaseous effluents produced during normal reactor operations.

(3) A general description of the provisions for packaging, storage, and shipment offsite of solid waste containing radioactive materials resulting from treatment of gaseous and liquid effluents and from other sources.

(c) Each application for an operating license shall include:

(1) A description of the equipment and procedures for the control of gaseous and liquid effluents and for the maintenance and use of equipment installed in radioactive waste systems, under paragraph (a) of this section; and

(2) A revised estimate of the information required in paragraph (b)(2) of this section if the expected releases and exposures differ significantly from the estimates submitted in the application for a construction permit.

(d) Each application for a combined license under part 52 of this chapter shall include:

(1) A description of the equipment and procedures for the control of gaseous and liquid effluents and for the maintenance and use of equipment installed in radioactive waste systems, under paragraph (a) of this section; and

(2) The information required in paragraph (b)(2) of this section.

(e) Each application for a design approval, a design certification, or a manufacturing license under part 52 of this chapter shall include:

(1) A description of the equipment for the control of gaseous and liquid effluents and for the maintenance and use of equipment installed in radioactive waste systems, under paragraph (a) of this section; and

(2) The information required in paragraph (b)(2) of this section.

[35 FR 18387, Dec. 3, 1970, as amended at 40 FR 58847, Dec. 19, 1975; 61 FR 65172, Dec. 11, 1996; 72 FR 49492, Aug. 28, 2007]

§ 50.35 Issuance of construction permits.[1]

[Top of File]

(a) When an applicant has not supplied initially all of the technical information required to complete the application and support the issuance of a construction permit which approves all proposed design features, the Commission may issue a construction permit if the Commission finds that (1) the applicant has described the proposed design of the facility, including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features or components incorporated therein for the protection of the health and safety of the public; (2) such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report; (3) safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components; and that (4) on the basis of the foregoing, there is reasonable assurance that, (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility, and (ii) taking into consideration the site criteria contained in part 100 of this chapter, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public.

Note: When an applicant has supplied initially all of the technical information required to complete the application, including the final design of the facility, the findings required above will be appropriately modified to reflect that fact.

(b) A construction permit will constitute an authorization to the applicant to proceed with construction but will not constitute Commission approval of the safety of any design feature or specification unless the applicant specifically requests such approval and such approval is incorporated in the permit. The applicant, at his option, may request such approvals in the construction permit or, from time to time, by amendment of his construction permit. The Commission may, in its discretion, incorporate in any construction permit provisions requiring the applicant to furnish periodic reports of the progress and results of research and development programs designed to resolve safety questions.

(c) Any construction permit will be subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission until (1) the applicant has submitted to the Commission, by amendment to the application, the complete final safety analysis report, portions of which may be submitted and evaluated from time to time, and (2) the Commission has found that the final design provides reasonable assurance that the health and safety of the public will not be endangered by operation of the facility in accordance with the requirements of the license and the regulations in this chapter.

[27 FR 12915, Dec. 29, 1962, as amended at 31 FR 12780, Sept. 30, 1966; 35 FR 5318, Mar. 31, 1970; 35 FR 6644, Apr. 25, 1970; 35 FR 11461, July 7, 1970]

[1] The Commission may issue a provisional construction permit pursuant to the regulations in this part in effect on March 30, 1970, for any facility for which a notice of hearing on an application for a provisional construction permit has been published on or before that date.

§ 50.36 Technical specifications.

[Top of File]

(a)(1) Each applicant for a license authorizing operation of a production or utilization facility shall include in his application proposed technical specifications in accordance with the requirements of this section. A summary statement of the bases or reasons for such specifications, other than those covering administrative controls, shall also be included in the application, but shall not become part of the technical specifications.

(2) Each applicant for a design certification or manufacturing license under part 52 of this chapter shall include in its application proposed generic technical specifications in accordance with the requirements of this section for the portion of the plant that is within the scope of the design certification or manufacturing license application.

(b) Each license authorizing operation of a production or utilization facility of a type described in § 50.21 or § 50.22 will include technical specifications. The technical specifications will be derived from the analyses and evaluation included in the safety analysis report, and amendments thereto, submitted pursuant to § 50.34. The Commission may include such additional technical specifications as the Commission finds appropriate.

(c) Technical specifications will include items in the following categories:

(1) *Safety limits, limiting safety system settings, and limiting control settings.* (i)(A) Safety limits for nuclear reactors are limits upon important process variables that are found to be necessary to reasonably protect the integrity of certain of the physical barriers that guard against the uncontrolled release of radioactivity. If any safety limit is exceeded, the reactor must be shut down. The licensee shall notify the Commission, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence. Operation must not be resumed until authorized by the Commission. The licensee shall retain the record of the results of each review until the Commission terminates the license for the reactor, except for nuclear power reactors licensed under § 50.21(b) or § 50.22 of this part. For these reactors, the licensee shall notify the Commission as required by § 50.72 and submit a Licensee Event Report to the Commission as required by § 50.73. Licensees in these cases shall retain the records of the review for a period of three years following issuance of a Licensee Event Report.

(B) Safety limits for fuel reprocessing plants are those bounds within which the process variables must be maintained for adequate control of the operation and that must not be exceeded in order to protect the integrity of the physical system that is designed to guard against the uncontrolled release or radioactivity. If any safety limit for a fuel reprocessing plant is exceeded, corrective action must be taken as stated in the technical specification or the affected part of the process, or the entire process if required, must be shut down, unless this action

would further reduce the margin of safety. The licensee shall notify the Commission, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence. If a portion of the process or the entire process has been shutdown, operation must not be resumed until authorized by the Commission. The licensee shall retain the record of the results of each review until the Commission terminates the license for the plant.

(ii)(A) Limiting safety system settings for nuclear reactors are settings for automatic protective devices related to those variables having significant safety functions. Where a limiting safety system setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that automatic protective action will correct the abnormal situation before a safety limit is exceeded. If, during operation, it is determined that the automatic safety system does not function as required, the licensee shall take appropriate action, which may include shutting down the reactor. The licensee shall notify the Commission, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence. The licensee shall retain the record of the results of each review until the Commission terminates the license for the reactor except for nuclear power reactors licensed under § 50.21(b) or § 50.22 of this part. For these reactors, the licensee shall notify the Commission as required by § 50.72 and submit a Licensee Event Report to the Commission as required by § 50.73. Licensees in these cases shall retain the records of the review for a period of three years following issuance of a Licensee Event Report.

(B) Limiting control settings for fuel reprocessing plants are settings for automatic alarm or protective devices related to those variables having significant safety functions. Where a limiting control setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that protective action, either automatic or manual, will correct the abnormal situation before a safety limit is exceeded. If, during operation, the automatic alarm or protective devices do not function as required, the licensee shall take appropriate action to maintain the variables within the limiting control-setting values and to repair promptly the automatic devices or to shut down the affected part of the process and, if required, to shut down the entire process for repair of automatic devices. The licensee shall notify the Commission, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence. The licensee shall retain the record of the results of each review until the Commission terminates the license for the plant.

(2) *Limiting conditions for operation*. (i) Limiting conditions for operation are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met. When a limiting condition for operation of any process step in the system of a fuel reprocessing plant is not met, the licensee shall shut down that part of the operation or follow any remedial action permitted by the technical specifications until the condition can be met. In the case of a nuclear reactor not licensed under § 50.21(b) or § 50.22 of this part or fuel reprocessing plant, the licensee shall notify the Commission, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence. The licensee shall retain the record of the results of each review until the Commission terminates the license for the nuclear reactor or the fuel reprocessing plant. In the case of nuclear power reactors licensed under § 50.21(b) or § 50.22, the licensee shall notify the Commission if required by § 50.72 and shall submit a Licensee Event Report to the Commission as required by § 50.73. In this case, licensees shall retain records associated with preparation of a Licensee Event Report for a period of three years following issuance of the report. For events which do not require a Licensee Event Report, the licensee shall retain each record as required by the technical specifications.

(ii) A technical specification limiting condition for operation of a nuclear reactor must be established for each item meeting one or more of the following criteria:

(A) *Criterion 1*. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.

(B) *Criterion 2*. A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

(C) *Criterion 3*. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.

(D) *Criterion 4*. A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

(iii) A licensee is not required to propose to modify technical specifications that are included in any license issued before August 18, 1995, to satisfy the criteria in paragraph (c)(2)(ii) of this section.

(3) *Surveillance requirements*. Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

(4) *Design features*. Design features to be included are those features of the facility such as materials of construction and geometric arrangements, which, if altered or modified, would have a significant effect on safety and are not covered in categories described in paragraphs (c) (1), (2), and (3) of this section.

(5) *Administrative controls*. Administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner. Each licensee shall submit any reports to the Commission pursuant to approved technical specifications as specified in § 50.4.

(6) *Decommissioning*. This paragraph applies only to nuclear power reactor facilities that have submitted the certifications required by § 50.82(a)(1) and to non-power reactor facilities which are not authorized to operate. Technical specifications involving safety limits, limiting

safety system settings, and limiting control system settings; limiting conditions for operation; surveillance requirements; design features; and administrative controls will be developed on a case-by-case basis.

(7) *Initial notification*. Reports made to the Commission by licensees in response to the requirements of this section must be made as follows:

(i) Licensees that have an installed Emergency Notification System shall make the initial notification to the NRC Operations Center in accordance with §50.72 of this part.

(ii) All other licensees shall make the initial notification by telephone to the Administrator of the appropriate NRC Regional Office listed in appendix D, part 20, of this chapter.

(8) *Written Reports*. Licensees for nuclear power reactors licensed under § 50.21(b) and § 50.22 of this part shall submit written reports to the Commission in accordance with § 50.73 of this part for events described in paragraphs (c)(1) and (c)(2) of this section. For all licensees, the Commission may require Special Reports as appropriate.

(d)(1) This section shall not be deemed to modify the technical specifications included in any license issued prior to January 16, 1969. A license in which technical specifications have not been designated shall be deemed to include the entire safety analysis report as technical specifications.

(2) An applicant for a license authorizing operation of a production or utilization facility to whom a construction permit has been issued prior to January 16, 1969, may submit technical specifications in accordance with this section, or in accordance with the requirements of this part in effect prior to January 16, 1969.

(3) At the initiative of the Commission or the licensee, any license may be amended to include technical specifications of the scope and content which would be required if a new license were being issued.

(e) The provisions of this section apply to each nuclear reactor licensee whose authority to operate the reactor has been removed by license amendment, order, or regulation.

[33 FR 18612, Dec. 17, 1968, as amended at 48 FR 33860, July 26, 1983; 51 FR 40308, Nov. 6, 1986; 53 FR 19249, May 27, 1988; 60 FR 36959, July 19, 1995; 61 FR 39299, July 29, 1996; 72 FR 49493, Aug. 28, 2007; 73 FR 54932, Sep. 24, 2008]

§ 50.36a Technical specifications on effluents from nuclear power reactors.

[Top of File]

(a) To keep releases of radioactive materials to unrestricted areas during normal conditions, including expected occurrences, as low as is reasonably achievable, each licensee of a nuclear power reactor and each applicant for a design certification or a manufacturing license will include technical specifications that, in addition to requiring compliance with applicable provisions of § 20.1301 of this chapter, require that:

(1) Operating procedures developed pursuant to § 50.34a(c) for the control of effluents be established and followed and that the radioactive waste system, pursuant to § 50.34a, be maintained and used. The licensee shall retain the operating procedures in effect as a record until the Commission terminates the license and shall retain each superseded revision of the procedures for 3 years from the date it was superseded.

(2) Each holder of an operating license, and each holder of a combined license after the Commission has made the finding under § 52.103 (g) of this chapter, shall submit a report to the Commission annually that specifies the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in gaseous effluents during the previous 12 months, including any other information as may be required by the Commission to estimate maximum potential annual radiation doses to the public resulting from effluent releases. The report must be submitted as specified in § 50.4, and the time between submission of the reports must be no longer than 12 months. If quantities of radioactive materials released during the reporting period are significantly above design objectives, the report must cover this specifically. On the basis of these reports and any additional information the Commission may obtain from the licensee or others, the Commission may require the licensee to take action as the Commission deems appropriate.

(b) In establishing and implementing the operating procedures described in paragraph (a) of this section, the licensee shall be guided by the following considerations: Experience with the design, construction, and operation of nuclear power reactors indicates that compliance with the technical specifications described in this section will keep average annual releases of radioactive material in effluents and their resultant committed effective dose equivalents at small percentages of the dose limits specified in § 20.1301 and in the license. At the same time, the licensee is permitted the flexibility of operation, compatible with considerations of health and safety, to assure that the public is provided a dependable source of power even under unusual conditions which may temporarily result in releases higher than such small percentages, but still within the limits specified in § 20.1301 of this chapter and in the license. It is expected that in using this flexibility under unusual conditions, the licensee will exert its best efforts to keep levels of radioactive material in effluents as low as is reasonably achievable. The guides set out in appendix I, provide numerical guidance on limiting conditions for operation for light-water cooled nuclear power reactors to meet the requirement that radioactive materials in effluents released to unrestricted areas be kept as low as is reasonably achievable.

[61 FR 39299, July 29, 1996; 72 FR 49493, Aug. 28, 2007]

§ 50.36b Environmental conditions.

[Top of File]

(a) Each construction permit under this part, each early site permit under part 52 of this chapter, and each combined license under part 52 of this chapter may include conditions to protect the environment during construction. These conditions are to be set out in an attachment to the permit or license, which is incorporated in and made a part of the permit or license. These conditions will be derived from information contained in the environmental report submitted
pursuant to § 51.50 of this chapter as analyzed and evaluated in the NRC record of decision, and will identify the
obligations of the licensee in the environmental area, including, as appropriate, requirements for reporting and keeping records of environmental data, and any conditions and monitoring requirement for the protection of the nonaquatic environment.

(b) Each license authorizing operation of a production or utilization facility, including a combined license under part 52 of this chapter, and each license for a nuclear power reactor facility for which the certification of permanent cessation of operations required under § 50.82(a)(1) or § 52.110(a) of this chapter has been submitted, which is of a type described in § 50.21(b)(2) or (3) or § 50.22 or is a testing facility, may include conditions to protect the environment during operation and decommissioning. These conditions are to be set out in an attachment to the license which is incorporated in and made a part of the license. These conditions will be derived from information contained in the
environmental report or the supplement to the environmental report submitted pursuant to §§ 51.50 and 51.53 of this
chapter as analyzed and evaluated in the NRC record of decision, and will identify the obligations of the licensee in the environmental area, including, as appropriate, requirements for reporting and keeping records of environmental data, and any conditions and monitoring requirement for the protection of the nonaquatic environment.

[61 FR 39299, July 29, 1996; 72 FR 49493, Aug. 28, 2007]

§ 50.37 Agreement limiting access to Classified Information.

[Top of File]

As part of its application and in any event before the receipt of Restricted Data or classified National Security
Information or the issuance of a license, construction permit, early site permit, or standard design approval, or before the Commission has adopted a final standard design certification rule under part 52 of this chapter, the applicant shall agree in writing that it will not permit any individual to have access to any facility to possess Restricted Data or
classified National Security Information until the individual and/or facility has been approved for access under the
provisions of 10 CFR parts 25 and/or 95. The agreement of the applicant becomes part of the license, or construction
permit, or standard design approval.

[62 FR 17690, Apr. 11, 1997; 72 FR 49493, Aug. 28, 2007]

§ 50.38 Ineligibility of certain applicants.

[Top of File]

Any person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity which the Commission knows or has reason to believe is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, shall be ineligible to apply for and obtain a license.

[21 FR 355, Jan. 16, 1956, as amended at 43 FR 6924, Feb. 17, 1978]

§ 50.39 Public inspection of applications.

[Top of File]

Applications and documents submitted to the Commission in connection with applications may be made available for public inspection in accordance with the provisions of the regulations contained in part 2 of this chapter.

Standards for Licenses, Certifications, and Regulatory Approvals

[Top of File]

§ 50.40 Common standards.

In determining that a construction permit or operating license in this part, or early site permit, combined license, or manufacturing license in part 52 of this chapter will be issued to an applicant, the Commission will be guided by the following considerations:

(a) Except for an early site permit or manufacturing license, the processes to be performed, the operating procedures,
the facility and equipment, the use of the facility, and other technical specifications, or the proposals, in regard to any of the foregoing

collectively provide reasonable assurance that the applicant will comply with the regulations in this chapter, including the regulations in part 20 of this chapter, and that the health and safety of the public will not be endangered.

(b) The applicant for a construction permit, operating license, combined license, or manufacturing license is technically and financially qualified to engage in the proposed activities in accordance with the regulations in this chapter. However, no consideration of financial qualification is necessary for an electric utility applicant for an operating license for a utilization facility of the type described in § 50.21(b) or § 50.22 or for an applicant for a manufacturing license.

(c) The issuance of a construction permit, operating license, early site permit, combined license, or manufacturing license to the applicant will not, in the opinion of the Commission, be inimical to the common defense and security or to the health and safety of the public.

(d) Any applicable requirements of subpart A of 10 CFR part 51 have been satisfied.

[21 FR 355, Jan. 19, 1956, as amended at 36 FR 12731, July 7, 1971; 49 FR 9404, Mar. 12, 1984; 49 FR 35753, Sept. 12, 1984; 72 FR 49493, Aug. 28, 2007]

§ 50.41 Additional standards for class 104 licenses.

[Top of File]

In determining that a class 104 license will be issued to an applicant, the Commission will, in addition to applying the standards set forth in § 50.40 be guided by the following considerations:

(a) The Commission will permit the widest amount of effective medical therapy possible with the amount of special nuclear material available for such purposes.

(b) The Commission will permit the conduct of widespread and diverse research and development.

(c) Reserved.

[21 FR 355, Jan. 19, 1956, as amended at 35 FR 19660, Dec. 29, 1970; 73 FR 44620, Jul. 31, 2008]

§ 50.42 Additional standard for class 103 licenses.

[Top of File]

In determining whether a class 103 license will be issued to an applicant, the Commission will, in addition to applying the standards set forth in § 50.40, consider whether the proposed activities will serve a useful purpose proportionate to the quantities of special nuclear material or source material to be utilized.

[21 FR 355, Jan. 19, 1956, as amended at 35 FR 11461, July 17, 1970; 35 FR 19660, Dec. 29, 1970; 65 FR 44660, July 19, 2000; 73 FR 44620, Jul. 31, 2008]

§ 50.43 Additional standards and provisions affecting class 103 licenses and certifications for commercial power.

[Top of File]

In addition to applying the standards set forth in §§ 50.40 and 50.42, paragraphs (a) through (e) of this section apply in the case of a class 103 license for a facility for the generation of commercial power. For a design certification under part 52 of this chapter, only paragraph (e) of this section applies.

(a) The NRC will:

(1) Give notice in writing of each application to the regulatory agency or State as may have jurisdiction over the rates and services incident to the proposed activity;

(2) Publish notice of the application in trade or news publications as it deems appropriate to give reasonable notice to municipalities, private utilities, public bodies, and cooperatives which might have a potential interest in the utilization or production facility; and

(3) Publish notice of the application once each week for 4 consecutive weeks in the Federal Register. No license will be issued by the NRC prior to the giving of these notices and until 4 weeks after the last notice is published in the Federal Register.

(b) If there are conflicting applications for a limited opportunity for such license, the Commission will give preferred consideration in the following order: First, to applications submitted by public or cooperative bodies for facilities to be located in high cost power areas in the United States; second, to applications submitted by others for facilities to be located in such areas; third, to applications submitted by public or cooperative bodies for facilities to be located in other than high cost power areas; and, fourth, to all other applicants.

(c) The licensee who transmits electric energy in interstate commerce, or sells it at wholesale in interstate commerce, shall be subject to the regulatory provisions of the Federal Power Act.

(d) Nothing shall preclude any government agency, now or hereafter authorized by law to engage in the production, marketing, or distribution of electric energy, if otherwise qualified, from obtaining a construction permit or operating license under this part, or a combined license under part 52 of this chapter for a utilization facility for the primary purpose of producing electric energy for disposition for ultimate public consumption.

(e) Applications for a design certification, combined license, manufacturing license, or operating license that propose nuclear reactor designs which differ significantly from light-water reactor designs that were licensed before 1997, or use simplified, inherent, passive, or other innovative means to accomplish their safety functions, will be approved only if:

(1)(i) The performance of each safety feature of the design has been demonstrated through either analysis, appropriate test programs, experience, or a combination thereof;

(ii) Interdependent effects among the safety features of the design are acceptable, as demonstrated by analysis, appropriate test programs, experience, or a combination thereof; and

(iii) Sufficient data exist on the safety features of the design to assess the analytical tools used for safety analyses over a sufficient range of normal operating conditions, transient conditions, and specified accident sequences, including equilibrium core conditions; or

(2) There has been acceptable testing of a prototype plant over a sufficient range of normal operating conditions, transient conditions, and specified accident sequences, including equilibrium core conditions. If a prototype plant is used to comply with the testing requirements, then the NRC may impose additional requirements on siting, safety features, or operational conditions for the prototype plant to protect the public and the plant staff from the possible consequences of accidents during the testing period.

[21 FR 355, Jan. 19, 1956, as amended at 35 FR 19660, Dec. 29, 1970; 63 FR 50480, Sept. 22, 1998; 72 FR 49494, Aug. 28, 2007]

§ 50.44 Combustible gas control for nuclear power reactors.

[Top of File]

(a) *Definitions.*

(1) *Inerted atmosphere* means a containment atmosphere with less than 4 percent oxygen by volume.

(2) *Mixed atmosphere* means that the concentration of combustible gases in any part of the containment is below a level that supports combustion or detonation that could cause loss of containment integrity.

(b) *Requirements for currently-licensed reactors.* Each boiling or pressurized water nuclear power reactor with an operating license on October 16, 2003, except for those facilities for which the certifications required under § 50.82(a)(1) have been submitted, must comply with the following requirements, as applicable:

(1) *Mixed atmosphere.* All containments must have a capability for ensuring a mixed atmosphere.

(2) *Combustible gas control.* (i) All boiling water reactors with Mark I or Mark II type containments must have an inerted atmosphere.

(ii) All boiling water reactors with Mark III type containments and all pressurized water reactors with ice condenser containments must have the capability for controlling combustible gas generated from a metal-water reaction involving 75 percent of the fuel cladding surrounding the active fuel region (excluding the cladding surrounding the plenum volume) so that there is no loss of containment structural integrity.

(3) *Equipment Survivability.* All boiling water reactors with Mark III containments and all pressurized water reactors with ice condenser containments that do not rely upon an inerted atmosphere inside containment to control combustible gases must be able to establish and maintain safe shutdown and containment structural integrity with systems and components capable of performing their functions during and after exposure to the environmental conditions created by the burning of hydrogen. Environmental conditions caused by local detonations of hydrogen must also be included, unless such detonations can be shown unlikely to occur. The amount of hydrogen to be considered must be equivalent to that generated from a metal-water reaction involving 75 percent of the fuel cladding surrounding the active fuel region (excluding the cladding surrounding the plenum volume).

(4) *Monitoring.* (i) Equipment must be provided for monitoring oxygen in containments that use an inerted atmosphere for combustible gas control. Equipment for monitoring oxygen must be functional, reliable, and capable of continuously measuring the concentration of oxygen in the containment atmosphere following a significant beyond design-basis accident for combustible gas control and accident management, including emergency planning.

(ii) Equipment must be provided for monitoring hydrogen in the containment. Equipment for monitoring hydrogen must be functional, reliable, and capable of continuously measuring the concentration of hydrogen in the containment atmosphere following a significant beyond design-basis accident for accident management, including emergency planning.

(5) *Analyses.* Each holder of an operating license for a boiling water reactor with a Mark III type of containment or for a pressurized water reactor with an ice condenser type of containment, shall perform an analysis that:

(i) Provides an evaluation of the consequences of large amounts of hydrogen generated after the start of an accident (hydrogen resulting from the metal-water reaction of up to and including 75 percent of the fuel cladding surrounding the active fuel region, excluding the cladding surrounding the plenum volume) and include consideration of hydrogen control measures as appropriate;

(ii) Includes the period of recovery from the degraded condition;

(iii) Uses accident scenarios that are accepted by the NRC staff. These scenarios must be accompanied by sufficient supporting justification to show that they describe the behavior of the reactor system during and following an accident resulting in a degraded core.

(iv) Supports the design of the hydrogen control system selected to meet the requirements of this section; and,

(v) Demonstrates, for those reactors that do not rely upon an inerted atmosphere to comply with paragraph (b)(2)(ii) of this section, that:

(A) Containment structural integrity is maintained. Containment structural integrity must be demonstrated by use of an analytical technique that is accepted by the NRC staff in accordance with § 50.90. This demonstration must include sufficient supporting justification to show that the technique describes the containment response to the structural loads involved. This method could include the use of actual material properties with suitable margins to account for uncertainties in modeling, in material properties, in construction tolerances, and so on; and

(B) Systems and components necessary to establish and maintain safe shutdown and to maintain containment integrity will be capable of performing their functions during and after exposure to the environmental conditions created by the burning of hydrogen, including local detonations, unless such detonations can be shown unlikely to occur.

(c) *Requirements for future water-cooled reactor applicants and licensees.*[2] The requirements in this paragraph apply to all water-cooled reactor construction permits or operating licenses under this part, and to all water-cooled reactor design approvals, design certifications, combined licenses or manufacturing licenses under part 52 of this chapter, any of which are issued after October 16, 2003.

(1) *Mixed atmosphere.* All containments must have a capability for ensuring a mixed atmosphere during design-basis and significant beyond design-basis accidents.

(2) *Combustible gas control.* All containments must have an inerted atmosphere, or must limit hydrogen concentrations in containment during and following an accident that releases an equivalent amount of hydrogen as would be generated from a 100 percent fuel clad-coolant reaction, uniformly distributed, to less than 10 percent (by volume) and maintain containment structural integrity and appropriate accident mitigating features.

(3) *Equipment Survivability.* Containments that do not rely upon an inerted atmosphere to control combustible gases must be able to establish and maintain safe shutdown and containment structural integrity with systems and components capable of performing their functions during and after exposure to the environmental conditions created by the burning of hydrogen. Environmental conditions caused by local detonations of hydrogen must also be included, unless such detonations can be shown unlikely to occur. The amount of hydrogen to be considered must be equivalent to that generated from a fuel clad-coolant reaction involving 100 percent of the fuel cladding surrounding the active fuel region.

(4) *Monitoring.* (i) Equipment must be provided for monitoring oxygen in containments that use an inerted atmosphere for combustible gas control. Equipment for monitoring oxygen must be functional, reliable, and capable of continuously measuring the concentration of oxygen in the containment atmosphere following a significant beyond design-basis accident for combustible gas control and accident management, including emergency planning.

(ii) Equipment must be provided for monitoring hydrogen in the containment. Equipment for monitoring hydrogen must be functional, reliable, and capable of continuously measuring the concentration of hydrogen in the containment atmosphere following a significant beyond design-basis accident for accident management, including emergency planning.

(5) *Structural analysis.* An applicant must perform an analysis that demonstrates containment structural integrity. This demonstration must use an analytical technique that is accepted by the NRC and include sufficient supporting justification to show that the technique describes the containment response to the structural loads involved. The analysis must address an accident that releases hydrogen generated from 100 percent fuel clad-coolant reaction accompanied by hydrogen burning. Systems necessary to ensure containment integrity must also be demonstrated to perform their function under these conditions.

(d) *Requirements for future non water-cooled reactor applicants and licensees and certain water-cooled reactor applicants and licensees.* The requirements in this paragraph apply to all construction permits and operating licenses under this part, and to all design approvals, design certifications, combined licenses, or manufacturing licenses under part 52 of this chapter, for non water-cooled reactors and water-cooled reactors that do not fall within the description in paragraph (c), footnote 1 of this section, any of which are issued after October 16, 2003. Applications subject to this paragraph must include:

(1) Information addressing whether accidents involving combustible gases are technically relevant for their design, and

(2) If accidents involving combustible gases are found to be technically relevant, information (including a design-specific probabilistic risk assessment) demonstrating that the safety impacts of combustible gases during design-basis and significant beyond design-basis accidents have been addressed to ensure adequate protection of public health and safety and common defense and security.

[43 FR 50163, Oct. 27, 1978, as amended at 46 FR 58486, Dec. 2, 1981; 50 FR 3504, Jan. 25, 1985; 50 FR 5567, Feb. 11, 1985; 51 FR 40308, Nov. 6, 1986; 53 FR 43420, Oct. 27, 1988; 57 FR 39358, Aug. 31, 1992, 61 FR 39299, July 29, 1996; 64 FR 48951, Sept. 9, 1999; 68 FR 54141, Sep. 16, 2003]

[2] The requirements of this paragraph apply only to water-cooled reactor designs with characteristics (e.g., type and quantity of cladding materials) such that the potential for production of combustible gases is comparable to light water reactor designs licensed as of October 16, 2003.

§ 50.45 Standards for construction permits, operating licenses, and combined licenses.

[Top of File]

(a) An applicant for an operating license or an amendment of an operating license who proposes to construct or alter a production or utilization facility will be initially granted a construction permit if the application is in conformity with and acceptable under the criteria of §§ 50.31 through 50.38, and the standards of §§ 50.40 through 50.43, as applicable.

(b) A holder of a combined license who proposes, after the Commission makes the finding under § 52.103(g) of this chapter, to alter the licensed facility will be initially granted a construction permit if the application is in conformity with and acceptable under the criteria of §§ 50.30 through 50.33, § 50.34(f), §§ 50.34a through 50.38, the standards of §§ 50.40 through 50.43, as applicable, and §§ 52.79 and 52.80 of this chapter.

[72 FR 49494, Aug. 28, 2007]

§ 50.46 Acceptance criteria for emergency core cooling systems for light-water nuclear power reactors.

[Top of File]

(a)(1)(i) Each boiling or pressurized light-water nuclear power reactor fueled with uranium oxide pellets within cylindrical zircaloy or ZIRLO cladding must be provided with an emergency core cooling system (ECCS) that must be designed so that its calculated cooling performance following postulated loss-of-coolant accidents conforms to the criteria set forth in paragraph (b) of this section. ECCS cooling performance must be calculated in accordance with an acceptable evaluation model and must be calculated for a number of postulated loss-of-coolant accidents of different sizes, locations, and other properties sufficient to provide assurance that the most severe postulated loss-of-coolant accidents are calculated. Except as provided in paragraph (a)(1)(ii) of this section, the evaluation model must include sufficient supporting justification to show that the analytical technique realistically describes the behavior of the reactor system during a loss-of-coolant accident. Comparisons to applicable experimental data must be made and uncertainties in the analysis method and inputs must be identified and assessed so that the uncertainty in the calculated results can be estimated. This uncertainty must be accounted for, so that, when the calculated ECCS cooling performance is compared to the criteria set forth in paragraph (b) of this section, there is a high level of probability that the criteria would not be exceeded. Appendix K, Part II Required Documentation, sets forth the documentation requirements for each evaluation model. This section does not apply to a nuclear power reactor facility for which the certifications required under § 50.82(a)(1) have been submitted.

(ii) Alternatively, an ECCS evaluation model may be developed in conformance with the required and acceptable features of appendix K ECCS Evaluation Models.

(2) The Director of Nuclear Reactor Regulation may impose restrictions on reactor operation if it is found that the evaluations of ECCS cooling performance submitted are not consistent with paragraphs (a)(1) (i) and (ii) of this section.

(3)(i) Each applicant for or holder of an operating license or construction permit issued under this part, applicant for a standard design certification under part 52 of this chapter (including an applicant after the Commission has adopted a final design certification regulation), or an applicant for or holder of a standard design approval, a combined license or a manufacturing license issued under part 52 of this chapter, shall estimate the effect of any change to or error in an acceptable evaluation model or in the application of such a model to determine if the change or error is significant. For this purpose, a significant change or error is one which results in a calculated peak fuel cladding temperature different by more than 50 °F from the temperature calculated for the limiting transient using the last acceptable model, or is a cumulation of changes and errors such that the sum of the absolute magnitudes of the respective temperature changes is greater than 50 °F.

(ii) For each change to or error discovered in an acceptable evaluation model or in the application of such a model that affects the temperature calculation, the applicant or holder of a construction permit, operating license, combined license, or manufacturing license shall report the nature of the change or error and its estimated effect on the limiting ECCS analysis to the Commission at least annually as specified in § 50.4 or § 52.3 of this chapter, as applicable. If the change or error is significant, the applicant or licensee shall provide this report within 30 days and include with the report a proposed schedule for providing a reanalysis or taking other action as may be needed to show compliance with § 50.46 requirements. This schedule may be developed using an integrated scheduling system previously approved for the facility by the NRC. For those facilities not using an NRC approved integrated scheduling system, a schedule will be established by the NRC staff within 60 days of receipt of the proposed schedule. Any change or error correction that results in a calculated ECCS performance that does not conform to the criteria set forth in paragraph (b) of this section is a reportable event as described in §§ 50.55(e), 50.72, and 50.73. The affected applicant or licensee shall propose immediate steps to demonstrate compliance or bring plant design or operation into compliance with § 50.46 requirements.

(iii) For each change to or error discovered in an acceptable evaluation model or in the application of such a model that affects the temperature calculation, the applicant or holder of a standard design approval or the applicant for a standard design certification (including an applicant after the Commission has adopted a final design certification rule) shall report the nature of the change or error and its estimated effect on the limiting ECCS analysis to the Commission and to any applicant or licensee referencing the design approval or design certification at least annually as specified in § 52.3 of this chapter. If the change or error is significant, the applicant or holder of the design approval or the applicant for the design certification shall provide this report within 30 days and include with the report a proposed schedule for providing a reanalysis or taking other action as may be needed to show compliance with § 50.46 requirements. The affected applicant or holder shall propose immediate steps to demonstrate compliance or bring plant design into compliance with § 50.46 requirements.

(b)(1) *Peak cladding temperature*. The calculated maximum fuel element cladding temperature shall not exceed 2200º F.

(2) *Maximum cladding oxidation*. The calculated total oxidation of the cladding shall nowhere exceed 0.17 times the total cladding thickness before oxidation. As used in this subparagraph total oxidation means the total thickness of cladding metal that would be locally converted to oxide if all the oxygen absorbed by and reacted with the cladding locally were converted to stoichiometric zirconium dioxide. If cladding rupture is calculated to occur, the inside surfaces of the cladding shall be included in the oxidation, beginning at the calculated time of rupture. Cladding thickness before oxidation means the radial distance from inside to outside the cladding, after any calculated rupture or swelling has occurred but before significant oxidation. Where the calculated conditions of transient pressure and temperature lead to a prediction of cladding swelling, with or without cladding rupture, the unoxidized cladding thickness shall be defined as the cladding cross-sectional area, taken at a horizontal plane at the elevation of the rupture, if it occurs, or at the elevation of the highest cladding temperature if no rupture is calculated to occur, divided by the average circumference at that elevation. For ruptured cladding the circumference does not include the rupture opening.

(3) *Maximum hydrogen generation*. The calculated total amount of hydrogen generated from the chemical reaction of the cladding with water or steam shall not exceed 0.01 times the hypothetical amount that would be generated if all of the metal in the cladding cylinders surrounding the fuel, excluding the cladding surrounding the plenum volume, were to react.

(4) *Coolable geometry*. Calculated changes in core geometry shall be such that the core remains amenable to cooling.

(5) *Long-term cooling*. After any calculated successful initial operation of the ECCS, the calculated core temperature shall be maintained at an acceptably low value and decay heat shall be removed for the extended period of time required by the long-lived radioactivity remaining in the core.

(c) As used in this section: (1) Loss-of-coolant accidents (LOCA's) are hypothetical accidents that would result from the loss of reactor coolant, at a rate in excess of the capability of the reactor coolant makeup system, from breaks in pipes in the reactor coolant pressure boundary up to and including a break equivalent in size to the double-ended rupture of the largest pipe in the reactor coolant system.

(2) An evaluation model is the calculational framework for evaluating the behavior of the reactor system during a postulated loss-of-coolant accident (LOCA). It includes one or more computer programs and all other information necessary for application of the calculational framework to a specific LOCA, such as mathematical models used, assumptions included in the programs, procedure for treating the program input and output information, specification of those portions of analysis not included in computer programs, values of parameters, and all other information necessary to specify the calculational procedure.

(d) The requirements of this section are in addition to any other requirements applicable to ECCS set forth in this part. The criteria set forth in paragraph (b), with cooling performance calculated in accordance with an acceptable evaluation model, are in implementation of the general requirements with respect to ECCS cooling performance design set forth in this part, including in particular Criterion 35 of appendix A.

[39 FR 1002, Jan. 4, 1974, as amended at 53 FR 36004, Sept. 16, 1988; 57 FR 39358, Aug. 31, 1992; 61 FR 39299, July 29, 1996; 62 FR 59726, Nov. 3, 1997; 72 FR 49494, Aug. 28, 2007]

§ 50.46a Acceptance criteria for reactor coolant system venting systems.

[Top of File]

Each nuclear power reactor must be provided with high point vents for the reactor coolant system, for the reactor vessel head, and for other systems required to maintain adequate core cooling if the accumulation of noncondensible gases would cause the loss of function of these systems. High point vents are not required for the tubes in U-tube steam generators. Acceptable venting systems must meet the following criteria:

(a) The high point vents must be remotely operated from the control room.

(b) The design of the vents and associated controls, instruments and power sources must conform to appendix A and appendix B of this part.

(c) The vent system must be designed to ensure that:

(1) The vents will perform their safety functions; and

(2) There would not be inadvertent or irreversible actuation of a vent.

[68 FR 54142, Sep. 16, 2003]

§ 50.47 Emergency plans.

[Top of File]

(a)(1)(i) Except as provided in paragraph (d) of this section, no initial operating license for a nuclear power reactor will be issued unless a finding is made by the NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. No finding under this section is necessary for issuance of a renewed nuclear power reactor operating license.

(ii) No initial combined license under part 52 of this chapter will be issued unless a finding is made by the NRC that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. No finding under this section is necessary for issuance of a renewed combined license.

(iii) If an application for an early site permit under subpart A of part 52 of this chapter includes complete and integrated emergency plans under 10 CFR 52.17(b)(2)(ii), no early site permit will be issued unless a finding is made by the NRC that the emergency plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

(iv) If an application for an early site permit proposes major features of the emergency plans under 10 CFR 52.17(b)(2)(i), no early site permit will be issued unless a finding is made by the NRC that the major features are acceptable in accordance with the applicable standards of 10 CFR 50.47 and 10 CFR part 50, appendix E, within the scope of emergency preparedness matters addressed in the major features.

(2) The NRC will base its finding on a review of the Federal Emergency Management Agency (FEMA) findings and determinations as to whether State and local emergency plans are adequate and whether there is reasonable assurance that they can be implemented, and on the NRC assessment as to whether the applicant's onsite emergency plans are adequate and whether there is reasonable assurance that they can be implemented. A FEMA finding will primarily be based on a review of the plans. Any other information already available to FEMA may be considered in assessing whether there is reasonable assurance that the plans can be implemented. In any NRC licensing proceeding, a FEMA finding will constitute a rebuttable presumption on questions of adequacy and implementation capability.

(b) The onsite and, except as provided in paragraph (d) of this section, offsite emergency response plans for nuclear power reactors must meet the following standards:

(1) Primary responsibilities for emergency response by the nuclear facility licensee and by State and local organizations within the Emergency Planning Zones have been assigned, the emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.

(2) On-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentation of response capabilities is available and the interfaces among various onsite response activities and offsite support and response activities are specified.

(3) Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

(4) A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and State and local response plans call for reliance on information provided by facility licensees for determinations of minimum initial offsite response measures.

(5) Procedures have been established for notification, by the licensee, of State and local response organizations and for notification of emergency personnel by all organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

(6) Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

(7) Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e.g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

(8) Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

(9) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

(10) A range of protective actions has been developed for the plume exposure pathway EPZ for emergency workers and the public. In developing this range of actions, consideration has been given to evacuation, sheltering, and, as a supplement to these, the prophylactic

use of potassium iodide (KI), as appropriate. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

(11) Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

(12) Arrangements are made for medical services for contaminated injured individuals.

(13) General plans for recovery and reentry are developed.

(14) Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

(15) Radiological emergency response training is provided to those who may be called on to assist in an emergency.

(16) Responsibilities for plan development and review and for distribution of emergency plans are established, and planners are properly trained.

(c)(1) Failure to meet the applicable standards set forth in paragraph (b) of this section may result in the Commission declining to issue an operating license; however, the applicant will have an opportunity to demonstrate to the satisfaction of the Commission that deficiencies in the plans are not significant for the plant in question, that adequate interim compensating actions have been or will be taken promptly, or that there are other compelling reasons to permit plant operations. Where an applicant for an operating license asserts that its inability to demonstrate compliance with the requirements of paragraph (b) of this section results wholly or substantially from the decision of state and/or local governments not to participate further in emergency planning, an operating license may be issued if the applicant demonstrates to the Commission's satisfaction that:

(i) The applicant's inability to comply with the requirements of paragraph (b) of this section is wholly or substantially the result of the non-participation of state and/or local governments.

(ii) The applicant has made a sustained, good faith effort to secure and retain the participation of the pertinent state and/or local governmental authorities, including the furnishing of copies of its emergency plan.

(iii) The applicant's emergency plan provides reasonable assurance that public health and safety is not endangered by operation of the facility concerned. To make that finding, the applicant must demonstrate that, as outlined below, adequate protective measures can and will be taken in the event of an emergency. A utility plan will be evaluated against the same planning standards applicable to a state or local plan, as listed in paragraph (b) of this section, with due allowance made both for--

(A) Those elements for which state and/or local non-participation makes compliance infeasible and

(B) The utility's measures designed to compensate for any deficiencies resulting from state and/or local non-participation.

In making its determination on the adequacy of a utility plan, the NRC will recognize the reality that in an actual emergency, state and local government officials will exercise their best efforts to protect the health and safety of the public. The NRC will determine the adequacy of that expected response, in combination with the utility's compensating measures, on a case-by-case basis, subject to the following guidance. In addressing the circumstance where applicant's inability to comply with the requirements of paragraph (b) of this section is wholly or substantially the result of non-participation of state and/or local governments, it may be presumed that in the event of an actual radiological emergency state and local officials would generally follow the utility plan. However, this presumption may be rebutted by, for example, a good faith and timely proffer of an adequate and feasible state and/or local radiological emergency plan that would in fact be relied upon in a radiological emergency.

(2) Generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway shall focus on such actions as are appropriate to protect the food ingestion pathway.

(d) Notwithstanding the requirements of paragraphs (a) and (b) of this section, and except as specified by this paragraph, no NRC or FEMA review, findings, or determinations concerning the state of offsite emergency preparedness or the adequacy of and capability to implement State and local or utility offsite emergency plans are required prior to issuance of an operating license authorizing only fuel loading or low power testing and training (up to 5 percent of the rated power). Insofar as emergency planning and preparedness requirements are concerned, a license authorizing fuel loading and/or low power testing and training may be issued after a finding is made by the NRC that the state of onsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The NRC will base this finding on its assessment of the applicant's onsite emergency plans against the pertinent standards in paragraph (b) of this section and appendix E. Review of applicant's emergency plans will include the following standards with offsite aspects:

(1) Arrangements for requesting and effectively using offsite assistance on site have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the

planned onsite response have been identified.

(2) Procedures have been established for licensee communications with State and local response organizations, including initial notification of the declaration of emergency and periodic provision of plant and response status reports.

(3) Provisions exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite.

(4) Adequate emergency facilities and equipment to support the emergency response onsite are provided and maintained.

(5) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use onsite.

(6) Arrangements are made for medical services for contaminated and injured onsite individuals.

(7) Radiological emergency response training has been made available to those offsite who may be called to assist in an emergency onsite.

(e) Notwithstanding the requirements of paragraph (b) of this section and the provisions of § 52.103 of this chapter, a holder of a combined license under part 52 of this chapter may not load fuel or operate except as provided in accordance with appendix E to part 50 and § 50.54(gg).

[45 FR 55409, Aug. 8, 1980, as amended at 47 FR 30235, July 13, 1982; 47 FR 40537, Sept. 15, 1982; 49 FR 27736, July 6, 1984; 50 FR 19324, May 8, 1985; 52 FR 42085, Nov. 3, 1987; 53 FR 36959, Sept. 23, 1988; 56 FR 64976, Dec. 13, 1991; 61 FR 30132, June 14, 1996; 66 FR 5440, Jan. 19, 2001; 72 FR 49495, Aug. 28, 2007]

§ 50.48 Fire protection.

[Top of File]

(a)(1) Each holder of an operating license issued under this part or a combined license issued under part 52 of this chapter must have a fire protection plan that satisfies Criterion 3 of appendix A to this part. This fire protection plan must:

(i) Describe the overall fire protection program for the facility;

(ii) Identify the various positions within the licensee's organization that are responsible for the program;

(iii) State the authorities that are delegated to each of these positions to implement those responsibilities; and

(iv) Outline the plans for fire protection, fire detection and suppression capability, and limitation of fire damage.

(2) The plan must also describe specific features necessary to implement the program described in paragraph (a)(1) of this section such as--

(i) Administrative controls and personnel requirements for fire prevention and manual fire suppression activities;

(ii) Automatic and manually operated fire detection and suppression systems; and

(iii) The means to limit fire damage to structures, systems, or components important to safety so that the capability to shut down the plant safely is ensured.

(3) The licensee shall retain the fire protection plan and each change to the plan as a record until the Commission terminates the reactor license. The licensee shall retain each superseded revision of the procedures for 3 years from the date it was superseded.

(4) Each applicant for a design approval, design certification, or manufacturing license under part 52 of this chapter must have a description and analysis of the fire protection design features for the standard plant necessary to demonstrate compliance with Criterion 3 of appendix A to this part.

(b) Appendix R to this part establishes fire protection features required to satisfy Criterion 3 of appendix A to this part with respect to certain generic issues for nuclear power plants licensed to operate before January 1, 1979.

(1) Except for the requirements of Sections III.G, III.J, and III.O, the provisions of Appendix R to this part do not apply to nuclear power plants licensed to operate before January 1, 1979, to the extent that--

(i) Fire protection features proposed or implemented by the licensee have been accepted by the NRC staff as satisfying the provisions of Appendix A to Branch Technical Position (BTP) APCSB 9.5-1 reflected in NRC fire protection safety evaluation reports issued before the effective date of February 19, 1981; or

(ii) Fire protection features were accepted by the NRC staff in comprehensive fire protection safety evaluation reports issued before

Appendix A to Branch Technical Position (BTP) APCSB 9.5-1 was published in August 1976.

(2) With respect to all other fire protection features covered by Appendix R, all nuclear power plants licensed to operate before January 1, 1979, must satisfy the applicable requirements of Appendix R to this part, including specifically the requirements of Sections III.G, III.J, and III.O.

(c) *National Fire Protection Association Standard NFPA 805.*

(1) *Approval of incorporation by reference.* National Fire Protection Association (NFPA) Standard 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805), which is referenced in this section, was approved for incorporation by reference by the Director of the Federal Register pursuant to 5 U.S.C. 552(a) and 1 CFR part 51. Copies of NFPA 805 may be purchased from the NFPA Customer Service Department, 1 Batterymarch Park, P.O. Box 9101, Quincy, MA 02269-9101 and in PDF format through the NFPA Online Catalog (*http://www.nfpa.org*) or by calling 1-800-344-3555 or (617) 770-3000. Copies are also available for inspection at the NRC Library, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland 20852-2738, and at the NRC Public Document Room, Building One White Flint North, Room O1-F15, 11555 Rockville Pike, Rockville, Maryland 20852-2738. Copies are also available at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call (202) 741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(2) *Exceptions, modifications, and supplementation of NFPA 805.* As used in this section, references to NFPA 805 are to the 2001 Edition, with the following exceptions, modifications, and supplementation:

(i) *Life Safety Goal, Objectives, and Criteria.* The Life Safety Goal, Objectives, and Criteria of Chapter 1 are not endorsed.

(ii) *Plant Damage/Business Interruption Goal, Objectives, and Criteria.* The Plant Damage/Business Interruption Goal, Objectives, and Criteria of Chapter 1 are not endorsed.

(iii) *Use of feed-and-bleed.* In demonstrating compliance with the performance criteria of Sections 1.5.1(b) and (c), a high-pressure charging/injection pump coupled with the pressurizer power-operated relief valves (PORVs) as the sole fire-protected safe shutdown path for maintaining reactor coolant inventory, pressure control, and decay heat removal capability (i.e., feed-and-bleed) for pressurized-water reactors (PWRs) is not permitted.

(iv) *Uncertainty analysis.* An uncertainty analysis performed in accordance with Section 2.7.3.5 is not required to support deterministic approach calculations.

(v) *Existing cables.* In lieu of installing cables meeting flame propagation tests as required by Section 3.3.5.3, a flame-retardant coating may be applied to the electric cables, or an automatic fixed fire suppression system may be installed to provide an equivalent level of protection. In addition, the italicized exception to Section 3.3.5.3 is not endorsed.

(vi) *Water supply and distribution.* The italicized exception to Section 3.6.4 is not endorsed. Licensees who wish to use the exception to Section 3.6.4 must submit a request for a license amendment in accordance with paragraph (c)(2)(vii) of this section.

(vii) *Performance-based methods.* Notwithstanding the prohibition in Section 3.1 against the use of performance-based methods, the fire protection program elements and minimum design requirements of Chapter 3 may be subject to the performance-based methods permitted elsewhere in the standard. Licensees who wish to use performance-based methods for these fire protection program elements and minimum design requirements shall submit a request in the form of an application for license amendment under § 50.90. The Director of the Office of Nuclear Reactor Regulation, or a designee of the Director, may approve the application if the Director or designee determines that the performance-based approach;

(A) Satisfies the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release;

(B) Maintains safety margins; and

(C) Maintains fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire safe shutdown capability).

(3) *Compliance with NFPA 805.*

(i) A licensee may maintain a fire protection program that complies with NFPA 805 as an alternative to complying with paragraph (b) of this section for plants licensed to operate before January 1, 1979, or the fire protection license conditions for plants licensed to operate after January 1, 1979. The licensee shall submit a request to comply with NFPA 805 in the form of an application for license amendment under § 50.90. The application must identify any orders and license conditions that must be revised or superseded, and contain any necessary revisions to the plant's technical specifications and the bases thereof. The Director of the Office of Nuclear Reactor Regulation, or a designee of the Director, may approve the application if the Director or designee determines that the licensee has identified orders, license conditions, and the technical specifications that must be revised or superseded, and that any necessary revisions are adequate. Any approval by the Director or the designee must be in the form of a license amendment approving the use of NFPA 805 together with any necessary revisions to the technical specifications.

(ii) The licensee shall complete its implementation of the methodology in Chapter 2 of NFPA 805 (including all required evaluations and analyses) and, upon completion, modify the fire protection plan required by paragraph (a) of this section to reflect the licensee's decision to comply with NFPA 805, before changing its fire protection program or nuclear power plant as permitted by NFPA 805.

(4) *Risk-informed or performance-based alternatives to compliance with NFPA 805.* A licensee may submit a request to use risk-informed or performance-based alternatives to compliance with NFPA 805. The request must be in the form of an application for license amendment under § 50.90 of this chapter. The Director of the Office of Nuclear Reactor Regulation, or designee of the Director, may approve the application if the Director or designee determines that the proposed alternatives:

(i) Satisfy the performance goals, performance objectives, and performance criteria specified in NFPA 805 related to nuclear safety and radiological release;

(ii) Maintain safety margins; and

(iii) Maintain fire protection defense-in-depth (fire prevention, fire detection, fire suppression, mitigation, and post-fire safe shutdown capability).

(d) [Reserved].

(e) [Reserved].

(f) Licensees that have submitted the certifications required under § 50.82(a)(1) shall maintain a fire protection program to address the potential for fires that could cause the release or spread of radioactive materials (i.e., that could result in a radiological hazard). A fire protection program that complies with NFPA 805 shall be deemed to be acceptable for complying with the requirements of this paragraph.

(1) The objectives of the fire protection program are to--

(i) Reasonably prevent these fires from occurring;

(ii) Rapidly detect, control, and extinguish those fires that do occur and that could result in a radiological hazard; and

(iii) Ensure that the risk of fire-induced radiological hazards to the public, environment and plant personnel is minimized.

(2) The licensee shall assess the fire protection program on a regular basis. The licensee shall revise the plan as appropriate throughout the various stages of facility decommissioning.

(3) The licensee may make changes to the fire protection program without NRC approval if these changes do not reduce the effectiveness of fire protection for facilities, systems, and equipment that could result in a radiological hazard, taking into account the decommissioning plant conditions and activities.

[65 FR 38190, June 20, 2000; 69 FR 33550, June 16, 2004; 72 FR 49495, Aug. 28, 2007]

§ 50.49 Environmental qualification of electric equipment important to safety for nuclear power plants.

[Top of File]

(a) Each holder of or an applicant for an operating license issued under this part, or a combined license or manufacturing license issued under part 52 of this chapter, other than a nuclear power plant for which the certifications required under § 50.82(a)(1) or § 52.110(a)(1) of this chapter have been submitted, shall establish a program for qualifying the electric equipment defined in paragraph (b) of this section. For a manufacturing license, only electric equipment defined in paragraph (b) which is within the scope of the manufactured reactor must be included in the program.

(b) Electric equipment important to safety covered by this section is:

(1) Safety-related electric equipment.[3]

Engineers, Inc., 345 East 47th Street, New York, NY 10017.

(i) This equipment is that relied upon to remain functional during and following design basis events to ensure--

(A) The integrity of the reactor coolant pressure boundary;

(B) The capability to shut down the reactor and maintain it in a safe shutdown condition; or

(C) The capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guidelines in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

(ii) Design basis events are defined as conditions of normal operation, including anticipated operational occurrences, design basis accidents, external events, and natural phenomena for which the plant must be designed to ensure functions (b)(1)(i) (A) through (C) of this section.

(2) Nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions specified in subparagraphs (b)(1) (i) (A) through (C) of paragraph (b)(1) of this section by the safety-related equipment.

(3) Certain post-accident monitoring equipment.[4]

(c) Requirements for (1) dynamic and seismic qualification of electric equipment important to safety, (2) protection of electric equipment important to safety against other natural phenomena and external events, and (3) environmental qualification of electric equipment important to safety located in a mild environment are not included within the scope of this section. A mild environment is an environment that would at no time be significantly more severe than the environment that would occur during normal plant operation, including anticipated operational occurrences.

(d) The applicant or licensee shall prepare a list of electric equipment important to safety covered by this section. In addition, the applicant or licensee shall include the information in paragraphs (d)(1), (2), and (3) of this section for this electric equipment important to safety in a qualification file. The applicant or licensee shall keep the list and information in the file current and retain the file in auditable form for the entire period during which the covered item is installed in the nuclear power plant or is stored for future use to permit verification that each item of electric equipment is important to safely meet the requirements of paragraph (j) of this section.

(1) The performance specifications under conditions existing during and following design basis accidents.

(2) The voltage, frequency, load, and other electrical characteristics for which the performance specified in accordance with paragraph (d)(1) of this section can be ensured.

(3) The environmental conditions, including temperature, pressure, humidity, radiation, chemicals, and submergence at the location where the equipment must perform as specified in accordance with paragraphs (d)(1) and (2) of this section.

(e) The electric equipment qualification program must include and be based on the following:

(1) *Temperature and pressure*. The time-dependent temperature and pressure at the location of the electric equipment important to safety must be established for the most severe design basis accident during or following which this equipment is required to remain functional.

(2) *Humidity*. Humidity during design basis accidents must be considered.

(3) *Chemical effects*. The composition of chemicals used must be at least as severe as that resulting from the most limiting mode of plant operation (e.g., containment spray, emergency core cooling, or recirculation from containment sump). If the composition of the chemical spray can be affected by equipment malfunctions, the most severe chemical spray environment that results from a single failure in the spray system must be assumed.

(4) *Radiation*. The radiation environment must be based on the type of radiation, the total dose expected during normal operation over the installed life of the equipment, and the radiation environment associated with the most severe design basis accident during or following which the equipment is required to remain functional, including the radiation resulting from recirculating fluids for equipment located near the recirculating lines and including dose-rate effects.

(5) *Aging*. Equipment qualified by test must be preconditioned by natural or artificial (accelerated) aging to its end-of-installed life condition. Consideration must be given to all significant types of degradation which can have an effect on the functional capability of the equipment. If preconditioning to an end-of-installed life condition is not practicable, the equipment may be preconditioned to a shorter designated life. The equipment must be replaced or refurbished at the end of this designated life unless ongoing qualification demonstrates that the item has additional life.

(6) *Submergence* (if subject to being submerged).

(7) *Synergistic effects*. Synergistic effects must be considered when these effects are believed to have a significant effect on equipment performance.

(8) *Margins*. Margins must be applied to account for unquantified uncertainty, such as the effects of production variations and inaccuracies in test instruments. These margins are in addition to any conservatisms applied during the derivation of local environmental conditions of the equipment unless these conservatisms can be quantified and shown to contain appropriate margins.

(f) Each item of electric equipment important to safety must be qualified by one of the following methods:

(1) Testing an identical item of equipment under identical conditions or under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable.

(2) Testing a similar item of equipment with a supporting analysis to show that the equipment to be qualified is acceptable.

(3) Experience with identical or similar equipment under similar conditions with a supporting analysis to show that the equipment to be qualified is acceptable.

(4) Analysis in combination with partial type test data that supports the analytical assumptions and conclusions.

(g) Each holder of an operating license issued prior to February 22, 1983, shall, by May 20, 1983, identify the electric equipment important to safety within the scope of this section already qualified and submit a schedule for either the qualification to the provisions of this section or for the replacement of the remaining electric equipment important to safety within the scope of this section. This schedule must establish a goal of final environmental qualification of the electric equipment within the scope of this section by the end of the second refueling outage after March 31, 1982 or by March 31, 1985, whichever is earlier. The Director of the Office of Nuclear Reactor Regulation may grant requests for extensions of this deadline to a date no later than November 30, 1985, for specific pieces of equipment if these requests are filed on a timely basis and demonstrate good cause for the extension, such as procurement lead time, test complications, and installation problems. In exceptional cases, the Commission itself may consider and grant extensions beyond November 30, 1985, for completion of environmental qualification.

The schedule in this paragraph supersedes the June 30, 1982, deadline, or any other previously imposed date, for environmental qualification of electric equipment contained in certain nuclear power operating licenses.

(h) Each license shall notify the Commission as specified in § 50.4 of any significant equipment qualification problem that may require extension of the completion date provided in accordance with paragraph (g) of this section within 60 days of its discovery.

(i) Applicants for operating licenses granted after February 22, 1983, but prior to November 30, 1985, shall perform an analysis to ensure that the plant can be safely operated pending completion of equipment qualification required by this section. This analysis must be submitted, as specified in § 50.4, for consideration prior to the granting of an operating license and must include, where appropriate, consideration of:

(1) Accomplishing the safety function by some designated alternative equipment if the principal equipment has not been demonstrated to be fully qualified.

(2) The validity of partial test data in support of the original qualification.

(3) Limited use of administrative controls over equipment that has not been demonstrated to be fully qualified.

(4) Completion of the safety function prior to exposure to the accident environment resulting from a design basis event and ensuring that the subsequent failure of the equipment does not degrade any safety function or mislead the operator.

(5) No significant degradation of any safety function or misleading information to the operator as a result of failure of equipment under the accident environment resulting from a design basis event.

(j) A record of the qualification, including documentation in paragraph (d) of this section, must be maintained in an auditable form for the entire period during which the covered item is installed in the nuclear power plant or is stored for future use to permit verification that each item of electric equipment important to safety covered by this section:

(1) Is qualified for its application; and

(2) Meets its specified performance requirements when it is subjected to the conditions predicted to be present when it must perform its safety function up to the end of its qualified life.

(k) Applicants for and holders of operating licenses are not required to requalify electric equipment important to safety in accordance with the provisions of this section if the Commission has previously required qualification of that equipment in accordance with "Guidelines for Evaluating Environmental Qualification of Class 1E Electrical Equipment in Operating Reactors," November 1979 (DOR Guidelines), or NUREG-0588 (For Comment version), "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment."

(l) Replacement equipment must be qualified in accordance with the provisions of this section unless there are sound reasons to the contrary.

[48 FR 2733, Jan. 21, 1983, as amended at 49 FR 45576, Nov. 19, 1984; 51 FR 40308, Nov. 6, 1986; 51 FR 43709, Dec. 3, 1986; 52 FR 31611, Aug. 21, 1987; 53 FR 19250, May 27, 1988; 61 FR 39300, July 29, 1996; 61 FR 65173, Dec. 11, 1996; 62 FR 47271, Sept. 8, 1997; 64 FR 72001, Dec. 23, 1999; 66 FR 64738, Dec. 14, 2001; 72 FR 49495, Aug. 28, 2007]

[3] Safety-related electric equipment is referred to as "Class 1E" equipment in IEEE 323-1974. Copies of this standard may be obtained from the Institute of Electrical and Electronics.

[4] Specific guidance concerning the types of variables to be monitored is provided in Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident." Copies of the Regulatory Guide may be purchased through the U.S. Government Printing Office by calling 202-275-2060 or by writing to the U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082.

Issuance, Limitations, and Conditions of Licenses and Construction Permits

[Top of File]

§ 50.50 Issuance of licenses and construction permits.

Upon determination that an application for a license meets the standards and requirements of the act and regulations, and that notifications, if any, to other agencies or bodies have been duly made, the Commission will issue a license, or if appropriate a construction permit, in such form and containing such conditions and limitations including technical specifications, as it deems appropriate and necessary.

§ 50.51 Continuation of license.

[Top of File]

(a) Each license will be issued for a fixed period of time to be specified in the license but in no case to exceed 40 years from date of issuance. Where the operation of a facility is involved, the Commission will issue the license for the term requested by the applicant or for the estimated useful life of the facility if the Commission determines that the estimated useful life is less than the term requested. Where construction of a facility is involved, the Commission may specify in the construction permit the period for which the license will be issued if approved pursuant to § 50.56. Licenses may be renewed by the Commission upon the expiration of the period. Renewal of operating licenses for nuclear power plants is governed by 10 CFR part 54. Application for termination of license is to be made pursuant to § 50.82.

(b) Each license for a facility that has permanently ceased operations, continues in effect beyond the expiration date to authorize ownership and possession of the production or utilization facility, until the Commission notifies the licensee in writing that the license is terminated. During such period of continued effectiveness the licensee shall--

(1) Take actions necessary to decommission and decontaminate the facility and continue to maintain the facility, including, where applicable, the storage, control and maintenance of the spent fuel, in a safe condition, and

(2) Conduct activities in accordance with all other restrictions applicable to the facility in accordance with the NRC regulations and the provisions of the specific 10 CFR part 50 license for the facility.

[56 FR 64976, Dec. 13, 1991, as amended at 61 FR 39300, July 29, 1996]

§ 50.52 Combining licenses.

[Top of File]

The Commission may combine in a single license the activities of an applicant which would otherwise be licensed severally.

§ 50.53 Jurisdictional limitations.

[Top of File]

No license under this part shall be deemed to have been issued for activities which are not under or within the jurisdiction of the United States.

[21 FR 355, Jan. 19, 1956, as amended at 43 FR 6924, Feb. 17, 1978]

§ 50.54 Conditions of licenses.

[Top of File]

The following paragraphs with the exception of paragraphs (r) and (gg) of this section are conditions in every nuclear power reactor operating license issued under this part. The following paragraphs with the exception of paragraph (r), (s), and (u) of this section are conditions in every combined license issued under part 52 of this chapter, provided, however, that paragraphs (i), (i–1), (j), (k), (l), (m), (n), (w), (x), (y), and (z) of this section are only applicable after the Commission makes the finding under § 52.103(g) of this chapter.

(a)(1) Each nuclear power plant or fuel reprocessing plant licensee subject to the quality assurance criteria in appendix B of this part shall implement, under § 50.34(b)(6)(ii) or § 52.79 of this chapter, the quality assurance program described or referenced in the safety analysis report, including changes to that report. However, a holder of a combined license under part 52 of this chapter shall implement the quality assurance program described or referenced in the safety analysis report applicable to operation 30 days prior to the scheduled date for the initial loading of fuel.

(2) Each licensee described in paragraph (a)(1) of this section shall, by June 10, 1983, submit to the appropriate NRC Regional Office shown in appendix D of part 20 of this chapter the current description of the quality assurance program it is implementing for inclusion in the Safety Analysis Report, unless there are no changes to the description previously accepted by NRC. This submittal must identify changes made to the quality assurance program description since the description was submitted to NRC. (Should a licensee need additional time beyond June 10, 1983 to submit its current quality assurance program description to NRC, it shall notify the appropriate NRC Regional Office in writing, explain why additional time is needed, and provide a schedule for NRC approval showing when its current quality assurance program description will be submitted.)

(3) Each licensee described in paragraph (a)(1) of this section may make a change to a previously accepted quality assurance program description included or referenced in the Safety Analysis Report without prior NRC approval, provided the change does not reduce the

commitments in the program description as accepted by the NRC. Changes to the quality assurance program description that do not reduce the commitments must be submitted to the NRC in accordance with the requirements of Sec. 50.71(e). In addition to quality assurance program changes involving administrative improvements and clarifications, spelling corrections, punctuation, or editorial items, the following changes are not considered to be reductions in commitment:

(i) The use of a QA standard approved by the NRC which is more recent than the QA standard in the licensee's current QA program at the time of the change;

(ii) The use of a quality assurance alternative or exception approved by an NRC safety evaluation, provided that the bases of the NRC approval are applicable to the licensee's facility;

(iii) The use of generic organizational position titles that clearly denote the position function, supplemented as necessary by descriptive text, rather than specific titles;

(iv) The use of generic organizational charts to indicate functional relationships, authorities, and responsibilities, or, alternately, the use of descriptive text;

(v) The elimination of quality assurance program information that duplicates language in quality assurance regulatory guides and quality assurance standards to which the licensee is committed; and

(vi) Organizational revisions that ensure that persons and organizations performing quality assurance functions continue to have the requisite authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations.

(4) Changes to the quality assurance program description that do reduce the commitments must be submitted to the NRC and receive NRC approval prior to implementation, as follows:

(i) Changes made to the quality assurance program description as presented in the Safety Analysis Report or in a topical report must be submitted as specified in Sec. 50.4.

(ii) The submittal of a change to the Safety Analysis Report quality assurance program description must include all pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the revised program incorporating the change continues to satisfy the criteria of appendix B of this part and the Safety Analysis Report quality assurance program description commitments previously accepted by the NRC (the letter need not provide the basis for changes that correct spelling, punctuation, or editorial items).

(iii) A copy of the forwarding letter identifying the change must be maintained as a facility record for three years.

(iv) Changes to the quality assurance program description included or referenced in the Safety Analysis Report shall be regarded as accepted by the Commission upon receipt of a letter to this effect from the appropriate reviewing office of the Commission or 60 days after submittal to the Commission, whichever occurs first.

(b) No right to the special nuclear material shall be conferred by the license except as may be defined by the license.

(c) Neither the license, nor any right thereunder, nor any right to utilize or produce special nuclear material shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of the act and give its consent in writing.

(d) The license shall be subject to suspension and to the rights of recapture of the material or control of the facility reserved to the Commission under section 108 of the act in a state of war or national emergency declared by Congress.

(e) The license shall be subject to revocation, suspension, modification, or amendment for cause as provided in the act and regulations, in accordance with the procedures provided by the act and regulations.

(f) The licensee shall at any time before expiration of the license, upon request of the Commission, submit, as specified in § 50.4, written statements, signed under oath or affirmation, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked. Except for information sought to verify licensee compliance with the current licensing basis for that facility, the NRC must prepare the reason or reasons for each information request prior to issuance to ensure that the burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each such justification provided for an evaluation performed by the NRC staff must be approved by the Executive Director for Operations or his or her designee prior to issuance of the request.

(g) The issuance or existence of the license shall not be deemed to waive, or relieve the licensee from compliance with, the antitrust laws, as specified in subsection 105a of the Act. In the event that the licensee should be found by a court of competent jurisdiction to have violated any provision of such antitrust laws in the conduct of the licensed activity, the Commission may suspend or revoke the license or take such other action with respect to it as shall be deemed necessary.

(h) The license shall be subject to the provisions of the Act now or hereafter in effect and to all rules, regulations, and orders of the Commission. The terms and conditions of the license shall be subject to amendment, revision, or modification, by reason of amendments of

the Act or by reason of rules, regulations, and orders issued in accordance with the terms of the act.

(i) Except as provided in § 55.13 of this chapter, the licensee may not permit the manipulation of the controls of any facility by anyone who is not a licensed operator or senior operator as provided in part 55 of this chapter.

(i-1) Within 3 months after either the issuance of an operating license or the date that the Commission makes the finding under § 52.103(g) of this chapter for a combined license, as applicable, the licensee shall have in effect an operator requalification program. The operator requalification program must, as a minimum, meet the requirements of § 55.59(c) of this chapter. Notwithstanding the provisions of § 50.59, the licensee may not, except as specifically authorized by the Commission decrease the scope of an approved operator requalification program.

(j) Apparatus and mechanisms other than controls, the operation of which may affect the reactivity or power level of a reactor shall be manipulated only with the knowledge and consent of an operator or senior operator licensed pursuant to part 55 of this chapter present at the controls.

(k) An operator or senior operator licensed pursuant to part 55 of this chapter shall be present at the controls at all times during the operation of the facility.

(l) The licensee shall designate individuals to be responsible for directing the licensed activities of licensed operators. These individuals shall be licensed as senior operators pursuant to part 55 of this chapter.

(m)(1) A senior operator licensed pursuant to part 55 of this chapter shall be present at the facility or readily available on call at all times during its operation, and shall be present at the facility during initial start-up and approach to power, recovery from an unplanned or unscheduled shut-down or significant reduction in power, and refueling, or as otherwise prescribed in the facility license.

(2) Notwithstanding any other provisions of this section, by January 1, 1984, licensees of nuclear power units shall meet the following requirements:

(i) Each licensee shall meet the minimum licensed operator staffing requirements in the following table:

Minimum Requirements[1] Per Shift for On-Site Staffing of Nuclear Power Units by Operators and Senior Operators Licensed Under 10 CFR Part 55

Number of nuclear power units operating[2]	Position	One Unit	Two units		Three units	
		One control room	One control room	Two control rooms	Two control rooms	Three control rooms
None	Senior Operator	1	1	1	1	1
	Operator	1	2	2	3	3
One	Senior Operator	2	2	2	2	2
	Operator	2	3	3	4	4
Two	Senior Operator		2	3	[3]3	3
	Operator		3	4	[3]5	5
Three	Senior Operator				3	4
	Operator				5	6

[1]Temporary deviations from the numbers required by this table shall be in accordance with criteria established in the unit's technical specifications.

[2]For the purpose of this table, a nuclear power unit is considered to be operating when it is in a mode other than cold shutdown or refueling as defined by the unit's technical specifications.

[3]The number of required licensed personnel when the operating nuclear power units are controlled from a common control room are two senior operators and four operators.

(ii) Each licensee shall have at its site a person holding a senior operator license for all fueled units at the site who is assigned responsibility for overall plant operation at all times there is fuel in any unit. If a single senior operator does not hold a senior operator license on all fueled units at the site, then the licensee must have at the site two or more senior operators, who in combination are licensed as senior operators on all fueled units.

(iii) When a nuclear power unit is in an operational mode other than cold shutdown or refueling, as defined by the unit's technical specifications, each licensee shall have a person holding a senior operator license for the nuclear power unit in the control room at all times. In addition to this senior operator, for each fueled nuclear power unit, a licensed operator or senior operator shall be present at the controls at all times.

(iv) Each licensee shall have present, during alteration of the core of a nuclear power unit (including fuel loading or transfer), a person holding a senior operator license or a senior operator license limited to fuel handling to directly supervise the activity and, during this time, the licensee shall not assign other duties to this person.

(3) Licensees who cannot meet the January 1, 1984 deadline must submit by October 1, 1983 a request for an extension to the Director of the Office of Nuclear Regulation and demonstrate good cause for the request.

(n) The licensee shall not, except as authorized pursuant to a construction permit, make any alteration in the facility constituting a change from the technical specifications previously incorporated in a license or construction permit pursuant to § 50.36 of this part.

(o) Primary reactor containments for water cooled power reactors, other than facilities for which the certifications required under §§ 50.82(a)(1) or 52.110(a)(1) of this chapter have been submitted, shall be subject to the requirements set forth in appendix J to this part.

(p)(1) The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with appendix C of part 73 of this chapter for effecting the actions and decisions contained in the Responsibility Matrix of the safeguards contingency plan. The licensee may make no change which would decrease the effectiveness of a security plan, or guard training and qualification plan, prepared pursuant to § 50.34(c) or § 52.79(a), or part 73 of this chapter, or of the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, Responsibility Matrix) contained in a licensee safeguards contingency plan prepared pursuant to § 50.34(d) or § 52.79(a) or part 73 of this chapter, as applicable, without prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to the licensee's license pursuant to § 50.90.

(2) The licensee may make changes to the plans referenced in paragraph (p)(1) of this section, without prior Commission approval if the changes do not decrease the safeguards effectiveness of the plan. The licensee shall maintain records of changes to the plans made without prior Commission approval for a period of 3 years from the date of the change, and shall submit, as specified in § 50.4 or § 52.3 of this chapter, a report containing a description of each change within 2 months after the change is made. Prior to the safeguards contingency plan being put into effect, the licensee shall have:

(i) All safeguards capabilities specified in the safeguards contingency plan available and functional;

(ii) Detailed procedures developed according to appendix C to part 73 of this chapter available at the licensee's site; and

(iii) All appropriate personnel trained to respond to safeguards incidents as outlined in the plan and specified in the detailed procedures.

(3) The licensee shall provide for the development, revision, implementation, and maintenance of its safeguards contingency plan. The licensee shall ensure that all program elements are reviewed by individuals independent of both security program management and personnel who have direct responsibility for implementation of the security program either:

(i) At intervals not to exceed 12 months; or

(ii) As necessary, based on an assessment by the licensee against performance indicators, and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect security, but no longer than 12 months after the change. In any case, all elements of the safeguards contingency plan must be reviewed at least once every 24 months.

(4) The review must include a review and audit of safeguards contingency procedures and practices, an audit of the security system testing and maintenance program, and a test of the safeguards systems along with commitments established for response by local law enforcement authorities. The results of the review and audit, along with recommendations for improvements, must be documented, reported to the licensee's corporate and plant management, and kept available at the plant for inspection for a period of 3 years.

(q) A holder of a nuclear power reactor operating license under this part, or a combined license under part 52 of this chapter after the Commission makes the finding under § 52.103(g) of this chapter, shall follow and maintain in effect emergency plans which meet the standards in § 50.47(b) and the requirements in appendix E of this part. A licensee authorized to possess and/or operate a research reactor or a fuel facility shall follow and maintain in effect emergency plans which meet the requirements in appendix E to this part. The licensee shall retain the emergency plan and each change that decreases the effectiveness of the plan as a record until the Commission terminates the license for the nuclear power reactor. The nuclear power reactor licensee may make changes to these plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of § 50.47(b) and the requirements of appendix E to this part. The research reactor and/or the fuel facility licensee may make changes to these plans without Commission approval only if these changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the requirements of appendix E to this part. This nuclear power reactor, research reactor, or fuel facility licensee shall retain a record of each change to the emergency plan made without prior Commission approval for a period of 3 years from the date of the change. Proposed changes that decrease the effectiveness of the approved emergency plans may not be implemented without application to and approval by the Commission. The licensee shall submit, as specified in § 50.4, a report of each proposed change for approval. If a change is made without approval, the licensee shall submit, as specified in § 50.4, a report of each change within 30 days after the change is made.

(r) Each licensee who is authorized to possess and/or operate a research or test reactor facility with an authorized power level greater than or equal to 2 MW thermal, under a licensee of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR part 50, appendix E, to the Director of the Office of Nuclear Reactor Regulation for approval by September 7, 1982. Each licensee who is authorized to possess and/or operate a research or test reactor facility with an authorized power level less than 2 MW thermal, under a license of the type specified in § 50.21(c), shall submit emergency plans complying with 10 CFR part 50, appendix E, to the Director of the Office of Nuclear Reactor Regulation for approval by November 3, 1982.

(s)(1) Each licensee who is authorized to possess and/or operate a nuclear power reactor shall submit to NRC within 60 days of the

effective date of this amendment the radiological emergency response plans of State and local governmental entities in the United States that are wholly or partially within a plume exposure pathway EPZ, as well as the plans of State governments wholly or partially within an ingestion pathway EPZ.[1, 2] These plans must be forwarded to the Director of Nuclear Reactor Regulation, by appropriate method listed in § 50.4, with a copy to the Administrator of the appropriate NRC regional office. Generally, the plume exposure pathway EPZ for nuclear power reactors shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs for a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. The plans for the ingestion pathway EPZ shall focus on such actions as are appropriate to protect the food ingestion pathway.

(2)(i) For operating power reactors, the licensee, State, and local emergency response plans shall be implemented by April 1, 1981, except as provided in section IV.D.3 of appendix E to this part.

(ii) If after April 1, 1981, the NRC finds that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency (*including findings based on requirements of appendix E, section IV.D.3*) and if the deficiencies (*including deficiencies based on requirements of appendix E, section IV.D.3*) are not corrected within four months of that finding, the Commission will determine whether the reactor shall be shut down until such deficiencies are remedied or whether other enforcement action is appropriate. In determining whether a shutdown or other enforcement action is appropriate, the Commission shall take into account, among other factors, whether the licensee can demonstrate to the Commission's satisfaction that the deficiencies in the plan are not significant for the plant in question, or that adequate interim compensating actions have been or will be taken promptly, or that that there are other compelling reasons for continued operation.

(3) The NRC will base its finding on a review of the FEMA findings and determinations as to whether State and local emergency plans are adequate and capable of being implemented, and on the NRC assessment as to whether the licensee's emergency plans are adequate and capable of being implemented. Nothing in this paragraph shall be construed as limiting the authority of the Commission to take action under any other regulation or authority of the Commission or at any time other than that specified in this paragraph.

(t)(1) The licensee shall provide for the development, revision, implementation, and maintenance of its emergency preparedness program. The licensee shall ensure that all program elements are reviewed by persons who have no direct responsibility for the implementation of the emergency preparedness program either:

(i) At intervals not to exceed 12 months or,

(ii) As necessary, based on an assessment by the licensee against performance indicators, and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect emergency preparedness, but no longer than 12 months after the change. In any case, all elements of the emergency preparedness program must be reviewed at least once every 24 months.

(2) The review must include an evaluation for adequacy of interfaces with State and local governments and of licensee drills, exercises, capabilities, and procedures. The results of the review, along with recommendations for improvements, must be documented, reported to the licensee's corporate and plant management, and retained for a period of 5 years. The part of the review involving the evaluation for adequacy of interface with State and local governments must be available to the appropriate State and local governments.

(u) Within 60 days after the effective date of this amendment, each nuclear power reactor licensee shall submit to the NRC plans for coping with emergencies that meet standards in § 50.47(b) and the requirements of appendix E to this part.

(v) Each licensee subject to the requirements of Part 73 of this chapter shall ensure that Safeguards Information is protected against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements in § 73.22 or § 73.23 of this chapter, as applicable.

(w) Each power reactor licensee under this part for a production or utilization facility of the type described in §§ 50.21(b) or 50.22 shall take reasonable steps to obtain insurance available at reasonable costs and on reasonable terms from private sources or to demonstrate to the satisfaction of the NRC that it possesses an equivalent amount of protection covering the licensee's obligation, in the event of an accident at the licensee's reactor, to stabilize and decontaminate the reactor and the reactor station site at which the reactor experiencing the accident is located, provided that:

(1) The insurance required by paragraph (w) of this section must have a minimum coverage limit for each reactor station site of either $1.06 billion or whatever amount of insurance is generally available from private sources, whichever is less. The required insurance must clearly state that, as and to the extent provided in paragraph (w)(4) of this section, any proceeds must be payable first for stabilization of the reactor and next for decontamination of the reactor and the reactor station site. If a licensee's coverage falls below the required minimum, the licensee shall within 60 days take all reasonable steps to restore its coverage to the required minimum. The required insurance may, at the option of the licensee, be included within policies that also provide coverage for other risks, including, but not limited to, the risk of direct physical damage.

(2)(i) With respect to policies issued or annually renewed on or after April 2, 1991, the proceeds of such required insurance must be dedicated, as and to the extent provided in this paragraph, to reimbursement or payment on behalf of the insured of reasonable expenses incurred or estimated to be incurred by the licensee in taking action to fulfill the licensee's obligation, in the event of an accident at the licensee's reactor, to ensure that the reactor is in, or is returned to, and maintained in, a safe and stable condition and that radioactive contamination is removed or controlled such that personnel exposures are consistent with the occupational exposure limits in 10 CFR part 20. These actions must be consistent with any other obligation the licensee may have under this chapter and must be subject to paragraph (w)(4) of this section. As used in this section, an "accident" means an event that involves the release of radioactive material from its

intended place of confinement within the reactor or on the reactor station site such that there is a present danger of release off site in amounts that would pose a threat to the public health and safety.

(ii) The stabilization and decontamination requirements set forth in paragraph (w)(4) of this section must apply uniformly to all insurance policies required under paragraph (w) of this section.

(3) The licensee shall report to the NRC on April 1 of each year the current levels of this insurance or financial security it maintains and the sources of this insurance or financial security.

(4)(i) In the event of an accident at the licensee's reactor, whenever the estimated costs of stabilizing the licensed reactor and of decontaminating the reactor and the reactor station site exceed $100 million, the proceeds of the insurance required by paragraph (w) of this section must be dedicated to and used, first, to ensure that the licensed reactor is in, or is returned to, and can be maintained in, a safe and stable condition so as to prevent any significant risk to the public health and safety and, second, to decontaminate the reactor and the reactor station site in accordance with the licensee's cleanup plan as approved by order of the Director of the Office of Nuclear Reactor Regulation. This priority on insurance proceeds must remain in effect for 60 days or, upon order of the Director, for such longer periods, in increments not to exceed 60 days except as provided for activities under the cleanup plan required in paragraphs (w)(4)(iii) and (w)(4)(iv) of this section, as the Director may find necessary to protect the public health and safety. Actions needed to bring the reactor to and maintain the reactor in a safe and stable condition may include one or more of the following, as appropriate: (A) Shutdown of the reactor; (B) Establishment and maintenance of long-term cooling with stable decay heat removal; (C) Maintenance of sub-criticality; (D) Control of radioactive releases; and (E) Securing of structures, systems, or components to minimize radiation exposure to onsite personnel or to the offsite public or to facilitate later decontamination or both.

(ii) The licensee shall inform the Director of the Office of Nuclear Reactor Regulation in writing when the reactor is and can be maintained in a safe and stable condition so as to prevent any significant risk to the public health and safety. Within 30 days after the licensee informs the Director that the reactor is in this condition, or at such earlier time as the licensee may elect or the Director may for good cause direct, the licensee shall prepare and submit a cleanup plan for the Director's approval. The cleanup plan must identify and contain an estimate of the cost of each cleanup operation that will be required to decontaminate the reactor sufficiently to permit the licensee either to resume operation of the reactor or to apply to the Commission under § 50.82 for authority to decommission the reactor and to surrender the license voluntarily. Cleanup operations may include one or more of the following, as appropriate: (A) Processing any contaminated water generated by the accident and by decontamination operations to remove radioactive materials; (B) Decontamination of surfaces inside the auxiliary and fuel-handling buildings and the reactor building to levels consistent with the Commission's occupational exposure limits in 10 CFR part 20, and decontamination or disposal of equipment; (C) Decontamination or removal and disposal of internal parts and damaged fuel from the reactor vessel; and (D) Cleanup of the reactor coolant system.

(iii) Following review of the licensee's cleanup plan, the Director will order the licensee to complete all operations that the Director finds are necessary to decontaminate the reactor sufficiently to permit the licensee either to resume operation of the reactor or to apply to the Commission under § 50.82 for authority to decommission the reactor and to surrender the license voluntarily. The Director shall approve or disapprove, in whole or in part for stated reasons, the licensee's estimate of cleanup costs for such operations. Such order may not be effective for more than 1 year, at which time it may be renewed. Each subsequent renewal order, if imposed, may be effective for not more than 6 months.

(iv) Of the balance of the proceeds of the required insurance not already expended to place the reactor in a safe and stable condition pursuant to paragraph (w)(2)(i) of this section, an amount sufficient to cover the expenses of completion of those decontamination operations that are the subject of the Director's order shall be dedicated to such use, provided that, upon certification to the Director of the amounts expended previously and from time to time for stabilization and decontamination and upon further certification to the Director as to the sufficiency of the dedicated amount remaining, policies of insurance may provide for payment to the licensee or other loss payees of amounts not so dedicated, and the licensee may proceed to use in parallel (and not in preference thereto) any insurance proceeds not so dedicated for other purposes.

(x) A licensee may take reasonable action that departs from a license condition or a technical specification (contained in a license issued under this part) in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent.

(y) Licensee action permitted by paragraph (x) of this section shall be approved, as a minimum, by a licensed senior operator, or, at a nuclear power reactor facility for which the certifications required under § 50.82(a)(1) have been submitted, by either a licensed senior operator or a certified fuel handler, prior to taking the action.

(z) Each licensee with a utilization facility licensed pursuant to sections 103 or 104b. of the Act shall immediately notify the NRC Operations Center of the occurrence of any event specified in § 50.72 of this part.

(aa) The license shall be subject to all conditions deemed imposed as a matter of law by sections 401(a)(2) and 401(d) of the Federal Water Pollution Control Act, as amended (33 U.S.C.A. 1341(a)(2) and (d).)

(bb) For nuclear power reactors licensed by the NRC, the licensee shall, within 2 years following permanent cessation of operation of the reactor or 5 years before expiration of the reactor operating license, whichever occurs first, submit written notification to the Commission for its review and preliminary approval of the program by which the licensee intends to manage and provide funding for the management of all irradiated fuel at the reactor following permanent cessation of operation of the reactor until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy for its ultimate disposal in a repository. Licensees of nuclear power reactors that have permanently ceased operation by April 4, 1994 are required to submit such written notification by April 4, 1996. Final Commission review will be undertaken as part of any proceeding for continued licensing under part 50 or part 72 of this chapter. The licensee must demonstrate to NRC that the elected actions will be consistent with NRC requirements for licensed possession of irradiated nuclear fuel and that the actions will be implemented on a timely basis. Where implementation of such actions requires NRC authorizations, the licensee shall verify in the notification that submittals for such actions have been or will be made to NRC and shall identify them. A copy of the

notification shall be retained by the licensee as a record until expiration of the reactor operating license. The licensee shall notify the NRC of any significant changes in the proposed waste management program as described in the initial notification.

(cc)(1) Each licensee shall notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any chapter of title 11 (Bankruptcy) of the United States Code by or against:

(i) The licensee;

(ii) An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or

(iii) An affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.

(2) This notification must indicate:

(i) The bankruptcy court in which the petition for bankruptcy was filed; and

(ii) The date of the filing of the petition.

(dd) A licensee may take reasonable action that departs from a license condition or a technical specification (contained in a license issued under this part) in a national security emergency:

(1) When this action is immediately needed to implement national security objectives as designated by the national command authority through the Commission, and

(2) No action consistent with license conditions and technical specifications that can meet national security objectives is immediately apparent.

A national security emergency is established by a law enacted by the Congress or by an order or directive issued by the President pursuant to statutes or the Constitution of the United States. The authority under this paragraph must be exercised in accordance with law, including section 57e of the Act, and is in addition to the authority granted under paragraph (x) of this section, which remains in effect unless otherwise directed by the Commission during a national security emergency.

(ee)(1) Each license issued under this part authorizing the possession of byproduct and special nuclear material produced in the operation of the licensed reactor includes, whether stated in the license or not, the authorization to receive back that same material, in the same or altered form or combined with byproduct or special nuclear material produced in the operation of another reactor of the same licensee located at that site, from a licensee of the Commission or an Agreement State, or from a non-licensed entity authorized to possess the material.

(2) The authorizations in this subsection are subject to the same limitations and requirements applicable to the original possession of the material.

(3) This paragraph does not authorize the receipt of any material recovered from the reprocessing of irradiated fuel.

(ff) For licensees of nuclear power plants that have implemented the earthquake engineering criteria in Appendix S to this part, plant shutdown is required as provided in Paragraph IV(a)(3) of Appendix S to this part. Prior to resuming operations, the licensee shall demonstrate to the Commission that no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public and the licensing basis is maintained.

(gg)(1) Notwithstanding 10 CFR 52.103, if following the conduct of the exercise required by paragraph IV.f.2.a of appendix E to part 50 of this chapter, DHS identifies one or more deficiencies in the state of offsite emergency preparedness, the holder of a combined license under 10 CFR part 52 may operate at up to 5 percent of rated thermal power only if the Commission finds that the state of onsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. The NRC will base this finding on its assessment of the applicant's onsite emergency plans against the pertinent standards in § 50.47 and appendix E to this part. Review of the applicant's emergency plans will include the following standards with offsite aspects:

(i) Arrangements for requesting and effectively using offsite assistance onsite have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned onsite response have been identified.

(ii) Procedures have been established for licensee communications with State and local response organizations, including initial notification of the declaration of emergency and periodic provision of plant and response status reports.

(iii) Provisions exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite.

(iv) Adequate emergency facilities and equipment to support the emergency response onsite are provided and maintained.

(v) Adequate methods, systems, and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use onsite.

(vi) Arrangements are made for medical services for contaminated and injured onsite individuals.

(vii) Radiological emergency response training has been made available to those offsite who may be called to assist in an emergency onsite.

(2) The condition in this paragraph, regarding operation at up to 5 percent power, ceases to apply 30 days after DHS informs the NRC that the offsite deficiencies have been corrected, unless the NRC notifies the combined license holder before the expiration of the 30-day period that the Commission finds under paragraphs (s)(2) and (3) of this section that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

[21 FR 355, Jan. 19, 1956; 72 FR 49495, Aug. 28, 2007; 73 FR 63571, Oct. 24, 2008]

EDITORIAL NOTE: For Federal Register citations affecting § 50.54, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

[1] Emergency Planning Zones (EPZs) are discussed in NUREG-0396; EPA 520/1-78-016, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," December 1978.

[2] If the State and local emergency response plans have been previously provided to the NRC for inclusion in the facility docket, the applicant need only provide the appropriate reference to meet this requirement.

§ 50.55 Conditions of construction permits, early site permits, combined licenses, and manufacturing licenses.

[Top of File]

Each construction permit is subject to the following terms and conditions; each early site permit is subject to the terms and conditions in paragraph (f) of this section; each manufacturing license is subject to the terms and conditions in paragraphs (e) and (f) of this section; and each combined license is subject to the terms and conditions in paragraphs (e) and (f) of this section until the date that the Commission makes the finding under § 52.103(g) of this chapter:

(a) The construction permit shall state the earliest and latest dates for completion of the construction or modification.

(b) If the proposed construction or modification of the facility is not completed by the latest completion date, the construction permit shall expire and all rights are forfeited. However, upon good cause shown, the Commission will extend the completion date for a reasonable period of time. The Commission will recognize, among other things, developmental problems attributable to the experimental nature of the facility or fire, flood, explosion, strike, sabotage, domestic violence, enemy action, an act of the elements, and other acts beyond the control of the permit holder, as a basis for extending the completion date.

(c) Except as modified by this section and § 50.55a, the construction permit shall be subject to the same conditions to which a license is subject.

(d) At or about the time of completion of the construction or modification of the facility, the applicant will file any additional information needed to bring the original application for license up to date, and will file an application for an operating license or an amendment to an application for a license to construct and operate the facility for the issuance of an operating license, as appropriate, as specified in § 50.30 (d) of this part.

(e)(1) *Definitions*. For purposes of this paragraph, the definitions in § 21.3 of this chapter apply.

(2) *Posting requirements*.

(i) Each individual, partnership, corporation, dedicating entity, or other entity subject to the regulations in this part shall post current copies of the regulations in this part; Section 206 of the Energy Reorganization Act of 1974 (ERA); and procedures adopted under the regulations in this part. These documents must be posted in a conspicuous position on any premises within the United States where the activities subject to this part are conducted.

(ii) If posting of the regulations in this part or the procedures adopted under the regulations in this part is not practicable, the licensee or firm subject to the regulations in this part may, in addition to posting Section 206 of the ERA, post a notice which describes the regulations/procedures, including the name of the individual to whom reports may be made, and states where the regulation, procedures, and reports may be examined.

(3) *Procedures*. Each individual, corporation, partnership, or other entity holding a facility construction permit subject to this part, combined license (until the Commission makes the finding under 10 CFR 52.103(g)), and manufacturing license under 10 CFR part 52 must adopt appropriate procedures to—

(i) Evaluate deviations and failures to comply to identify defects and failures to comply associated with substantial safety hazards as soon as practicable, and, except as provided in paragraph (e)(3)(ii) of this section, in all cases within 60 days of discovery, to identify a reportable defect or failure to comply that could create a substantial safety hazard, were it to remain uncorrected.

(ii) Ensure that if an evaluation of an identified deviation or failure to comply potentially associated with a substantial safety hazard cannot be completed within 60 days from discovery of the deviation or failure to comply, an interim report is prepared and submitted to the Commission through a director or responsible officer or designated person as discussed in paragraph (e)(4)(v) of this section. The interim report should describe the deviation or failure to comply that is being evaluated and should also state when the evaluation will be completed. This interim report must be submitted in writing within 60 days of discovery of the deviation or failure to comply.

(iii) Ensure that a director or responsible officer of the holder of a facility construction permit subject to this part, combined license (until the Commission makes the finding under 10 CFR 52.103(g)), and manufacturing license under 10 CFR part 52 is informed as soon as practicable, and, in all cases, within the 5 working days after completion of the evaluation described in paragraph (e)(3)(i) or (e)(3)(ii) of this section, if the construction or manufacture of a facility or activity, or a basic component supplied for such facility or activity—

(A) Fails to comply with the AEA, as amended, or any applicable regulation, order, or license of the Commission, relating to a substantial safety hazard;

(B) Contains a defect; or

(C) Undergoes any significant breakdown in any portion of the quality assurance program conducted under the requirements of appendix B to 10 CFR part 50 which could have produced a defect in a basic component. These breakdowns in the quality assurance program are reportable whether or not the breakdown actually resulted in a defect in a design approved and released for construction, installation, or manufacture.

(4) *Notification*. (i) The holder of a facility construction permit subject to this part, combined license (until the Commission makes the finding under 10 CFR 52.103(g)), and manufacturing license who obtains information reasonably indicating that the facility fails to comply with the AEA, as amended, or any applicable regulation, order, or license of the Commission relating to a substantial safety hazard must notify the Commission of the failure to comply through a director or responsible officer or designated person as discussed in paragraph (e)(10) of this section.

(ii) The holder of a facility construction permit subject to this part, combined license, or manufacturing license, who obtains information reasonably indicating the existence of any defect found in the construction or manufacture, or any defect found in the final design of a facility as approved and released for construction or manufacture, must notify the Commission of the defect through a director or responsible officer or designated person as discussed in paragraph (e)(4)(v) of this section.

(iii) The holder of a facility construction permit subject to this part, combined license, or manufacturing license, who obtains information reasonably indicating that the quality assurance program has undergone any significant breakdown discussed in paragraph (e)(3)(ii)(C) of this section must notify the Commission of the breakdown in the quality assurance program through a director or responsible officer or designated person as discussed in paragraph (4)(v) of this section.

(iv) A dedicating entity is responsible for identifying and evaluating deviations and reporting defects and failures to comply associated with substantial safety hazards for dedicated items; and maintaining auditable records for the dedication process.

(v) The notification requirements of this paragraph apply to all defects and failures to comply associated with a substantial safety hazard regardless of whether extensive evaluation, redesign, or repair is required to conform to the criteria and bases stated in the safety analysis report, construction permit, combined license, or manufacturing license. Evaluation of potential defects and failures to comply and reporting of defects and failures to comply under this section satisfies the construction permit holder's, combined license holder's, and manufacturing license holder's evaluation and notification obligations under part 21 of this chapter, and satisfies the responsibility of individual directors or responsible officers of holders of construction permits issued under § 50.23, holders of combined licenses (until the Commission makes the finding under § 52.103 of this chapter), and holders of manufacturing licenses to report defects, and failures to comply associated with substantial safety hazards under Section 206 of the ERA. The director or responsible officer may authorize an individual to provide the notification required by this section, provided that this must not relieve the director or responsible officer of his or her responsibility under this section.

(5) *Notification—timing and where sent*. The notification required by paragraph (e)(4) of this section must consist of—

(i) Initial notification by facsimile, which is the preferred method of notification, to the NRC Operations Center at (301) 816–5151 or by telephone at (301) 816–5100 within 2 days following receipt of information by the director or responsible corporate officer under paragraph (e)(3)(iii) of this section, on the identification of a defect or a failure to comply. Verification that the facsimile has been received should be made by calling the NRC Operations Center. This paragraph does not apply to interim reports described in paragraph (e)(3)(ii) of this section.

(ii) Written notification submitted to the Document Control Desk, U.S. Nuclear Regulatory Commission, by an appropriate method listed in § 50.4, with a copy to the appropriate Regional Administrator at the address specified in appendix D to part 20 of this chapter and a copy to the appropriate NRC resident inspector within 30 days following receipt of information by the director or responsible corporate officer under paragraph (e)(3)(iii) of this section, on the identification of a defect or failure to comply.

(6) *Content of notification*. The written notification required by paragraph (e)(9)(ii) of this section must clearly indicate that the written notification is being submitted under § 50.55(e) and include the following information, to the extent known.

(i) Name and address of the individual or individuals informing the Commission.

(ii) Identification of the facility, the activity, or the basic component supplied for the facility or the activity within the United States which contains a defect or fails to comply.

(iii) Identification of the firm constructing or manufacturing the facility or supplying the basic component which fails to comply or contains a defect.

(iv) Nature of the defect or failure to comply and the safety hazard which is created or could be created by the defect or failure to comply.

(v) The date on which the information of a defect or failure to comply was obtained.

(vi) In the case of a basic component which contains a defect or fails to comply, the number and location of all the basic components in use at the facility subject to the regulations in this part.

(vii) In the case of a completed reactor manufactured under part 52 of this chapter, the entities to which the reactor was supplied.

(viii) The corrective action which has been, is being, or will be taken; the name of the individual or organization responsible for the action; and the length of time that has been or will be taken to complete the action.

(ix) Any advice related to the defect or failure to comply about the facility, activity, or basic component that has been, is being, or will be given to other entities.

(7) *Procurement documents*. Each individual, corporation, partnership, dedicating entity, or other entity subject to the regulations in this part shall ensure that each procurement document for a facility, or a basic component specifies or is issued by the entity subject to the regulations, when applicable, that the provisions of 10 CFR part 21 or 10 CFR 50.55(e) applies, as applicable.

(8) *Coordination with 10 CFR part 21*. The requirements of § 50.55(e) are satisfied when the defect or failure to comply associated with a substantial safety hazard has been previously reported under part 21 of this chapter, under § 73.71 of this chapter, or under §§ 50.55(e) or 50.73. For holders of construction permits issued before October 29, 1991, evaluation, reporting and recordkeeping requirements of § 50.55 (e) may be met by complying with the comparable requirements of part 21 of this chapter.

(9) *Records retention*. The holder of a construction permit, combined license, and manufacturing license must prepare and maintain records necessary to accomplish the purposes of this section, specifically—

(i) Retain procurement documents, which define the requirements that facilities or basic components must meet in order to be considered acceptable, for the lifetime of the facility or basic component.

(ii) Retain records of evaluations of all deviations and failures to comply under paragraph (e)(3)(i) of this section for the longest of:

(A) Ten (10) years from the date of the evaluation;

(B) Five (5) years from the date that an early site permit is referenced in an application for a combined license; or

(C) Five (5) years from the date of delivery of a manufactured reactor.

(iii) Retain records of all interim reports to the Commission made under paragraph (e)(3)(ii) of this section, or notifications to the Commission made under paragraph (e)(4) of this section for the minimum time periods stated in paragraph (e)(9)(ii) of this section;

(iv) Suppliers of basic components must retain records of:

(A) All notifications sent to affected licensees or purchasers under paragraph (e)(4)(iv) of this section for a minimum of ten (10) years following the date of the notification;

(B) The facilities or other purchasers to whom basic components or associated services were supplied for a minimum of fifteen (15) years from the delivery of the basic component or associated services.

(v) Maintaining records in accordance with this section satisfies the recordkeeping obligations under part 21 of this chapter of the entities, including directors or responsible officers thereof, subject to this section.

(f)(1) Each nuclear power plant or fuel reprocessing plant construction permit holder subject to the quality assurance criteria in appendix B

of this part shall implement, pursuant to § 50.34(a)(7) of this part, the quality assurance program described or referenced in the Safety Analysis Report, including changes to that report.

(2) Each construction permit holder described in paragraph (f)(1) of this section shall, by June 10, 1983, submit to the appropriate NRC Regional Office shown in appendix D of part 20 of this chapter the current description of the quality assurance program it is implementing for inclusion in the Safety Analysis Report, unless there are no changes to the description previously accepted by NRC. This submittal must identify changes made to the quality assurance program description since the description was submitted to NRC. (Should a permit holder need additional time beyond June 10, 1983 to submit its current quality assurance program description to NRC, it shall notify the appropriate NRC Regional Office in writing, explain why additional time is needed, and provide a schedule for NRC approval showing when its current quality assurance program description will be submitted.)

(3) After March 11, 1983, each construction permit holder described in paragraph (f)(1) of this section may make a change to a previously accepted quality assurance program description included or referenced in the Safety Analysis Report, provided the change does not reduce the commitments in the program description previously accepted by the NRC. Changes to the quality assurance program description that do not reduce the commitments must be submitted to NRC within 90 days. Changes to the quality assurance program description that do reduce the commitments must be submitted to NRC and receive NRC approval before implementation, as follows:

(i) Changes to the Safety Analysis Report must be submitted for review as specified in § 50.4. Changes made to NRC-accepted quality assurance topical report descriptions must be submitted as specified in § 50.4.

(ii) The submittal of a change to the Safety Analysis Report quality assurance program description must include all pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the revised program incorporating the change continues to satisfy the criteria of appendix B of this part and the Safety Analysis Report quality assurance program description commitments previously accepted by the NRC (the letter need not provide the basis for changes that correct spelling, punctuation, or editorial items).

(iii) A copy of the forwarding letter identifying the changes must be maintained as a facility record for three years.

(iv) Changes to the quality assurance program description included or referenced in the Safety Analysis Report shall be regarded as accepted by the Commission upon receipt of a letter to this effect from the appropriate reviewing office of the Commission or 60 days after submittal to the Commission, whichever occurs first.

(4) Each holder of an early site permit or a manufacturing license under part 52 of this chapter shall implement the quality assurance program described or referenced in the safety analysis report, including changes to that report. Each holder of a combined license shall implement the quality assurance program for design and construction described or referenced in the safety analysis report, including changes to that report, provided, however, that the holder of a combined license is not subject to the terms and conditions in this paragraph after the Commission makes the finding under § 52.103(g) of this chapter.

(i) Each holder described in paragraph (f)(4) of this section may make a change to a previously accepted quality assurance program description included or referenced in the safety analysis report, if the change does not reduce the commitments in the program description previously accepted by the NRC. Changes to the quality assurance program description that do not reduce the commitments must be submitted to NRC within 90 days. Changes to the quality assurance program description that reduce the commitments must be submitted to NRC and receive NRC approval before implementation, as follows:

(A) Changes to the safety analysis report must be submitted for review as specified in § 50.4. Changes made to NRC-accepted quality assurance topical report descriptions must be submitted as specified in § 50.4.

(B) The submittal of a change to the safety analysis report quality assurance program description must include all pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the revised program incorporating the change continues to satisfy the criteria of appendix B of this part and the safety analysis report quality assurance program description commitments previously accepted by the NRC (the letter need not provide the basis for changes that correct spelling, punctuation, or editorial items).

(C) A copy of the forwarding letter identifying the changes must be maintained as a facility record for three (3) years.

(D) Changes to the quality assurance program description included or referenced in the safety analysis report shall be regarded as accepted by the Commission upon receipt of a letter to this effect from the appropriate reviewing office of the Commission or 60 days after submittal to the Commission, whichever occurs first.

(ii) [Reserved]

[21 FR 355, Jan. 19, 1956, as amended at 32 FR 4055, Mar. 15, 1967; 35 FR 11461, July 17, 1970; 35 FR 19661, Dec. 29, 1970; 36 FR 11424, June 12, 1971; 37 FR 6460, Mar. 30, 1972; 38 FR 1272, Jan. 11, 1973; 41 FR 16446, Apr. 19, 1976; 42 FR 43385, Aug. 29, 1977; 48 FR 1029, Jan. 10, 1983; 51 FR 40309, Nov. 6, 1986; 56 FR 36091, July 31, 1991; 59 FR 14087, Mar. 25, 1994; 68 FR 58809, Oct. 10, 2003; 72 FR 49497, Aug. 28, 2007]

§ 50.55a Codes and standards.

[Top of File]

Each construction permit for a utilization facility is subject to the following conditions in addition to those specified in § 50.55. Each combined license for a utilization facility is subject to the following conditions in addition to those specified in § 50.55, except that each combined license for a boiling or pressurized water-cooled nuclear power facility is subject to the conditions in paragraphs (f) and (g) of this section, but only after the Commission makes the finding under § 52.103(g) of this chapter. Each operating license for a boiling or pressurized water-cooled nuclear power facility is subject to the conditions in paragraphs (f) and (g) of this section in addition to those specified in § 50.55. Each manufacturing license, standard design approval, and standard design certification application under part 52 of this chapter is subject to the conditions in paragraphs (a), (b)(1), (b)(4), (c), (d), (e), (f)(3), and (g)(3) of this section.

(a)(1) Structures, systems, and components must be designed, fabricated, erected, constructed, tested, and inspected to quality standards commensurate with the importance of the safety function to be performed.

(2) Systems and components of boiling and pressurized water-cooled nuclear power reactors must meet the requirements of the ASME Boiler and Pressure Vessel Code specified in paragraphs (b), (c), (d), (e), (f), and (g) of this section. Protection systems of nuclear power reactors of all types must meet the requirements specified in paragraph (h) of this section.

(3) Proposed alternatives to the requirements of paragraphs (c), (d), (e), (f), (g), and (h) of this section or portions thereof may be used when authorized by the Director, Office of Nuclear Reactor Regulation, or Director, Office of New Reactors, as appropriate. The applicant shall demonstrate that:

(i) The proposed alternatives would provide an acceptable level of quality and safety, or

(ii) Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

(b) The following standards have been approved for incorporation by reference by the Director of the Federal Register pursuant to 5 U.S.C. 552(a) and 1 CFR part 51: Sections III and XI of the ASME Boiler and Pressure Vessel Code and the ASME Code for Operation and Maintenance of Nuclear Power Plants, which are referenced in paragraphs (b)(1), (b)(2), and (b)(3) of this section; NRC Regulatory Guide 1.84, Revision 34, ''Design, Fabrication, and Materials Code Case Acceptability, ASME Section III'' (October 2007); NRC Regulatory Guide 1.147, Revision 15, ''Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1'' (October 2007); and Regulatory Guide 1.192, ''Operation and Maintenance Code Case Acceptability, ASME OM Code'' (June 2003), which list ASME Code cases that the NRC has approved in accordance with the requirements in paragraphs (b)(4), (b)(5), and (b)(6) of this section; ASME Code Case N–729–1, ''Alternative Examination Requirements for PWR Reactor Vessel Upper Heads With Nozzles Having Pressure-Retaining Partial-Penetration Welds, Section XI, Division 1'' (Approval Date: March 28, 2006), which has been approved by the NRC with conditions in accordance with the requirements in paragraph (g)(6)(ii)(D) of this section; and ASME Code Case N–722, ''Additional Examinations for PWR Pressure Retaining Welds in Class 1 Components Fabricated with Alloy 600/82/182 Materials, Section XI, Division 1'' (Approval Date: July 5, 2005), which has been approved by the NRC with conditions in accordance with the requirements in paragraphs (g)(6)(ii)(E) of this section. Copies of the ASME Boiler and Pressure Vessel Code, the ASME Code for Operation and Maintenance of Nuclear Power Plants, ASME Code Case N–729–1, and ASME Code Case N–722 may be purchased from the American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016 or through the Web http://www.asme.org/Codes/. Single copies of NRC Regulatory Guides 1.84, Revision 34; 1.147, Revision 15; and 1.192 may be obtained free of charge by writing the Reproduction and Distribution Services Section, U.S. Nuclear Regulatory Commission, Washington, DC 20555– 0001; or by fax to 301–415–2289; or by e-mail to DISTRIBUTION@nrc.gov. Copies of the ASME Codes and NRC Regulatory Guides incorporated by reference in this section may be inspected at the NRC Technical Library, Two White Flint North, 11545 Rockville Pike, Rockville, MD 20852–2738 or call 301–415–5610, or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http:// www.archives.gov/ federal_register/code_of_federal_regulations/ibr_locations.html*.

(1) As used in this section, references to Section III of the ASME Boiler and Pressure Vessel Code refer to Section III, and include the 1963 Edition through 1973 Winter Addenda, and the 1974 Edition (Division 1) through the 2004 Edition (Division 1), subject to the following limitations and modifications:

(i) *Section III Materials.* When applying the 1992 Edition of Section III, applicants or licensees must apply the 1992 Edition with the 1992 Addenda of Section II of the ASME Boiler and Pressure Vessel Code.

(ii) *Weld leg dimensions.* When applying the 1989 Addenda through the latest edition, and addenda incorporated by reference in paragraph (b)(1) of this section, applicants or licensees may not apply paragraph NB–3683.4(c)(1), Footnote 11 to Figure NC–3673.2(b)–1, and Figure ND–3673.2(b)–1.

(iii) *Seismic design of piping*. Applicants and licensees may use Articles NB–3200, NB–3600, NC–3600, and ND–3600 for seismic design of piping, up to and including the 1993 Addenda, subject to the limitation specified in paragraph (b)(1)(ii) of this section. Applicants and licensees may not use these Articles for seismic design of piping in the 1994 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(1) of this section.

(iv) *Quality assurance.* When applying editions and addenda later than the 1989 Edition of Section III, the requirements of NQA-1, "Quality Assurance Requirements for Nuclear Facilities," 1986 Edition through the 1992 Edition, are acceptable for use provided that the edition and addenda of NQA-1 specified in NCA-4000 is used in conjunction with the administrative, quality, and technical provisions contained in the edition and addenda of Section III being used.

(v) *Independence of inspection.* Applicants or licensees may not apply NCA–4134.10(a) of Section III, 1995 Edition, through the latest edition and addenda incorporated by reference in paragraph (b)(1) of this section.

(vi) *Subsection NH.* The provisions in Subsection NH, "Class 1 Components in Elevated Temperature Service," 1995 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(1) of this section, may only be used for the design and construction

of Type 316 stainless steel pressurizer heater sleeves where service conditions do not cause the component to reach temperatures exceeding 900 °F.

(2) As used in this section, references to Section XI of the ASME Boiler and Pressure Vessel Code refer to Section XI, and include the 1970 Edition through the 1976 Winter Addenda, and the 1977 Edition (Division 1) through the 2004 Edition (Division 1), subject to the following limitations and modifications:

(i) *Limitations on specific editions and addenda*. When applying the 1974 Edition, only the addenda through the Summer 1975 Addenda may be used. When applying the 1977 Edition, all of the addenda through the Summer 1978 Addenda must also be used. Addenda and editions subsequent to the Summer 1978 Addenda, that are incorporated by reference in paragraph (b)(2) of this section are not affected by these limitations.

(ii) *Pressure-retaining welds in ASME Code Class 1 piping (applies to Table IWB-2500 and IWB-2500- 1 and Category B-J).* If the facility's application for a construction permit was docketed prior to July 1, 1978, the extent of examination for Code Class 1 pipe welds may be determined by the requirements of Table IWB- 2500 and Table IWB- 2600 Category B-J of Section XI of the ASME Code in the 1974 Edition and addenda through the Summer 1975 Addenda or other requirements the Commission may adopt.

(iii) *Steam generator tubing (modifies Article IWB- 2000)*. If the technical specifications of a nuclear power plant include surveillance requirements for steam generators different than those in Article IWB- 2000, the inservice inspection program for steam generator tubing is governed by the requirements in the technical specifications.

(iv) *Pressure-retaining welds in ASME Code Class 2 piping (applies to Tables IWC-2520 or IWC-2520-1, Category C-F)*.

(A) Appropriate Code Class 2 pipe welds in Residual Heat Removal Systems, Emergency Core Cooling Systems, and Containment Heat Removal Systems, must be examined. When applying editions and addenda up to the 1983 Edition through the Summer 1983 Addenda of section XI of the ASME Code, the extent of examination for these systems must be determined by the requirements of paragraph IWC-1220, Table IWC-2520 Category C-F and C-G, and paragraph IWC-2411 in the 1974 Edition and Addenda through the Summer 1975 Addenda.

(B) For a nuclear power plant whose application for a construction permit was docketed prior to July 1, 1978, when applying editions and addenda up to the 1983 Edition through the Summer 1983 Addenda of section XI of the ASME Code, the extent of examination for Code Class 2 pipe welds may be determined by the requirements of paragraph IWC-1220, Table IWC-2520 Category C-F and C-G and paragraph IWC-2411 in the 1974 Edition and Addenda through the Summer 1975 Addenda of Section XI of the ASME Code or other requirements the Commission may adopt.

(v) Evaluation procedures and acceptance criteria for austenitic piping (applies to IWB- 3640). When applying the Winter 1983 Addenda and Winter 1984 Addenda, the rules of paragraph IWB- 3640 may be used for all applications permitted in that paragraph, except those associated with submerged arc welds (SAW) or shielded metal arc welds (SMAW). For SAW or SMAW, use paragraph IWB- 3640, as modified by the Winter 1985 Addenda.

(vi) *Effective edition and addenda of Subsection IWE and Subsection IWL, Section XI.* Licensees may use either the 1992 Edition with the 1992 Addenda or the 1995 Edition with the 1996 Addenda of Subsection IWE and Subsection IWL as modified and supplemented by the requirements in paragraphs (b)(2)(viii) and (b)(2)(ix) of this section when implementing the initial 120-month inspection interval for the containment inservice inspection requirements of this section. Successive 120-month interval updates must be implemented in accordance with paragraph (g)(4)(ii) of this section.

(vii) *Section XI References to OM Part 4, OM Part 6 and OM Part 10 (Table IWA-1600-1).* When using Table IWA-1600-1, "Referenced Standards and Specifications," in the Section XI, Division 1, 1987 Addenda, 1988 Addenda, or 1989 Edition, the specified "Revision Date or Indicator" for ASME/ANSI OM Part 4, ASME/ANSI Part 6, and ASME/ANSI Part 10 must be the OMa-1988 Addenda to the OM-1987 Edition. These requirements have been incorporated into the OM Code which is incorporated by reference in paragraph (b)(3) of this section.

(viii) *Examination of concrete containments.* Licensees applying Subsection IWL, 1992 Edition with the 1992 Addenda, shall apply paragraphs (b)(2)(viii)(A) through (b)(2)(viii)(E) of this section. Licensees applying Subsection IWL, 1995 Edition with the 1996 Addenda, shall apply paragraphs (b)(2)(viii)(A), (b)(2)(viii)(D)(3), and (b)(2)(viii)(E) of this section. Licensees applying Subsection IWL, 1998 Edition through the 2000 Addenda shall apply paragraphs (b)(2)(viii)(E) and (b)(2)(viii)(F) of this section. Licensees applying Subsection IWL, 2001 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, shall apply paragraphs (b)(2)(viii)(E) through (b)(2)(viii)(G) of this section.

(A) Grease caps that are accessible must be visually examined to detect grease leakage or grease cap deformations. Grease caps must be removed for this examination when there is evidence of grease cap deformation that indicates deterioration of anchorage hardware.

(B) When evaluation of consecutive surveillances of prestressing forces for the same tendon or tendons in a group indicates a trend of prestress loss such that the tendon force(s) would be less than the minimum design prestress requirements before the next inspection interval, an evaluation must be performed and reported in the Engineering Evaluation Report as prescribed in IWL-3300.

(C) When the elongation corresponding to a specific load (adjusted for effective wires or strands) during retensioning of tendons differs by more than 10 percent from that recorded during the last measurement, an evaluation must be performed to determine whether the difference is related to wire failures or slip of wires in anchorage. A difference of more than 10 percent must be identified in the ISI Summary Report required by IWA-6000.

(D) The licensee shall report the following conditions, if they occur, in the ISI Summary Report required by IWA-6000:

(*1*) The sampled sheathing filler grease contains chemically combined water exceeding 10 percent by weight or the presence of free water;

(*2*) The absolute difference between the amount removed and the amount replaced exceeds 10 percent of the tendon net duct volume;

(*3*) Grease leakage is detected during general visual examination of the containment surface.

(E) For Class CC applications, the licensee shall evaluate the acceptability of inaccessible areas when conditions exist in accessible areas that could indicate the presence of or result in degradation to such inaccessible areas. For each inaccessible area identified, the licensee shall provide the following in the ISI Summary Report required by IWA-6000:

(*1*) A description of the type and estimated extent of degradation, and the conditions that led to the degradation;

(*2*) An evaluation of each area, and the result of the evaluation, and;

(*3*) A description of necessary corrective actions.

(F) Personnel that examine containment concrete surfaces and tendon hardware, wires, or strands must meet the qualification provisions in IWA-2300. The "owner-defined" personnel qualification provisions in IWL-2310(d) are not approved for use.

(G) Corrosion protection material must be restored following concrete containment post-tensioning system repair and replacement activities in accordance with the quality assurance program requirements specified in IWA-1400.

(ix) *Examination of metal containments and the liners of concrete containments.* Licensees applying Subsection IWE, 1992 Edition with the 1992 Addenda, or the 1995 Edition with the 1996 Addenda, shall satisfy the requirements of paragraphs (b)(2)(ix)(A) through (b)(2)(ix)(E) of this section. Licensees applying Subsection IWE, 1998 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, shall satisfy the requirements of paragraphs (b)(2)(ix)(A), (b)(2)(ix)(B), and (b)(2)(ix)(F) through (b)(2)(ix)(I) of this section.

(A) For Class MC applications, the licensee shall evaluate the acceptability of inaccessible areas when conditions exist in accessible areas that could indicate the presence of or result in degradation to such inaccessible areas. For each inaccessible area identified, the licensee shall provide the following in the ISI Summary Report as required by IWA-6000:

(*1*) A description of the type and estimated extent of degradation, and the conditions that led to the degradation;

(*2*) An evaluation of each area, and the result of the evaluation, and;

(*3*) A description of necessary corrective actions.

(B) When performing remotely the visual examinations required by Subsection IWE, the maximum direct examination distance specified in Table IWA-2210-1 may be extended and the minimum illumination requirements specified in Table IWA-2210-1 may be decreased provided that the conditions or indications for which the visual examination is performed can be detected at the chosen distance and illumination.

(C) The examinations specified in Examination Category E-B, Pressure Retaining Welds, and Examination Category E-F, Pressure Retaining Dissimilar Metal Welds, are optional.

(D) Section 50.55a(b)(2)(ix)(D) may be used as an alternative to the requirements of IWE-2430.

(*1*) If the examinations reveal flaws or areas of degradation exceeding the acceptance standards of Table IWE-3410-1, an evaluation must be performed to determine whether additional component examinations are required. For each flaw or area of degradation identified which exceeds acceptance standards, the licensee shall provide the following in the ISI Summary Report required by IWA-6000:

(*i*) A description of each flaw or area, including the extent of degradation, and the conditions that led to the degradation;

(*ii*) The acceptability of each flaw or area, and the need for additional examinations to verify that similar degradation does not exist in similar components, and;

(*iii*) A description of necessary corrective actions.

(*2*) The number and type of additional examinations to ensure detection of similar degradation in similar components.

(E) A general visual examination as required by Subsection IWE must be performed once each period.

(F) VT-1 and VT-3 examinations must be conducted in accordance with IWA-2200. Personnel conducting examinations in accordance with the VT-1 or VT-3 examination method shall be qualified in accordance with IWA-2300. The "owner-defined" personnel qualification provisions in IWE-2330(a) for personnel that conduct VT-1 and VT-3 examinations are not approved for use.

(G) The VT-3 examination method must be used to conduct the examinations in Items E1.12 and E1.20 of Table IWE-2500-1, and the VT-1

examination method must be used to conduct the examination in Item E4.11 of Table IWE-2500-1. An examination of the pressure-retaining bolted connections in Item E1.11 of Table IWE-2500-1 using the VT-3 examination method must be conducted once each interval. The "owner-defined" visual examination provisions in IWE-2310(a) are not approved for use for VT-1 and VT-3 examinations.

(H) Containment bolted connections that are disassembled during the scheduled performance of the examinations in Item E1.11 of Table IWE-2500-1 must be examined using the VT-3 examination method. Flaws or degradation identified during the performance of a VT-3 examination must be examined in accordance with the VT-1 examination method. The criteria in the material specification or IWB-3517.1 must be used to evaluate containment bolting flaws or degradation. As an alternative to performing VT-3 examinations of containment bolted connections that are disassembled during the scheduled performance of Item E1.11, VT-3 examinations of containment bolted connections may be conducted whenever containment bolted connections are disassembled for any reason.

(I) The ultrasonic examination acceptance standard specified in IWE-3511.3 for Class MC pressure-retaining components must also be applied to metallic liners of Class CC pressure-retaining components.

(x) *Quality Assurance.* When applying Section XI editions and addenda later than the 1989 Edition, the requirements of NQA-1, "Quality Assurance Requirements for Nuclear Facilities," 1979 Addenda through the 1989 Edition, are acceptable as permitted by IWA-1400 of Section XI, if the licensee uses its 10 CFR Part 50, Appendix B, quality assurance program, in conjunction with Section XI requirements. Commitments contained in the licensee's quality assurance program description that are more stringent than those contained in NQA-1 must govern Section XI activities. Further, where NQA-1 and Section XI do not address the commitments contained in the licensee's Appendix B quality assurance program description, the commitments must be applied to Section XI activities.

(xi) [Reserved]

(xii) *Underwater Welding.* The provisions in IWA-4660, "Underwater Welding," of Section XI, 1997 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, are not approved for use on irradiated material.

(xiii) [Reserved]

(xiv) *Appendix VIII personnel qualification.* All personnel qualified for performing ultrasonic examinations in accordance with Appendix VIII shall receive 8 hours of annual hands-on training on specimens that contain cracks. Licensees applying the 1999 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section may use the annual practice requirements in VII-4240 of Appendix VII of Section XI in place of the 8 hours of annual hands-on training provided that the supplemental practice is performed on material or welds that contain cracks, or by analyzing prerecorded data from material or welds that contain cracks. In either case, training must be completed no earlier than 6 months prior to performing ultrasonic examinations at a licensee's facility.

(xv) *Appendix VIII specimen set and qualification requirements*. The following provisions may be used to modify implementation of Appendix VIII of Section XI, 1995 Edition through the 2001 Edition. Licensees choosing to apply these provisions shall apply all of the following provisions under this paragraph except for those in § 50.55a(b)(2)(xv)(F) which are optional. Licensees who use later editions and addenda than the 2001 Edition of the ASME Code shall use the 2001 Edition of Appendix VIII.

(A) When applying Supplements 2, 3, and 10 to Appendix VIII, the following examination coverage criteria requirements must be used:

(1) Piping must be examined in two axial directions, and when examination in the circumferential direction is required, the circumferential examination must be performed in two directions, provided access is available. Dissimilar metal welds must be examined axially and circumferentially.

(2) Where examination from both sides is not possible, full coverage credit may be claimed from a single side for ferritic welds. Where examination from both sides is not possible on austenitic welds or dissimilar metal welds, full coverage credit from a single side may be claimed only after completing a successful single-sided Appendix VIII demonstration using flaws on the opposite side of the weld. Dissimilar metal weld qualifications must be demonstrated from the austenitic side of the weld and may be used to perform examinations from either side of the weld.

(B) The following provisions must be used in addition to the requirements of Supplement 4 to Appendix VIII:

(*1*) Paragraph 3.1, Detection acceptance criteria--Personnel are qualified for detection if the results of the performance demonstration satisfy the detection requirements of ASME Section XI, Appendix VIII, Table VIII-S4-1 and no flaw greater than 0.25 inch through wall dimension is missed.

(*2*) Paragraph 1.1(c), Detection test matrix--Flaws smaller than the 50 percent of allowable flaw size, as defined in IWB-3500, need not be included as detection flaws. For procedures applied from the inside surface, use the minimum thickness specified in the scope of the procedure to calculate a/t. For procedures applied from the outside surface, the actual thickness of the test specimen is to be used to calculate a/t.

(C) When applying Supplement 4 to Appendix VIII, the following provisions must be used:

(*1*) A depth sizing requirement of 0.15 inch RMS must be used in lieu of the requirements in Subparagraphs 3.2(a) and 3.2(c), and a length sizing requirement of 0.75 inch RMS must be used in lieu of the requirement in Subparagraph 3.2(b).

(*2*) In lieu of the location acceptance criteria requirements of Subparagraph 2.1(b), a flaw will be considered detected when reported within 1.0 inch or 10 percent of the metal path to the flaw, whichever is greater, of its true location in the X and Y directions.

(*3*) In lieu of the flaw type requirements of Subparagraph 1.1(e)(1), a minimum of 70 percent of the flaws in the detection and sizing tests shall be cracks. Notches, if used, must be limited by the following:

(*i*) Notches must be limited to the case where examinations are performed from the clad surface.

(*ii*) Notches must be semielliptical with a tip width of less than or equal to 0.010 inches.

(*iii*) Notches must be perpendicular to the surface within ± 2 degrees.

(*4*) In lieu of the detection test matrix requirements in paragraphs 1.1(e)(2) and 1.1(e)(3), personnel demonstration test sets must contain a representative distribution of flaw orientations, sizes, and locations.

(D) The following provisions must be used in addition to the requirements of Supplement 6 to Appendix VIII:

(*1*) Paragraph 3.1, Detection Acceptance Criteria--Personnel are qualified for detection if:

(*i*) No surface connected flaw greater than 0.25 inch through wall has been missed.

(*ii*) No embedded flaw greater than 0.50 inch through wall has been missed.

(*2*) Paragraph 3.1, Detection Acceptance Criteria--For procedure qualification, all flaws within the scope of the procedure are detected.

(*3*) Paragraph 1.1(b) for detection and sizing test flaws and locations--Flaws smaller than the 50 percent of allowable flaw size, as defined in IWB-3500, need not be included as detection flaws. Flaws which are less than the allowable flaw size, as defined in IWB-3500, may be used as detection and sizing flaws.

(*4*) Notches are not permitted.

(E) When applying Supplement 6 to Appendix VIII, the following provisions must be used:

(*1*) A depth sizing requirement of 0.25 inch RMS must be used in lieu of the requirements of subparagraphs 3.2(a), 3.2(c)(2), and 3.2(c)(3).

(*2*) In lieu of the location acceptance criteria requirements in Subparagraph 2.1(b), a flaw will be considered detected when reported within 1.0 inch or 10 percent of the metal path to the flaw, whichever is greater, of its true location in the X and Y directions.

(*3*) In lieu of the length sizing criteria requirements of Subparagraph 3.2(b), a length sizing acceptance criteria of 0.75 inch RMS must be used.

(*4*) In lieu of the detection specimen requirements in Subparagraph 1.1(e)(1), a minimum of 55 percent of the flaws must be cracks. The remaining flaws may be cracks or fabrication type flaws, such as slag and lack of fusion. The use of notches is not allowed.

(*5*) In lieu of paragraphs 1.1(e)(2) and 1.1(e)(3) detection test matrix, personnel demonstration test sets must contain a representative distribution of flaw orientations, sizes, and locations.

(F) The following provisions may be used for personnel qualification for combined Supplement 4 to Appendix VIII and Supplement 6 to Appendix VIII qualification. Licensees choosing to apply this combined qualification shall apply all of the provisions of Supplements 4 and 6 including the following provisions:

(*1*) For detection and sizing, the total number of flaws must be at least 10. A minimum of 5 flaws shall be from Supplement 4, and a minimum of 50 percent of the flaws must be from Supplement 6. At least 50 percent of the flaws in any sizing must be cracks. Notches are not acceptable for Supplement 6.

(*2*) Examination personnel are qualified for detection and length sizing when the results of any combined performance demonstration satisfy the acceptance criteria of Supplement 4 to Appendix VIII.

(*3*) Examination personnel are qualified for depth sizing when Supplement 4 to Appendix VIII and Supplement 6 to Appendix VIII flaws are sized within the respective acceptance criteria of those supplements.

(G) When applying Supplement 4 to Appendix VIII, Supplement 6 to Appendix VIII, or combined Supplement 4 and Supplement 6 qualification, the following additional provisions must be used, and examination coverage must include:

(*1*) The clad to base metal interface, including a minimum of 15 percent T (measured from the clad to base metal interface), shall be examined from four orthogonal directions using procedures and personnel qualified in accordance with Supplement 4 to Appendix VIII.

(*2*) If the clad-to-base-metal-interface procedure demonstrates detectability of flaws with a tilt angle relative to the weld centerline of at least 45 degrees, the remainder of the examination volume is considered fully examined if coverage is obtained in one parallel and one perpendicular direction. This must be accomplished using a procedure and personnel qualified for single-side examination in accordance

with Supplement 6. Subsequent examinations of this volume may be performed using examination techniques qualified for a tilt angle of at least 10 degrees.

(*3*) The examination volume not addressed by § 50.55a(b)(2)(xv)(G)(*1*) is considered fully examined if coverage is obtained in one parallel and one perpendicular direction, using a procedure and personnel qualified for single sided examination when the provisions of § 50.55a(b)(2)(xv)(G)(*2*) are met.

(H) When applying Supplement 5 to Appendix VIII, at least 50 percent of the flaws in the demonstration test set must be cracks and the maximum misorientation shall be demonstrated with cracks. Flaws in nozzles with bore diameters equal to or less than 4 inches may be notches.

(I) When applying Supplement 5, Paragraph (a), to Appendix VIII, the following provision must be used in calculating the number of permissible false calls:

(*1*) The number of false calls allowed must be D/10, with a maximum of 3, where D is the diameter of the nozzle.

(J) [Reserved]

(K) When performing nozzle-to-vessel weld examinations, the following provisions must be used when the requirements contained in Supplement 7 to Appendix VIII are applied for nozzle-to-vessel welds in conjunction with Supplement 4 to Appendix VIII, Supplement 6 to Appendix VIII, or combined Supplement 4 and Supplement 6 qualification.

(*1*) For examination of nozzle-to-vessel welds conducted from the bore, the following provisions are required to qualify the procedures, equipment, and personnel:

(*i*) For detection, a minimum of four flaws in one or more full-scale nozzle mock-ups must be added to the test set. The specimens must comply with Supplement 6, paragraph 1.1, to Appendix VIII, except for flaw locations specified in Table VIII S6-1. Flaws may be either notches, fabrication flaws or cracks. Seventy-five (75) percent of the flaws must be cracks or fabrication flaws. Flaw locations and orientations must be selected from the choices shown in paragraph (b)(2)(xv)(K)(*4*) of this section, Table VIII-S7-1--Modified, with the exception that flaws in the outer eighty-five (85) percent of the weld need not be perpendicular to the weld. There may be no more than two flaws from each category, and at least one subsurface flaw must be included.

(*ii*) For length sizing, a minimum of four flaws as in § 50.55a(b)(2)(xv)(K)(*1*)(*i*) must be included in the test set. The length sizing results must be added to the results of combined Supplement 4 to Appendix VIII and Supplement 6 to Appendix VIII. The combined results must meet the acceptance standards contained in § 50.55a(b)(2)(xv)(E)(*3*).

(*iii*) For depth sizing, a minimum of four flaws as in § 50.55a(b)(2)(xv)(K)(*1*)(*i*) must be included in the test set. Their depths must be distributed over the ranges of Supplement 4, Paragraph 1.1, to Appendix VIII, for the inner 15 percent of the wall thickness and Supplement 6, Paragraph 1.1, to Appendix VIII, for the remainder of the wall thickness. The depth sizing results must be combined with the sizing results from Supplement 4 to Appendix VIII for the inner 15 percent and to Supplement 6 to Appendix VIII for the remainder of the wall thickness. The combined results must meet the depth sizing acceptance criteria contained in §§ 50.55a(b)(2)(xv)(C)(*1*), 50.55a(b)(2)(xv)(E)(*1*), and 50.55a(b)(2)(xv)(F)(*3*).

(*2*) For examination of reactor pressure vessel nozzle-to-vessel welds conducted from the inside of the vessel,

(*i*) The clad to base metal interface and the adjacent examination volume to a minimum depth of 15 percent T (measured from the clad to base metal interface) must be examined from four orthogonal directions using a procedure and personnel qualified in accordance with Supplement 4 to Appendix VIII as modified by §§ 50.55a(b)(2)(xv)(B) and 50.55a(b)(2)(xv)(C).

(*ii*) When the examination volume defined in § 50.55a(b)(2)(xv)(K)(*2*)(*i*) cannot be effectively examined in all four directions, the examination must be augmented by examination from the nozzle bore using a procedure and personnel qualified in accordance with § 50.55a(b)(2)(xv)(K)(*1*).

(*iii*) The remainder of the examination volume not covered by § 50.55a(b)(*2*)(xv)(K)(*2*)(*ii*) or a combination of § 50.55a(b)(2)(xv)(K)(*2*)(i) and § 50.55a(b)(2)(xv)(K)(*2*)(*ii*), must be examined from the nozzle bore using a procedure and personnel qualified in accordance with § 50.55a(b)(2)(xv)(K)(*1*), or from the vessel shell using a procedure and personnel qualified for single sided examination in accordance with Supplement 6 to Appendix VIII, as modified by §§ 50.55a(b)(2)(xv)(D), 50.55a(b)(2)(xv)(E), 50.55a(b)(2)(xv)(F), and 50.55a(b)(2)(xv)(G).

(*3*) For examination of reactor pressure vessel nozzle-to-shell welds conducted from the outside of the vessel,

(*i*) The clad to base metal interface and the adjacent metal to a depth of 15 percent T, (measured from the clad to base metal interface) must be examined from one radial and two opposing circumferential directions using a procedure and personnel qualified in accordance with Supplement 4 to Appendix VIII, as modified by §§ 50.55a(b)(2)(xv)(B) and 50.55a(b)(2)(xv)(C), for examinations performed in the radial direction, and Supplement 5 to Appendix VIII, as modified by § 50.55a(b)(*2*)(xv)(J), for examinations performed in the circumferential direction.

(*ii*) The examination volume not addressed by § 50.55a(b)(2)(xv)(K)(*3*)(*i*) must be examined in a minimum of one radial direction using a procedure and personnel qualified for single sided examination in accordance with Supplement 6 to Appendix VIII, as modified by §§ 50.55a(b)(2)(xv)(D), 50.55a(b)(2)(xv)(E), 50.55a(b)(2)(xv)(F), and 50.55a(b)(2)(xv)(G).

(*4*) Table VIII-S7-1, "Flaw Locations and Orientations," Supplement 7 to Appendix VIII, is modified as follows:

Table VIII-S7-1--Modified

Flaw Locations and Orientations		
	Parallel to weld	**Perpendicular to weld**
Inner 15 percent	X	X
OD Surface	X	.....
Subsurface	X	.....

(L) As a modification to the requirements of Supplement 8, Subparagraph 1.1(c), to Appendix VIII, notches may be located within one diameter of each end of the bolt or stud.

(M) When implementing Supplement 12 to Appendix VIII, only the provisions related to the coordinated implementation of Supplement 3 to Supplement 2 performance demonstrations are to be applied.

(xvi) *Appendix VIII single side ferritic vessel and piping and stainless steel piping examination.*

(A) Examinations performed from one side of a ferritic vessel weld must be conducted with equipment, procedures, and personnel that have demonstrated proficiency with single side examinations. To demonstrate equivalency to two sided examinations, the demonstration must be performed to the requirements of Appendix VIII as modified by this paragraph and §§ 50.55a(b)(2)(xv) (B) through (G), on specimens containing flaws with non-optimum sound energy reflecting characteristics or flaws similar to those in the vessel being examined.

(B) Examinations performed from one side of a ferritic or stainless steel pipe weld must be conducted with equipment, procedures, and personnel that have demonstrated proficiency with single side examinations. To demonstrate equivalency to two sided examinations, the demonstration must be performed to the requirements of Appendix VIII as modified by this paragraph and § 50.55a(b)(2)(xv)(A).

(xvii) *Reconciliation of Quality Requirements.* When purchasing replacement items, in addition to the reconciliation provisions of IWA-4200, 1995 Addenda through 1998 Edition, the replacement items must be purchased, to the extent necessary, in accordance with the licensee's quality assurance program description required by 10 CFR 50.34(b)(6)(ii).

(xviii) *Certification of NDE personnel.* (A) Level I and II nondestructive examination personnel shall be recertified on a 3-year interval in lieu of the 5-year interval specified in the 1997 Addenda and 1998 Edition of IWA-2314, and IWA-2314(a) and IWA-2314(b) of the 1999 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section.

(B) Paragraph IWA-2316 of the 1998 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, may only be used to qualify personnel that observe for leakage during system leakage and hydrostatic tests conducted in accordance with IWA-5211(a) and (b), 1998 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section.

(C) When qualifying visual examination personnel for VT-3 visual examinations under paragraph IWA-2317 of the 1998 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, the proficiency of the training must be demonstrated by administering an initial qualification examination and administering subsequent examinations on a 3-year interval.

(xix) *Substitution of alternative methods.* The provisions for the substitution of alternative examination methods, a combination of methods, or newly developed techniques in the 1997 Addenda of IWA-2240 must be applied. The provisions in IWA-2240, 1998 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, are not approved for use. The provisions in IWA-4520(c), 1997 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, allowing the substitution of alternative examination methods, a combination of methods, or newly developed techniques for the methods specified in the Construction Code are not approved for use.

(xx) *System leakage tests.*

(A) When performing system leakage tests in accordance with IWA–5213(a), 1997 through 2002 Addenda, the licensee shall maintain a 10-minute hold time after test pressure has been reached for Class 2 and Class 3 components that are not in use during normal operating conditions. No hold time is required for the remaining Class 2 and Class 3 components provided that the system has been in operation for at least 4 hours for insulated components or 10 minutes for uninsulated components.

(B) The NDE provision in IWA– 4540(a)(2) of the 2002 Addenda of Section XI must be applied when performing system leakage tests after repair and replacement activities performed by welding or brazing on a pressure retaining boundary using the 2003 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section.

(xxi) *Table IWB-2500-1 examination requirements.*

(A) The provisions of Table IWB–2500–1, Examination Category B–D, Full Penetration Welded Nozzles in Vessels, Items B3.40 and B3.60 (Inspection Program A) and Items B3.120 and B3.140 (Inspection Program B) of the 1998 Edition must be applied when using the 1999 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section. A visual examination with

magnification that has a resolution sensitivity to detect a 1-mil width wire or crack, utilizing the allowable flaw length criteria in Table IWB–3512–1, 1997 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, with a limiting assumption on the flaw aspect ratio (i.e., a/l=0.5), may be performed instead of an ultrasonic examination.

(B) The provisions of Table IWB-2500-1, Examination Category B-G-2, Item B7.80, that are in the 1995 Edition are applicable only to reused bolting when using the 1997 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section.

(xxii) *Surface Examination.* The use of the provision in IWA-2220, "Surface Examination," of Section XI, 2001 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, that allow use of an ultrasonic examination method is prohibited.

(xxiii) *Evaluation of Thermally Cut Surfaces.* The use of the provisions for eliminating mechanical processing of thermally cut surfaces in IWA-4461.4.2 of Section XI, 2001 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section are prohibited.

(xxiv) *Incorporation of the Performance Demonstration Initiative and Addition of Ultrasonic Examination Criteria.* The use of Appendix VIII and the supplements to Appendix VIII and Article I-3000 of Section XI of the ASME BPV Code, 2002 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, is prohibited.

(xxv) *Mitigation of Defects by Modification.* The use of the provisions in IWA-4340, "Mitigation of Defects by Modification," Section XI, 2001 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section are prohibited.

(xxvi) *Pressure Testing Class 1, 2, and 3 Mechanical Joints.* The repair and replacement activity provisions in IWA-4540(c) of the 1998 Edition of Section XI for pressure testing Class 1, 2, and 3 mechanical joints must be applied when using the 2001 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section.

(xxvii) *Removal of Insulation.* When performing visual examinations in accordance with IWA-5242 of Section XI, 2003 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of the section, insulation must be removed from 17-4 PH or 410 stainless steel studs or bolts aged at a temperature below 1100 °F or having a Rockwell Method C hardness value above 30, and from A-286 stainless steel studs or bolts preloaded to 100,000 pounds per square inch or higher.

(3) As used in this section, references to the OM Code refer to the ASME Code for Operation and Maintenance of Nuclear Power Plants, and include the 1995 Edition through the 2004 Edition subject to the following limitations and modifications:

(i) *Quality Assurance.* When applying editions and addenda of the OM Code, the requirements of NQA-1, "Quality Assurance Requirements for Nuclear Facilities," 1979 Addenda, are acceptable as permitted by ISTA 1.4 of the 1995 Edition through 1997 Addenda or ISTA-1500 of the 1998 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(3) of this section, provided the licensee uses its 10 CFR Part 50, Appendix B, quality assurance program in conjunction with the OM Code requirements. Commitments contained in the licensee's quality assurance program description that are more stringent than those contained in NQA-1 govern OM Code activities. If NQA-1 and the OM Code do not address the commitments contained in the licensee's Appendix B quality assurance program description, the commitments must be applied to OM Code activities.

(ii) *Motor-Operated Valve testing.* Licensees shall comply with the provisions for testing motor-operated valves in OM Code ISTC 4.2, 1995 Edition with the 1996 and 1997 Addenda, or ISTC-3500, 1998 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(3) of this section, and shall establish a program to ensure that motor-operated valves continue to be capable of performing their design basis safety functions.

(iii) [Reserved]

(iv) *Appendix II.* Licensees applying Appendix II, "Check Valve Condition Monitoring Program," of the OM Code, 1995 Edition with the 1996 and 1997 Addenda, shall satisfy the requirements of (b)(3)(iv)(A), (b)(3)(iv)(B), and (b)(3)(iv)(C) of this section. Licensees applying Appendix II, 1998 Edition through the 2002 Addenda, shall satisfy the requirements of (b)(3)(iv)(A), (b)(3)(iv)(B), and (b)(3)(iv)(D) of this section.

(A) Valve opening and closing functions must be demonstrated when flow testing or examination methods (nonintrusive, or disassembly and inspection) are used;

(B) The initial interval for tests and associated examinations may not exceed two fuel cycles or 3 years, whichever is longer; any extension of this interval may not exceed one fuel cycle per extension with the maximum interval not to exceed 10 years; trending and evaluation of existing data must be used to reduce or extend the time interval between tests.

(C) If the Appendix II condition monitoring program is discontinued, then the requirements of ISTC 4.5.1 through 4.5.4 must be implemented.

(D) The applicable provisions of subsection ISTC must be implemented if the Appendix II condition monitoring program is discontinued.

(v) *Subsection ISTD.* Article IWF-5000, "Inservice Inspection Requirements for Snubbers," of the ASME BPV Code, Section XI, provides inservice inspection requirements for examinations and tests of snubbers at nuclear power plants. Licensees may use Subsection ISTD, "Inservice Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Power Plants," ASME OM Code, 1995 Edition through the latest edition and addenda incorporated by reference in paragraph (b)(3) of this section, in place of the requirements for snubbers in Section XI,

IWF-5200(a) and (b) and IWF-5300(a) and (b), by making appropriate changes to their technical specifications or licensee-controlled documents. Preservice and inservice examinations must be performed using the VT-3 visual examination method described in IWA-2213.

(vi) *Exercise interval for manual valves.* Manual valves must be exercised on a 2-year interval rather that the 5-year interval specified in paragraph ISTC-3540 of the 1999 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(3) of this section, provided that adverse conditions do not require more frequent testing.

(4) *Design, Fabrication, and Materials Code Cases*. Licensees may apply the ASME Boiler and Pressure Vessel Code cases listed in NRC Regulatory Guide 1.84, Revision 34, without prior NRC approval subject to the following:

(i) When an applicant or licensee initially applies a listed Code case, the applicant or licensee shall apply the most recent version of that Code case incorporated by reference in this paragraph.

(ii) If an applicant or licensee has previously applied a Code case and a later version of the Code case is incorporated by reference in this paragraph, the applicant or licensee may continue to apply the previous version of the Code case as authorized, or may apply the later version of the Code case, including any NRC-specified conditions placed on its use, until it updates its Code of Record for the component being constructed.

(iii) Application of an annulled Code case is prohibited unless an applicant or licensee applied the listed Code case prior to it being listed as annulled in Regulatory Guide 1.84. If an applicant or licensee has applied a listed Code case that is later listed as annulled in Regulatory Guide 1.84, the applicant or licensee may continue to apply the Code case until it updates its Code of Record for the component being constructed.

(5) *Inservice Inspection Code Cases*. Licensees may apply the ASME Boiler and Pressure Vessel Code cases listed in Regulatory Guide 1.147, Revision 15, without prior NRC approval subject to the following:

(i) When a licensee initially applies a listed Code case, the licensee shall apply the most recent version of that Code case incorporated by reference in this paragraph.

(ii) If a licensee has previously applied a Code case and a later version of the Code case is incorporated by reference in this paragraph, the licensee may continue to apply, to the end of the current 120-month interval, the previous version of the Code case as authorized or may apply the later version of the Code case, including any NRC-specified conditions placed on its use.

(iii) Application of an annulled Code case is prohibited unless a licensee previously applied the listed Code case prior to it being listed as annulled in Regulatory Guide 1.147. Any Code case listed as annulled in any Revision of Regulatory Guide 1.147 which a licensee has applied prior to it being listed as annulled, may continue to be applied by that licensee to the end of the 120-month interval in which the Code case was implemented.

(6) *Operation and Maintenance of Nuclear Power Plants Code Cases.* Licensees may apply the ASME Operation and Maintenance Nuclear Power Plants Code cases listed in Regulatory Guide 1.192 without prior NRC approval subject to the following:

(i) When a licensee initially applies a listed Code case, the licensee shall apply the most recent version of that Code case incorporated by reference in this paragraph.

(ii) If a licensee has previously applied a Code case and a later version of the Code case is incorporated by reference in this paragraph, the licensee may continue to apply, to the end of the current 120-month interval, the previous version of the Code case as authorized or may apply the later version of the Code case, including any NRC-specified conditions placed on its use.

(iii) Application of an annulled Code case is prohibited unless a licensee previously applied the listed Code case prior to it being listed as annulled in Regulatory Guide 1.192. If a licensee has applied a listed Code case that is later listed as annulled in Regulatory Guide 1.192, the licensee may continue to apply the Code case to the end of the current 120-month interval.

(c) *Reactor coolant pressure boundary*. (1) Components which are part of the reactor coolant pressure boundary must meet the requirements for Class 1 components in Section III [4, 5] of the ASME Boiler and Pressure Vessel Code, except as provided in paragraphs (c)(2), (c)(3), and (c)(4) of this section.

(2) Components which are connected to the reactor coolant system and are part of the reactor coolant pressure boundary as defined in § 50.2 need not meet the requirements of paragraph (c)(1) of this section, *Provided*:

(i) In the event of postulated failure of the component during normal reactor operation, the reactor can be shut down and cooled down in an orderly manner, assuming makeup is provided by the reactor coolant makeup system; or

(ii) The component is or can be isolated from the reactor coolant system by two valves in series (both closed, both open, or one closed and the other open). Each open valve must be capable of automatic actuation and, assuming the other valve is open, its closure time must be such that, in the event of postulated failure of the component during normal reactor operation, each valve remains operable and the reactor can be shut down and cooled down in an orderly manner, assuming makeup is provided by the reactor coolant makeup system only.

(3) The Code edition, addenda, and optional ASME Code cases to be applied to components of the reactor coolant pressure boundary must be determined by the provisions of paragraph NCA-1140, Subsection NCA of Section III of the ASME Boiler and Pressure Vessel Code, but--

(i) the edition and addenda applied to a component must be those which are incorporated by reference in paragraph (b)(1) of this section,

(ii) the ASME Code provisions applied to the pressure vessel may be dated no earlier than the Summer 1972 Addenda of the 1971 edition,

(iii) the ASME Code provisions applied to piping, pumps, and valves may be dated no earlier than the Winter 1972 Addenda of the 1971 edition, and

(iv) The optional Code cases applied to a component must be those listed in NRC Regulatory Guide 1.84 that is incorporated by reference in paragraph (b) of this section.

(4) For a nuclear power plant whose construction permit was issued prior to May 14, 1984 the applicable Code Edition and Addenda for a component of the reactor coolant pressure boundary continue to be that Code Edition and Addenda that were required by Commission regulations for such component at the time of issuance of the construction permit.

(d) *Quality Group B components.* (1) For a nuclear power plant whose application for a construction permit under this part, or a combined license or manufacturing license under part 52 of this chapter is docketed after May 14, 1984, or for an application for a standard design approval or a standard design certification docketed after May 14, 1984, components classified Quality Group B [9] must meet the requirements for Class 2 Components in Section III of the ASME Boiler and Pressure Vessel Code.

(2) The Code edition, addenda, and optional ASME Code cases to be applied to the systems and components identified in paragraph (d)(1) of this section must be determined by the rules of paragraph NCA-1140, Subsection NCA of Section III of the ASME Boiler and Pressure Vessel Code, but--

(i) the edition and addenda must be those which are incorporated by reference in paragraph (b)(1) of this section,

(ii) the ASME Code provisions applied to the systems and

(iii) components may be dated no earlier than the 1980 Edition, and The optional Code cases must be those listed in the NRC Regulatory Guide 1.84 that is incorporated by reference in paragraph (b) of this section.

(e) *Quality Group C components.* (1) For a nuclear power plant whose application for a construction permit under this part, or a combined license or manufacturing license under part 52 of this chapter is docketed after May 14, 1984, or for an application for a standard design approval or a standard design certification docketed after May 14, 1984, components classified Quality Group C [9] must meet the requirements for Class 3 components in Section III of the ASME Boiler and Pressure Vessel Code.

(2) The Code edition, addenda, and optional ASME Code cases to be applied to the systems and components identified in paragraph (e)(1) of this section must be determined by the rules of paragraph NCA-1140, subsection NCA of Section III of the ASME Boiler and Pressure Vessel Code, but--

(i) the edition and addenda must be those which are incorporated by reference in paragraph (b)(1) of this section,

(ii) the ASME Code provisions applied to the systems and

(iii) components may be dated no earlier than the 1980 Edition, and The optional Code cases must be those listed in NRC Regulatory Guide 1.84 that is incorporated by reference in paragraph (b) of this section.

(f) *Inservice testing requirements.* Requirements for inservice inspection of Class 1, Class 2, Class 3, Class MC, and Class CC components (including their supports) are located in § 50.55a(g).

(1) For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued prior to January 1, 1971, pumps and valves must meet the test requirements of paragraphs (f)(4) and (f)(5) of this section to the extent practical. Pumps and valves which are part of the reactor coolant pressure boundary must meet the requirements applicable to components which are classified as ASME Code Class 1. Other pumps and valves that perform a function to shut down the reactor or maintain the reactor in a safe shutdown condition, mitigate the consequences of an accident, or provide overpressure protection for safety-related systems (in meeting the requirements of the 1986 Edition, or later, of the Boiler and Pressure Vessel or OM Code) must meet the test requirements applicable to components which are classified as ASME Code Class 2 or Class 3.

(2) For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued on or after January 1, 1971, but before July 1, 1974, pumps and valves which are classified as ASME Code Class 1 and Class 2 must be designed and be provided with access to enable the performance of inservice tests for operational readiness set forth in editions and addenda of Section XI of the ASME Boiler and Pressure Vessel Code incorporated by reference in paragraph (b) of this section (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, or 1.192 that are incorporated by reference in paragraph (b) of this section) in effect 6 months before the date of issuance of the construction permit. The pumps and valves may meet the inservice test requirements set forth in subsequent editions of this Code and addenda which are incorporated by reference in paragraph (b) of this section (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, Revision 15, or 1.192 that are incorporated by reference in paragraph (b) of this section), subject to the applicable limitations and modifications listed therein.

(3) For a boiling or pressurized watercooled nuclear power facility whose construction permit under this part or design approval, design certification, combined license, or manufacturing license under part 52 of this chapter, was issued on or after July 1, 1974:

(i)--(ii) [Reserved]

(iii)(A) Pumps and valves, in facilities whose construction permit was issued before November 22, 1999, which are classified as ASME Code Class 1 must be designed and be provided with access to enable the performance of inservice testing of the pumps and valves for assessing operational readiness set forth in the editions and addenda of Section XI of the ASME Boiler and Pressure Vessel Code incorporated by reference in paragraph (b) of this section (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, or 1.192 that are incorporated by reference in paragraph (b) of this section) applied to the construction of the particular pump or valve or the Summer 1973 Addenda, whichever is later.

(B) Pumps and valves, in facilities whose construction permit under this part, or design certification, design approval, combined license, or manufacturing license under part 52 of this chapter, is issued on or after November 22, 1999, which are classified as ASME Code Class 1 must be designed and be provided with access to enable the performance of inservice testing of the pumps and valves for assessing operational readiness set forth in editions and addenda of the ASME OM Code (or the optional ASME Code cases listed in the NRC Regulatory Guide 1.192 that is incorporated by reference in paragraph (b) of this section) referenced in paragraph (b)(3) of this section at the time the construction permit, combined license, manufacturing license, design certification, or design approval is issued.

(iv)(A) Pumps and valves, in facilities whose construction permit was issued before November 22, 1999, which are classified as ASME Code Class 2 and Class 3 must be designed and be provided with access to enable the performance of inservice testing of the pumps and valves for assessing operational readiness set forth in the editions and addenda of Section XI of the ASME Boiler and Pressure Vessel Code incorporated by reference in paragraph (b) of this section (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, Revision 15, that are incorporated by reference in paragraph (b) of this section) applied to the construction of the particular pump or valve or the Summer 1973 Addenda, whichever is later.

(B) Pumps and valves, in facilities whose construction permit under this part or design certification or combined license under part 52 of this chapter is issued on or after November 22, 1999, which are classified as ASME Code Class 2 and 3 must be designed and be provided with access to enable the performance of inservice testing of the pumps and valves for assessing operational readiness set forth in editions and addenda of the ASME OM Code (or the optional ASME Code cases listed in the NRC Regulatory Guide 1.192 that is incorporated by reference in paragraph (b) of this section) referenced in paragraph (b)(3) of this section at the time the construction permit, combined license, or design certification is issued.

(v) All pumps and valves may meet the test requirements set forth in subsequent editions of codes and addenda or portions thereof which are incorporated by reference in paragraph (b) of this section, subject to the limitations and modifications listed in paragraph (b) of this section.

(4) Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, pumps and valves which are classified as ASME Code Class 1, Class 2 and Class 3 must meet the inservice test requirements, except design and access provisions, set forth in the ASME OM Code and addenda that become effective subsequent to editions and addenda specified in paragraphs (f)(2) and (f)(3) of this section and that are incorporated by reference in paragraph (b) of this section, to the extent practical within the limitations of design, geometry and materials of construction of the components.

(i) Inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during the initial 120-month interval must comply with the requirements in the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section on the date 12 months before the date of issuance of the operating license under this part, or 12 months before the date scheduled for initial loading fuel under a combined license under part 52 of this chapter (or the optional ASME Code cases listed in NRC Regulatory Guide 1.192, that is incorporated by reference in paragraph (b) of this section), subject to the limitations and modifications listed in paragraph (b) of this section.

(ii) Inservice tests to verify operational readiness of pumps and valves, whose function is required for safety, conducted during successive 120-month intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section 12 months before the start of the 120-month interval (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, or 1.192 that are incorporated by reference in paragraph (b) of this section), subject to the limitations and modifications listed in paragraph (b) of this section.

(iii) [Reserved]

(iv) Inservice tests of pumps and valves may meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in paragraph (b) of this section, subject to the limitations and modifications listed in paragraph (b) of this section, and subject to Commission approval. Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met.

(5)(i) The inservice test program for a boiling or pressurized water-cooled nuclear power facility must be revised by the licensee, as necessary, to meet the requirements of paragraph (f)(4) of this section.

(ii) If a revised inservice test program for a facility conflicts with the technical specification for the facility, the licensee shall apply to the Commission for amendment of the technical specifications to conform the technical specification to the revised program. The licensee shall submit this application, as specified in § 50.4, at least 6 months before the start of the period during which the provisions become applicable, as determined by paragraph (f)(4) of this section.

(iii) If the licensee has determined that conformance with certain code requirements is impractical for its facility, the licensee shall notify the Commission and submit, as specified in § 50.4, information to support the determination.

(iv) Where a pump or valve test requirement by the code or addenda is determined to be impractical by the licensee and is not included in the revised inservice test program as permitted by paragraph (f)(4) of this section, the basis for this determination must be demonstrated to the satisfaction of the Commission not later than 12 months after the expiration of the initial 120-month period of operation from start of facility commercial operation and each subsequent 120-month period of operation during which the test is determined to be impractical.

(6)(i) The Commission will evaluate determinations under paragraph (f)(5) of this section that code requirements are impractical. The Commission may grant relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

(ii) The Commission may require the licensee to follow an augmented inservice test program for pumps and valves for which the Commission deems that added assurance of operational readiness is necessary.

(g) *Inservice inspection requirements*. Requirements for inservice testing of Class 1, Class 2, and Class 3 pumps and valves are located in § 50.55a(f).

(1) For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued before January 1, 1971, components (including supports) must meet the requirements of paragraphs (g)(4) and (g)(5) of this section to the extent practical. Components which are part of the reactor coolant pressure boundary and their supports must meet the requirements applicable to components which are classified as ASME Code Class 1. Other safety-related pressure vessels, piping, pumps and valves, and their supports must meet the requirements applicable to components which are classified as ASME Code Class 2 or Class 3.

(2) For a boiling or pressurized water-cooled nuclear power facility whose construction permit was issued on or after January 1, 1971, but before July 1, 1974, components (including supports) which are classified as ASME Code Class 1 and Class 2 must be designed and be provided with access to enable the performance of inservice examination of such components (including supports) and must meet the preservice examination requirements set forth in editions and addenda of Section XI of the ASME Boiler and Pressure Vessel Code incorporated by reference in paragraph (b) of this section (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, that are incorporated by reference in paragraph (b) of this section) in effect six months before the date of issuance of the construction permit. The components (including supports) may meet the requirements set forth in subsequent editions and addenda of this Code which are incorporated by reference in paragraph (b) of this section (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, that are incorporated by reference in paragraph (b) of this section), subject to the applicable limitations and modifications.

(3) For a boiling or pressurized watercooled nuclear power facility whose construction permit under this part, or design certification, design approval, combined license, or manufacturing license under part 52 of this chapter, was issued on or after July 1, 1974:

(i) Components (including supports) which are classified as ASME Code Class 1 must be designed and be provided with access to enable the performance of inservice examination of these components and must meet the preservice examination requirements set forth in the editions and addenda of Section XI of the ASME Boiler and Pressure Vessel Code incorporated by reference in paragraph (b) of this section (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, that are incorporated by reference in paragraph (b) of this section) applied to the construction of the particular component.

(ii) Components which are classified as ASME Code Class 2 and Class 3 and supports for components which are classified as ASME Code Class 1, Class 2, and Class 3 must be designed and be provided with access to enable the performance of inservice examination of these components and must meet the preservice examination requirements set forth in the editions and addenda of Section XI of the ASME Boiler and Pressure Vessel Code incorporated by reference in paragraph (b) of this section (or the optional ASME Code Cases listed in NRC Regulatory Guide 1.147, Revision 15, that are incorporated by reference in paragraph (b) of this section) applied to the construction of the particular component.

(iii)--(iv) [Reserved]

(v) All components (including supports) may meet the requirements set forth in subsequent editions of codes and addenda or portions thereof which are incorporated by reference in paragraph (b) of this section, subject to the limitations and modifications listed therein.

(4) Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) which are classified as ASME Code Class 1, Class 2 and Class 3 must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions of the ASME Boiler and Pressure Vessel Code and Addenda that become effective subsequent to editions specified in paragraphs (g)(2) and (g)(3) of this section and that are incorporated by reference in paragraph (b) of this section, to the extent practical within the limitations of design, geometry and materials of construction of the components. Components which are classified as Class MC pressure retaining components and their integral attachments, and components which are classified as Class CC pressure retaining components and their integral attachments must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of the ASME Boiler and Pressure Vessel Code and Addenda that are incorporated by reference in paragraph (b) of this section, subject to the limitation listed in paragraph (b)(2)(vi) of this section and the modifications listed in paragraphs (b)(2)(viii) and (b)(2)(ix) of this section, to the extent practical within the limitation of design, geometry and materials of construction of the components.

(i) Inservice examination of components and system pressure tests conducted during the initial 120-month inspection interval must comply with the requirements in the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section on the date 12 months before the date of issuance of the operating license (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, that are incorporated by reference in paragraph (b) of this section, subject to the limitations and modifications listed in paragraph (b) of this section.

(ii) Inservice examination of components and system pressure tests conducted during successive 120-month inspection intervals must

comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section 12 months before the start of the 120-month inspection interval (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, that are incorporated by reference in paragraph (b) of this section), subject to the limitations and modifications listed in paragraph (b) of this section.

(iii) Licensees may, but are not required to, perform the surface examinations of High Pressure Safety Injection Systems specified in Table IWB-2500-1, Examination Category B-J, Item Numbers B9.20, B9.21, and B9.22.

(iv) Inservice examination of components and system pressure tests may meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in paragraph (b) of this section, subject to the limitations and modifications listed in paragraph (b) of this section, and subject to Commission approval. Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met.

(v) For a boiling or pressurized watercooled nuclear power facility whose construction permit under this part or combined license under part 52 of this chapter was issued after January 1, 1956:

(A) Metal containment pressure retaining components and their integral attachments must meet the inservice inspection, repair, and replacement requirements applicable to components which are classified as ASME Code Class MC;

(B) Metallic shell and penetration liners which are pressure retaining components and their integral attachments in concrete containments must meet the inservice inspection, repair, and replacement requirements applicable to components which are classified as ASME Code Class MC; and

(C) Concrete containment pressure retaining components and their integral attachments, and the post-tensioning systems of concrete containments must meet the inservice inspection, repair, and replacement requirements applicable to components which are classified as ASME Code Class CC.

(5)(i) The inservice inspection program for a boiling or pressurized water-cooled nuclear power facility must be revised by the licensee, as necessary, to meet the requirements of paragraph (g)(4) of this section.

(ii) If a revised inservice inspection program for a facility conflicts with the technical specification for the facility, the licensee shall apply to the Commission for amendment of the technical specifications to conform the technical specification to the revised program. The licensee shall submit this application, as specified in § 50.4, at least six months before the start of the period during which the provisions become applicable, as determined by paragraph (g)(4) of this section.

(iii) If the licensee has determined that conformance with certain code requirements is impractical for its facility, the licensee shall notify the Commission and submit, as specified in § 50.4, information to support the determinations.

(iv) Where an examination requirement by the code or addenda is determined to be impractical by the licensee and is not included in the revised inservice inspection program as permitted by paragraph (g)(4) of this section, the basis for this determination must be demonstrated to the satisfaction of the Commission not later than 12 months after the expiration of the initial 120-month period of operation from start of facility commercial operation and each subsequent 120-month period of operation during which the examination is determined to be impractical.

(6)(i) The Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

(ii) The Commission may require the licensee to follow an augmented inservice inspection program for systems and components for which the Commission deems that added assurance of structural reliability is necessary.

(A) [Reserved]

(*1*) All previously granted reliefs under § 50.55a to licensees for the extent of volumetric examination of reactor vessel shell welds specified in Item B1.10 of Examination Category B-A, "Pressure Retaining Welds in Reactor Vessel," in Table IWB- 2500-1 of subsection IWB in applicable edition and addenda of section XI, Division 1, of the ASME Boiler and Pressure Vessel Code, during the inservice inspection interval in effect on September 8, 1992 are hereby revoked, subject to the specific modification in § 50.55a(g)(6)(ii)(A)(*3*)(*iv*) for licensees that defer the augmented examination in accordance with § 50.55a(g)(6)(ii)(A)(*3*).

(*2*) All licensees shall augment their reactor vessel examination by implementing once, as part of the inservice inspection interval in effect on September 8, 1992, the examination requirements for reactor vessel shell welds specified in Item B1.10 of Examination Category B-A, "Pressure Retaining Welds in Reactor Vessel," in Table IWB-2500-1 of subsection IWB of the 1989 Edition of section XI, Division 1, of the ASME Boiler and Pressure Vessel Code, subject to the conditions specified in § 50.55a(g)(6)(ii)(A)(*3*) and (*4*). The augmented examination, when not deferred in accordance with the provisions of § 50.55a(g)(6)(ii)(A)(*3*), shall be performed in accordance with the related procedures specified in the section XI edition and addenda applicable to the inservice inspection interval in effect on September 8, 1992, and may be used as a substitute for the reactor vessel shell weld examination scheduled for implementation during the inservice inspection interval in effect on September 8, 1992. For the purpose of this augmented examination, essentially 100% as used in Table IWB-2500-1 means more than 90 percent of the examination volume of each weld, where the reduction in coverage is due to interference by another component, or part geometry.

(*3*) Licensees with fewer than 40 months remaining in the inservice inspection interval in effect on September 8, 1992 may defer the augmented reactor vessel examination specified in § 50.55a(g)(6)(ii)(A)(*2*) to the first period of the next inspection interval under the following conditions:

(*i*) The deferred augmented examination may not be used as a substitute for the reactor vessel shell weld examination scheduled for implementation during the inservice inspection interval in effect on September 8, 1992.

(*ii*) The deferred augmented examination may be used as a substitute for the reactor vessel shell weld examination normally scheduled for the inspection interval in which the deferred examination is performed.

(*iii*) If the deferred augmented examination is used as a substitute for the normally scheduled reactor vessel shell weld examination, subsequent reactor vessel shell weld examinations must be performed during the first period of successive inspection intervals.

(*iv*) Licensees that defer the augmented examination, as permitted herein, may retain all previously granted reliefs that otherwise would be revoked by § 50.55a(g)(6)(ii)(A)(*1*) for the inservice inspection interval in effect on September 8, 1992.

(*v*) Licensees with fewer than 40 months remaining in the inservice inspection interval in effect on September 8, 1992 may extend that interval in accordance with the provisions of section XI (1989 Edition) IWA-2430(d) for the purpose of implementing the augmented examination during that interval.

(*vi*) The deferred augmented examination shall be performed in accordance with the related procedures specified in the section XI edition and addenda applicable to the inspection interval in which the augmented examination is performed.

(*4*) The requirement for augmented examination of the reactor vessel may be satisfied by an examination of essentially 100 percent of the reactor vessel shell welds specified in § 50.55a(g)(6)(ii)(A)(*2*) that has been completed, or is scheduled for implementation with a written commitment, or is required by § 50.55a(g)(4)(i), during the inservice inspection interval in effect on September 8, 1992.

(*5*) Licensees that make a determination that they are unable to completely satisfy the requirements for the augmented reactor vessel shell weld examination specified in paragraph (g)(6)(ii)(A) of this section shall submit information to the Commission to support the determination and shall propose an alternative to the examination requirements that would provide an acceptable level of quality and safety. The licensee may use the proposed alternative when authorized by the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate.

(B) Licensees do not have to submit to the NRC staff for approval of their containment inservice inspection programs which were developed to satisfy the requirements of Subsection IWE and Subsection IWL with specified modifications and limitations. The program elements and the required documentation must be maintained on site for audit.

(C) *Implementation of Appendix VIII to Section XI.* (*1*) Appendix VIII and the supplements to Appendix VIII to Section XI, Division 1, 1995 Edition with the 1996 Addenda of the ASME Boiler and Pressure Vessel Code must be implemented in accordance with the following schedule: Appendix VIII and Supplements 1, 2, 3, and 8--May 22, 2000; Supplements 4 and 6--November 22, 2000; Supplement 11--November 22, 2001; and Supplements 5, 7, and 10--November 22, 2002.

(*2*) Licensees implementing the 1989 Edition and earlier editions and addenda of IWA-2232 of Section XI, Division 1, of the ASME Boiler and Pressure Vessel Code must implement the 1995 Edition with the 1996 Addenda of Appendix VIII and the supplements to Appendix VIII of Section XI, Division 1, of the ASME Boiler and Pressure Vessel Code.

(D) *Reactor vessel head inspections.*

(1) All licensees of pressurized water reactors shall augment their inservice inspection program with ASME Code Case N–729–1 subject to the conditions specified in paragraphs (g)(6)(ii)(D)(*2*) through (*6*) of this section. Licensees of existing operating reactors as of September 10, 2008 shall implement their augmented inservice inspection program by December 31, 2008. Once a licensee implements this requirement, the First Revised NRC Order EA–03–009 no longer applies to that licensee and shall be deemed to be withdrawn.

(2) Note 9 of ASME Code Case N–729–1 shall not be implemented.

(3) Instead of the specified 'examination method' requirements for volumetric and surface examinations in Note 6 of Table 1 of Code Case N–729–1, the licensee shall perform volumetric and/or surface examination of essentially 100 percent of the required volume or equivalent surfaces of the nozzle tube, as identified by Figure 2 of ASME Code Case N–729–1. A demonstrated volumetric or surface leak path assessment through all J-groove welds shall be performed. If a surface examination is being substituted for a volumetric examination on a portion of a penetration nozzle that is below the toe of the J-groove weld [Point E on Figure 2 of ASME Code Case N–729–1], the surface examination shall be of the inside and outside wetted surface of the penetration nozzle not examined volumetrically.

(4) By September 1, 2009, ultrasonic examinations shall be performed using personnel, procedures and equipment that have been qualified by blind demonstration on representative mockups using a methodology that meets the conditions specified in (50.55a(g)(6)(ii)(D)(*3*)(i) through (50.55a(g)(6)(ii)(D)(*4*)(iv), instead of the qualification requirements of Paragraph –2500 of ASME Code Case N–729–1. References herein to Section XI, Appendix VIII shall be to the 2004 Edition with no Addenda of the ASME BPV Code.

(i) The specimen set shall have an applicable thickness qualification range of +25 percent to -40 percent for nominal depth through-wall thickness. The specimen set shall include geometric and material conditions that normally require discrimination from primary water stress corrosion cracking (PWSCC) flaws.

(ii) The specimen set shall have a minimum of ten (10) flaws which provide an acoustic response similar to PWSCC indications. All flaws shall be greater than 10 percent of the nominal pipe wall thickness. A minimum of 20 percent of the total flaws shall initiate from the inside surface and 20 percent from the outside surface. At least 20 percent of the flaws shall be in the depth ranges of 10–30 percent through wall thickness and at least 20 percent within a depth range of 31–50 percent through wall thickness. At least 20 percent and no more than 40 percent of the flaws shall be oriented axially.

(iii) Procedures shall identify the equipment and essential variables and settings used for the qualification, and are consistent with Subarticle VIII–2100 of Section XI, Appendix VIII. The procedure shall be requalified when an essential variable is changed outside the demonstration range as defined by Subarticle VIII–3130 of Section XI, Appendix VIII and as allowed by Articles VIII–4100, VIII–4200 and VIII–4300 of Section XI, Appendix VIII. Procedure qualification shall include the equivalent of at least three personnel performance demonstration test sets. Procedure qualification requires at least one successful personnel performance demonstration.

(iv) Personnel performance demonstration test acceptance criteria shall meet the personnel performance demonstration detection test acceptance criteria of Table VIII—S10–1 of Section XI, Appendix VIII, Supplement 10. Examination procedures, equipment, and personnel are qualified for depth sizing and length sizing when the RMS error, as defined by Subarticle VIII–3120 of Section XI, Appendix VIII, of the flaw depth measurements, as compared to the true flaw depths, do not exceed 1/8 inch (3 mm), and the root mean square (RMS) error of the flaw length measurements, as compared to the true flaw lengths, do not exceed 3/8 inch (10 mm), respectively.

(5) If flaws attributed to PWSCC have been identified, whether acceptable or not for continued service under Paragraphs –3130 or –3140 of ASME Code Case N–729–1, the re-inspection interval must be each refueling outage instead of the re-inspection intervals required by Table 1, Note (8) of ASME Code Case N–729–1.

(6) Appendix I of ASME Code Case N–729–1 shall not be implemented without prior NRC approval.

(E) *Reactor coolant pressure boundary visual inspections*.[1]

(*1*) All licensees of pressurized water reactors shall augment their inservice inspection program by implementing ASME Code Case N–722 subject to the conditions specified in paragraphs (g)(6)(ii)(E)(2) through (4) of this section. The inspection requirements of ASME Code Case N–722 do not apply to components with pressure retaining welds fabricated with Alloy 600/82/182 materials that have been mitigated by weld overlay or stress improvement.

(*2*) If a visual examination determines that leakage is occurring from a specific item listed in Table 1 of ASME Code Case N–722 that is not exempted by the ASME Code, Section XI, IWB–1220(b)(1), additional actions must be performed to characterize the location, orientation, and length of crack(s) in Alloy 600 nozzle wrought material and location, orientation, and length of crack(s) in Alloy 82/182 butt welds. Alternatively, licensees may replace the Alloy 600/82/182 materials in all the components under the item number of the leaking component.

(*3*) If the actions in paragraph (g)(6)(ii)(E)(*2*) of this section determine that a flaw is circumferentially oriented and potentially a result of primary water stress corrosion cracking, licensees shall perform non-visual NDE inspections of components that fall under that ASME Code Case N–722 item number. The number of components inspected must equal or exceed the number of components found to be leaking under that item number. If circumferential cracking is identified in the sample, non-visual NDE must be performed in the remaining components under that item number.

(*4*) If ultrasonic examinations of butt welds are used to meet the NDE requirements in paragraphs (g)(6)(ii)(E)(*2*) or (g)(6)(ii)(E)(*3*) of this section, they must be performed using the appropriate supplement of Section XI, Appendix VIII of the ASME Boiler and Pressure Vessel Code.

(h) *Protection and safety systems.* (1) IEEE Std. 603-1991, including the correction sheet dated January 30, 1995, which is referenced in paragraphs (h)(2) and (h)(3) of this section, is approved for incorporation by reference by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of IEEE Std. 603-1991 may be purchased from the Institute of Electrical and Electronics Engineers Service Center, 445 Hoes Lane, Piscataway, NJ 08855. The standard is also available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Md; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*. IEEE Std. 279, which is referenced in paragraph (h)(2) of this section, was approved for incorporation by reference by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR Part 51. Copies of IEEE Std. 279 are also available as indicated for IEEE Std. 603-1991.

(2) *Protection systems*. For nuclear power plants with construction permits issued after January 1, 1971, but before May 13, 1999, protection systems must meet the requirements stated in either IEEE Std. 279, "Criteria for Protection Systems for Nuclear Power Generating Stations," or in IEEE Std. 603-1991, "Criteria for Safety Systems for Nuclear Power Generating Stations," and the correction sheet dated January 30, 1995. For nuclear power plants with construction permits issued before January 1, 1971, protection systems must be consistent with their licensing basis or may meet the requirements of IEEE Std. 603-1991 and the correction sheet dated January 30, 1995.

(3) *Safety systems*. Applications filed on or after May 13, 1999, for construction permits and operating licenses under this part, and for design approvals, design certifications, and combined licenses under part 52 of this chapter, must meet the requirements for safety systems in IEEE Std. 603–1991 and the correction sheet dated January 30, 1995.

Footnotes to § 50.55a:

1 For inspections to be conducted every refueling outage and inspections conducted every other refueling outage, the initial inspection shall be performed at the next refueling outage after January 1, 2009. For inspections to be conducted once per interval, the inspections shall

begin in the interval in effect on January 1, 2009, and shall be prorated over the remaining periods and refueling outages in this interval.

2-3 [Reserved]

4 USAS and ASME Code addenda issued prior to the Winter 1977 Addenda are considered to be "in effect" or "effective" 6 months after their date of issuance *and* after they are incorporated by reference in paragraph (b) of this section. Addenda to the ASME Code issued after the Summer 1977 Addenda are considered to be "in effect" or "effective" after the date of publication of the addenda *and* after they are incorporated by reference in paragraph (b) of this section.

5 For ASME Code Editions and Addenda issued prior to the Winter 1977 Addenda, the Code Edition and Addenda applicable to the component is governed by the order or contract date for the component, not the contract date for the nuclear energy system. For the Winter 1977 Addenda and subsequent editions and addenda the method for determining the applicable Code editions and addenda is contained in Paragraph NCA 1140 of Section III of the ASME Code.

6-8 [Reserved]

9 Guidance for quality group classifications of components which are to be included in the safety analysis reports pursuant to § 50.34(a) and § 50.34(b) may be found in Regulatory Guide 1.26, "Quality Group Classifications and Standards for Water-, Steam-, and Radiological-Waste-Containing Components of Nuclear Power Plants," and in Section 3.2.2 of NUREG-0800, "Standard Review Plan for Review of Safety Analysis Reports for Nuclear Power Plants."

[36 FR 11424, June 12, 1971; 72 FR 49499, Aug. 28, 2007; 72 FR 71754, Dec. 19, 2007; 73 FR 5722, Jan. 31, 2008; 73 FR 52748, Sep. 10, 2008]

EDITORIAL NOTE: For Federal Register citations affecting § 50.55a, see the List of CFR Sections Affected.

§ 50.56 Conversion of construction permit to license; or amendment of license.

[Top of File]

Upon completion of the construction or alteration of a facility, in compliance with the terms and conditions of the construction permit and subject to any necessary testing of the facility for health or safety purposes, the Commission will, in the absence of good cause shown to the contrary issue a license of the class for which the construction permit was issued or an appropriate amendment of the license, as the case may be.

[21 FR 355, Jan. 19, 1956, as amended at 35 FR 11461, July 17, 1970]

§ 50.57 Issuance of operating license.[1]

[Top of File]

(a) Pursuant to § 50.56, an operating license may be issued by the Commission, up to the full term authorized by § 50.51, upon finding that:

(1) Construction of the facility has been substantially completed, in conformity with the construction permit and the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and

(2) The facility will operate in conformity with the application as amended, the provisions of the Act, and the rules and regulations of the Commission; and

(3) There is reasonable assurance (i) that the activities authorized by the operating license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations in this chapter; and

(4) The applicant is technically and financially qualified to engage in the activities authorized by the operating license in accordance with the regulations in this chapter. However, no finding of financial qualification is necessary for an electric utility applicant for an operating license for a utilization facility of the type described in § 50.21(b) or § 50.22.

(5) The applicable provisions of Part 140 of this chapter have been satisfied; and

(6) The issuance of the license will not be inimical to the common defense and security or to the health and safety of the public.

(b) Each operating license will include appropriate provisions with respect to any uncompleted items of construction and such limitations or conditions as are required to assure that operation during the period of the completion of such items will not endanger public health and safety.

(c) An applicant may, in a case where a hearing is held in connection with a pending proceeding under this section make a motion in writing, under this paragraph (c), for an operating license authorizing low-power testing (operation at not more than 1 percent of full power

for the purpose of testing the facility), and further operations short of full power operation. Action on such a motion by the presiding officer shall be taken with due regard to the rights of the parties to the proceedings, including the right of any party to be heard to the extent that his contentions are relevant to the activity to be authorized. Before taking any action on such a motion that any party opposes, the presiding officer shall make findings on the matters specified in paragraph (a) of this section as to which there is a controversy, in the form of an initial decision with respect to the contested activity sought to be authorized. The Director of Nuclear Reactor Regulation will make findings on all other matters specified in paragraph (a) of this section. If no party opposes the motion, the presiding officer will issue an order in accordance with § 2.319(p) authorizing the Director of Nuclear Reactor Regulation to make appropriate findings on the matters specified in paragraph (a) of this section and to issue a license for the requested operation.

[35 FR 5318, Mar. 31, 1970, as amended at 35 FR 6644, Apr. 25, 1970; 37 FR 11873, June 15, 1972; 37 FR 15142, July 28, 1972; 49 FR 35753, Sept. 12, 1984; 51 FR 7765, Mar. 6, 1986; 69 FR 2275, Jan. 14, 2004]

[1] The Commission may issue a provisional operating license pursuant to the regulations in this part in effect on March 30, 1970, for any facility for which a notice of hearing on an application for a provisional operating license or a notice of proposed issuance of a provisional operating license has been published on or before that date.

§ 50.58 Hearings and report of the Advisory Committee on Reactor Safeguards.

[Top of File]

(a) Each application for a construction permit or an operating license for a facility which is of a type described in § 50.21(b) or § 50.22, or for a testing facility, shall be referred to the Advisory Committee on Reactor Safeguards for a review and report. An application for an amendment to such a construction permit or operating license may be referred to the Advisory Committee on Reactor Safeguards for review and report. Any report shall be made part of the record of the application and available to the public, except to the extent that security classification prevents disclosure.

(b)(1) The Commission will hold a hearing after at least 30-days' notice and publication once in the FEDERAL REGISTER on each application for a construction permit for a production or utilization facility which is of a type described in § 50.21(b) or § 50.22, or for a testing facility.

(2) When a construction permit has been issued for such a facility following the holding of a public hearing, and an application is made for an operating license or for an amendment to a construction permit or operating license, the Commission may hold a hearing after at least 30-days' notice and publication once in the FEDERAL REGISTER, or, in the absence of a request therefor by any person whose interest may be affected, may issue an operating license or an amendment to a construction permit or operating license without a hearing, upon 30-days' notice and publication once in the FEDERAL REGISTER of its intent to do so.

(3) If the Commission finds, in an emergency situation, as defined in § 50.91, that no significant hazards consideration is presented by an application for an amendment to an operating license, it may dispense with public notice and comment and may issue the amendment. If the Commission finds that exigent circumstances exist, as described in § 50.91, it may reduce the period provided for public notice and comment.

(4) Both in an emergency situation and in the case of exigent circumstances, the Commission will provide 30 days notice of opportunity for a hearing, though this notice may be published after issuance of the amendment if the Commission determines that no significant hazards consideration is involved.

(5) The Commission will use the standards in § 50.92 to determine whether a significant hazards consideration is presented by an amendment to an operating license for a facility of the type described in § 50.21(b) or § 50.22, or which is a testing facility, and may make the amendment immediately effective, notwithstanding the pendency before it of a request for a hearing from any person, in advance of the holding and completion of any required hearing, where it has determined that no significant hazards consideration is involved.

(6) No petition or other request for review of or hearing on the staff's significant hazards consideration determination will be entertained by the Commission. The staff's determination is final, subject only to the Commission's discretion, on its own initiative, to review the determination.

[27 FR 12186, Dec. 8, 1962, as amended at 35 FR 11461, July 17, 1970; 39 FR 10555, Mar. 21, 1974; 51 FR 7765, Mar. 6, 1986]

§ 50.59 Changes, tests and experiments.

[Top of File]

(a) Definitions for the purposes of this section:

(1) Change means a modification or addition to, or removal from, the facility or procedures that affects a design function, method of performing or controlling the function, or an evaluation that demonstrates that intended functions will be accomplished.

(2) Departure from a method of evaluation described in the FSAR (as updated) used in establishing the design bases or in the safety analyses means:

(i) Changing any of the elements of the method described in the FSAR (as updated) unless the results of the analysis are conservative or essentially the same; or

(ii) Changing from a method described in the FSAR to another method unless that method has been approved by NRC for the intended application.

(3) Facility as described in the final safety analysis report (as updated) means:

(i) The structures, systems, and components (SSC) that are described in the final safety analysis report (FSAR) (as updated),

(ii) The design and performance requirements for such SSCs described in the FSAR (as updated), and

(iii) The evaluations or methods of evaluation included in the FSAR (as updated) for such SSCs which demonstrate that their intended function(s) will be accomplished.

(4) Final Safety Analysis Report (as updated) means the Final Safety Analysis Report (or Final Hazards Summary Report) submitted in accordance with Sec. 50.34, as amended and supplemented, and as updated per the requirements of Sec. 50.71(e) or Sec. 50.71(f), as applicable.

(5) Procedures as described in the final safety analysis report (as updated) means those procedures that contain information described in the FSAR (as updated) such as how structures, systems, and components are operated and controlled (including assumed operator actions and response times).

(6) Tests or experiments not described in the final safety analysis report (as updated) means any activity where any structure, system, or component is utilized or controlled in a manner which is either:

(i) Outside the reference bounds of the design bases as described in the final safety analysis report (as updated) or

(ii) Inconsistent with the analyses or descriptions in the final safety analysis report (as updated).

(b) This section applies to each holder of an operating license issued under this part or a combined license issued under part 52 of this chapter, including the holder of a license authorizing operation of a nuclear power reactor that has submitted the certification of permanent cessation of operations required under § 50.82(a)(1) or § 50.110 or a reactor licensee whose license has been amended to allow possession of nuclear fuel but not operation of the facility.

(c)(1) A licensee may make changes in the facility as described in the final safety analysis report (as updated), make changes in the procedures as described in the final safety analysis report (as updated), and conduct tests or experiments not described in the final safety analysis report (as updated) without obtaining a license amendment pursuant to Sec. 50.90 only if:

(i) A change to the technical specifications incorporated in the license is not required, and

(ii) The change, test, or experiment does not meet any of the criteria in paragraph (c)(2) of this section.

(2) A licensee shall obtain a license amendment pursuant to Sec. 50.90 prior to implementing a proposed change, test, or experiment if the change, test, or experiment would:

(i) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the final safety analysis report (as updated);

(ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the final safety analysis report (as updated);

(iii) Result in more than a minimal increase in the consequences of an accident previously evaluated in the final safety analysis report (as updated);

(iv) Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the final safety analysis report (as updated);

(v) Create a possibility for an accident of a different type than any previously evaluated in the final safety analysis report (as updated);

(vi) Create a possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the final safety analysis report (as updated);

(vii) Result in a design basis limit for a fission product barrier as described in the FSAR (as updated) being exceeded or altered; or

(viii) Result in a departure from a method of evaluation described in the FSAR (as updated) used in establishing the design bases or in the safety analyses.

(3) In implementing this paragraph, the FSAR (as updated) is considered to include FSAR changes resulting from evaluations performed pursuant to this section and analyses performed pursuant to Sec. 50.90 since submittal of the last update of the final safety analysis report pursuant to Sec. 50.71 of this part.

(4) The provisions in this section do not apply to changes to the facility or procedures when the applicable regulations establish more specific criteria for accomplishing such changes.

(d)(1) The licensee shall maintain records of changes in the facility, of changes in procedures, and of tests and experiments made pursuant to paragraph (c) of this section. These records must include a written evaluation which provides the bases for the determination that the change, test, or experiment does not require a license amendment pursuant to paragraph (c)(2) of this section.

(2) The licensee shall submit, as specified in § 50.4 or § 52.3 of this chapter, as applicable, a report containing a brief description of any changes, tests, and experiments, including a summary of the evaluation of each. A report must be submitted at intervals not to exceed 24 months. For combined licenses, the report must be submitted at intervals not to exceed 6 months during the period from the date of application for a combined license to the date the Commission makes its findings under 10 CFR 52.103(g).

(3) The records of changes in the facility must be maintained until the termination of an operating license issued under this part, a combined license issued under part 52 of this chapter, or the termination of a license issued under 10 CFR part 54, whichever is later. Records of changes in procedures and records of tests and experiments must be maintained for a period of 5 years.

[64 FR 53613, Oct. 4, 1999, as amended at 66 FR 64738, Dec. 14, 2001; 72 FR 49500, Aug. 28, 2007]

§ 50.60 Acceptance criteria for fracture prevention measures for lightwater nuclear power reactors for normal operation.

[Top of File]

(a) Except as provided in paragraph (b) of this section, all light-water nuclear power reactors, other than reactor facilities for which the certifications required under § 50.82(a)(1) have been submitted, must meet the fracture toughness and material surveillance program requirements for the reactor coolant pressure boundary set forth in appendices G and H to this part.

(b) Proposed alternatives to the described requirements in Appendices G and H of this part or portions thereof may be used when an exemption is granted by the Commission under § 50.12.

[48 FR 24009, May 27, 1983, as amended at 50 FR 50777, Dec. 12, 1985; 61 FR 39300, July 29, 1996]

§ 50.61 Fracture toughness requirements for protection against pressurized thermal shock events.

[Top of File]

(a) *Definitions*. For the purposes of this section:

(1) *ASME Code* means the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section III, Division I, "Rules for the Construction of Nuclear Power Plant Components," edition and addenda and any limitations and modifications thereof as specified in § 50.55a.

(2) *Pressurized Thermal Shock Event* means an event or transient in pressurized water reactors (PWRs) causing severe overcooling (thermal shock) concurrent with or followed by significant pressure in the reactor vessel.

(3) *Reactor Vessel Beltline* means the region of the reactor vessel (shell material including welds, heat affected zones and plates or forgings) that directly surrounds the effective height of the active core and adjacent regions of the reactor vessel that are predicted to experience sufficient neutron radiation damage to be considered in the selection of the most limiting material with regard to radiation damage.

(4) RT_{NDT} means the reference temperature for a reactor vessel material, under any conditions. For the reactor vessel beltline materials, RT_{NDT} must account for the effects of neutron radiation.

(5) $RT_{NDT(U)}$ means the reference temperature for a reactor vessel material in the pre-service or unirradiated condition, evaluated according to the procedures in the ASME Code, Paragraph NB–2331 or other methods approved by the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate.

(6) *EOL Fluence* means the best-estimate neutron fluence projected for a specific vessel beltline material at the clad-base-metal interface on the inside surface of the vessel at the location where the material receives the highest fluence on the expiration date of the operating license.

(7) RT_{PTS} means the reference temperature, RT_{NDT}, evaluated for the EOL Fluence for each of the vessel beltline materials, using the procedures of paragraph (c) of this section.

(8) *PTS Screening Criterion* means the value of RT_{PTS} for the vessel beltline material above which the plant cannot continue to operate

without justification.

(b) *Requirements*. (1) For each pressurized water nuclear power reactor for which an operating license has been issued under this part or a combined license has been issued under part 52 of this chapter, other than a nuclear power reactor facility for which the certifications required under § 50.82(a)(1) have been submitted, the licensee shall have projected values of RT_{PTS}, accepted by the NRC, for each reactor vessel beltline material for the EOL fluence of the material. The assessment of RT_{PTS} must use the calculation procedures given in paragraph (c)(1) of this section, except as provided in paragraphs (c)(2) and (c)(3) of this section. The assessment must specify the bases for the projected value of RT_{PTS} for each vessel beltline material, including the assumptions regarding core loading patterns, and must specify the copper and nickel contents and the fluence value used in the calculation for each beltline material. This assessment must be updated whenever there is a significant [2] change in projected values of RT_{PTS}, or upon request for a change in the expiration date for operation of the facility.

(2) The pressurized thermal shock (PTS) screening criterion is 270 F for plates, forgings, and axial weld materials, and 300 F for circumferential weld materials. For the purpose of comparison with this criterion, the value of RT_{PTS} for the reactor vessel must be evaluated according to the procedures of paragraph (c) of this section, for each weld and plate, or forging, in the reactor vessel beltline. RT_{PTS} must be determined for each vessel beltline material using the EOL fluence for that material.

(3) For each pressurized water nuclear power reactor for which the value of RT_{PTS} for any material in the beltline is projected to exceed the PTS screening criterion using the EOL fluence, the licensee shall implement those flux reduction programs that are reasonably practicable to avoid exceeding the PTS screening criterion set forth in paragraph (b)(2) of this section. The schedule for implementation of flux reduction measures may take into account the schedule for submittal and anticipated approval by the Director, Office of Nuclear Reactor Regulation, of detailed plant-specific analyses, submitted to demonstrate acceptable risk with RT_{PTS} above the screening limit due to plant modifications, new information or new analysis techniques.

(4) For each pressurized water nuclear power reactor for which the analysis required by paragraph (b)(3) of this section indicates that no reasonably practicable flux reduction program will prevent RT_{PTS} from exceeding the PTS screening criterion using the EOL fluence, the licensee shall submit a safety analysis to determine what, if any, modifications to equipment, systems, and operation are necessary to prevent potential failure of the reactor vessel as a result of postulated PTS events if continued operation beyond the screening criterion is allowed. In the analysis, the licensee may determine the properties of the reactor vessel materials based on available information, research results, and plant surveillance data, and may use probabilistic fracture mechanics techniques. This analysis must be submitted at least three years before RT_{PTS} is projected to exceed the PTS screening criterion.

(5) After consideration of the licensee's analyses, including effects of proposed corrective actions, if any, submitted in accordance with paragraphs (b)(3) and (b)(4) of this section, the Director, Office of Nuclear Reactor Regulation, may, on a case-by-case basis, approve operation of the facility with RT_{PTS} in excess of the PTS screening criterion. The Director, Office of Nuclear Reactor Regulation, will consider factors significantly affecting the potential for failure of the reactor vessel in reaching a decision.

(6) If the Director, Office of Nuclear Reactor Regulation, concludes, pursuant to paragraph (b)(5) of this section, that operation of the facility with RT_{PTS} in excess of the PTS screening criterion cannot be approved on the basis of the licensee's analyses submitted in accordance with paragraphs (b)(3) and (b)(4) of this section, the licensee shall request and receive approval by the Director, Office of Nuclear Reactor Regulation, prior to any operation beyond the criterion. The request must be based upon modifications to equipment, systems, and operation of the facility in addition to those previously proposed in the submitted analyses that would reduce the potential for failure of the reactor vessel due to PTS events, or upon further analyses based upon new information or improved methodology.

(7) If the limiting RT_{PTS} value of the plant is projected to exceed the screening criteria in paragraph (b)(2), or the criteria in paragraphs (b)(3) through (b)(6) of this section cannot be satisfied, the reactor vessel beltline may be given a thermal annealing treatment to recover the fracture toughness of the material, subject to the requirements of § 50.66. The reactor vessel may continue to be operated only for that service period within which the predicted fracture toughness of the vessel beltline materials satisfy the requirements of paragraphs (b)(2) through (b)(6) of this section, with RT_{PTS} accounting for the effects of annealing and subsequent irradiation.

(c) *Calculation of RT_{PTS}*. RT_{PTS} must be calculated for each vessel beltline material using a fluence value, f, which is the EOL fluence for the material. RT_{PTS} must be evaluated using the same procedures used to calculate RT_{NDT}, as indicated in paragraph (c)(1) of this section, and as provided in paragraphs (c)(2) and (c)(3) of this section.

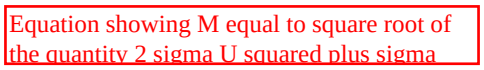
(1) Equation 1 must be used to calculate values of RT_{NDT} for each weld and plate, or forging, in the reactor vessel beltline.

Equation 1: $RT_{NDT} = RT_{NDT(U)} + M + \Delta RT_{NDT}$

(i) If a measured value of $RT_{NDT(U)}$ is not available, a generic mean value for the class[3] of material may be used if there are sufficient test results to establish a mean and a standard deviation for the class.

(ii) For generic values of weld metal, the following generic mean values must be used unless justification for different values is provided: 0ºF for welds made with Linde 80 flux, and -56°F for welds made with Linde 0091, 1092 and 124 and ARCOS B-5 weld fluxes.

(iii) *M* means the margin to be added to account for uncertainties in the values of $RT_{NDT(U)}$, copper and nickel contents, fluence and the calculational procedures. M is evaluated from Equation 2.



(A) In Equation 2, U Sig_g is the standard deviation for $RT_{NDT(U)}$. If a measured value of $RT_{NDT(U)}$ is used, then Sig_g is determined from the precision of the test method. If a measured value of $RT_{NDT(U)}$ is not available and a generic mean value for that class of materials is used, then Sig_g is the standard deviation obtained from the set of data used to establish the mean. If a generic mean value given in paragraph (c)(1)(i)(B) of this section for welds is used, then Sig_g is 17°F.

(B) In Equation 2, Sig_g is the standard deviation for RT_{NDT}. The value of Sig_g to be used is 28°F for welds and 17°F for base metal; the value of Sig_g need not exceed one-half of RT_{NDT}.

(iv) ΔRT_{NDT} is the mean value of the transition temperature shift, or change in RT_{NDT}, due to irradiation, and must be calculated using Equation 3.

Equation 3: $\Delta RT_{NDT} = (CF)f^{(0.28-0.10 \log f)}$

(A) *CF* (°F) is the chemistry factor, which is a function of copper and nickel content. CF is given in Table 1 for welds and in Table 2 for base metal (plates and forgings). Linear interpolation is permitted. In Tables 1 and 2, "Wt-% copper" and "Wt-% nickel" are the best-estimate values for the material, which will normally be the mean of the measured values for a plate or forging. For a weld, the best estimate values will normally be the mean of the measured values for a weld deposit made using the same weld wire heat number as the critical vessel weld. If these values are not available, the upper limiting values given in the material specifications to which the vessel material was fabricated may be used. If not available, conservative estimates (mean plus one standard deviation) based on generic data[4] may be used if justification is provided. If none of these alternatives are available, 0.35% copper and 1.0% nickel must be assumed.

(B) *f* is the best estimate neutron fluence, in units of 10^{19} n/cm^2 (E greater than 1 MeV), at the clad-base-metal interface on the inside surface of the vessel at the location where the material in question receives the highest fluence for the period of service in question. As specified in this paragraph, the EOL fluence for the vessel beltline material is used in calculating KRT_{PTS}.

(v) Equation 4 must be used for determining RT_{PTS} using equation 3 with EOL fluence values for determining ΔRT_{PTS}.

Equation 4: $RT_{PTS} = RT_{NDT(U)} + M + \Delta RT_{PTS}$

(2) To verify that RT_{NDT} for each vessel beltline material is a bounding value for the specific reactor vessel, licensees shall consider plant-specific information that could affect the level of embrittlement. This information includes but is not limited to the reactor vessel operating temperature and any related surveillance program[5] results.

(i) Results from the plant-specific surveillance program must be integrated into the RT_{NDT} estimate if the plant-specific surveillance data has been deemed credible as judged by the following criteria:

(A) The materials in the surveillance capsules must be those which are the controlling materials with regard to radiation embrittlement.

(B) Scatter in the plots of Charpy energy versus temperature for the irradiated and unirradiated conditions must be small enough to permit the determination of the 30-foot-pound temperature unambiguously.

(C) Where there are two or more sets of surveillance data from one reactor, the scatter of ΔRT_{NDT} values must be less than 28°F for welds and 17°F for base metal. Even if the range in the capsule fluences is large (two or more orders of magnitude), the scatter may not exceed twice those values.

(D) The irradiation temperature of the Charpy specimens in the capsule must equal the vessel wall temperature at the cladding/base metal interface within ±25°F.

(E) The surveillance data for the correlation monitor material in the capsule, if present, must fall within the scatter band of the data base for the material.

(ii)(A) Surveillance data deemed credible according to the criteria of paragraph (c)(2)(i) of this section must be used to determine a material-specific value of CF for use in Equation 3. A material-specific value of CF is determined from Equation 5.

Equation 5:

Equation 5, stating that CF equals the dividend of sums for i equal to 1 to n for two expressions. The expression in the numerator is A sub i times the quantity f sub i to the power (0.28 minus 0.10 log f sub i). The denominator expression in f sub i to the power (0.56 minus 0.20 log f sub i).

(B) In Equation 5, "n"is the number of surveillance data points, "A_i" is the measured value of ΔRT_{NDT} and "f_i" is the fluence for each surveillance data point. If there is clear evidence that the copper and nickel content of the surveillance weld differs from the vessel weld, i. e. differs from the average for the weld wire heat number associated with the vessel weld and the surveillance weld, the measured values of ΔRT_{NDT} must be adjusted for differences in copper and nickel content by multiplying them by the ratio of the chemistry factor for the vessel material to that for the surveillance weld.

(iii) For cases in which the results from a credible plant-specific surveillance program are used, the value of Sigma D symbol to be used is 14°F for welds and 8.5°F for base metal; the value of need not exceed one-half of RT_{NDT}.

(iv) The use of results from the plant-specific surveillance program may result in an RT_{NDT} that is higher or lower than those determined in paragraph (c)(1).

(3) Any information that is believed to improve the accuracy of the RT_{PTS} value significantly must be reported to the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate. Any value of RT_{PTS} that has been modified using the procedures of paragraph (c)(2) of this section is subject to the approval of the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, when used as provided in this section.

Table 1. Chemistry Factor for Weld Metals, °F

Copper, wt-%	Nickel, wt-%						
	0.00	0.20	0.40	0.60	0.80	1.00	1.20
0.00	20	20	20	20	20	20	20
0.01	20	20	20	20	20	20	20
0.02	21	26	27	27	27	27	27
0.03	22	35	41	41	41	41	41
0.04	24	43	54	54	54	54	54
0.05	26	49	67	68	68	68	68
0.06	29	52	77	82	82	82	82
0.07	32	55	85	95	95	95	95
0.08	36	58	90	106	108	108	108
0.09	40	61	94	115	122	122	122
0.10	44	65	97	122	133	135	135
0.11	49	68	101	130	144	148	148
0.12	52	72	103	135	153	161	161
0.13	58	76	106	139	162	172	176
0.14	61	79	109	142	168	182	188
0.15	66	84	112	146	175	191	200
0.16	70	88	115	149	178	199	211

0.17	75	92	119	151	184	207	221
0.18	79	95	122	154	187	214	230
0.19	83	100	126	157	191	220	238
0.20	88	104	129	160	194	223	245
0.21	92	108	133	164	197	229	252
0.22	97	112	137	167	200	232	257
0.23	101	117	140	169	203	236	263
0.24	105	121	144	173	206	239	268
0.25	110	126	148	176	209	243	272
0.26	113	130	151	180	212	246	276
0.27	119	134	155	184	216	249	280
0.28	122	138	160	187	218	251	284
0.29	128	142	164	191	222	254	287
0.30	131	146	167	194	225	257	290
0.31	136	151	172	198	228	260	293
0.32	140	155	175	202	231	263	296
0.33	144	160	180	205	234	266	299
0.34	149	164	184	209	238	269	302
0.35	153	168	187	212	241	272	305
0.36	158	172	191	216	245	275	308
0.37	162	177	196	220	248	248	311
0.38	166	182	200	223	250	281	314
0.39	171	185	203	227	254	285	317
0.40	175	189	207	231	257	288	320

Table 2. Chemistry Factor for Base Metals, ºF

Copper, wt-%	Nickel, wt-%						
	0.00	0.20	0.40	0.60	0.80	1.00	1.20
0.00	20	20	20	20	20	20	20
0.01	20	20	20	20	20	20	20
0.02	20	20	20	20	20	20	20
0.03	20	20	20	20	20	20	20
0.04	22	26	26	26	26	26	26
0.05	25	31	31	31	31	31	31
0.06	28	37	37	37	37	37	37
0.07	31	43	44	44	44	44	44
0.08	34	48	51	51	51	51	51
0.09	37	53	58	58	58	58	58
0.10	41	58	65	65	67	67	67
0.11	45	62	72	74	77	77	77
0.12	49	67	79	83	86	86	86
0.13	53	71	85	91	96	96	96
0.14	57	75	91	100	105	106	106
0.15	61	80	99	110	115	117	117
0.16	65	84	104	118	123	125	125
0.17	69	88	110	127	132	135	135
0.18	73	92	115	134	141	144	144
0.19	78	97	120	142	150	154	154

0.20	82	102	125	149	159	164	165
0.21	86	107	129	155	167	172	174
0.22	91	112	134	161	176	181	184
0.23	95	117	138	167	184	190	194
0.24	100	121	143	172	191	199	204
0.25	104	126	148	176	199	208	214
0.26	109	130	151	180	205	216	221
0.27	114	134	155	184	211	225	230
0.28	119	138	160	187	216	233	239
0.29	124	142	164	191	221	241	248
0.30	129	146	167	194	225	249	257
0.31	134	151	172	198	228	255	266
0.32	139	155	175	202	231	260	274
0.33	144	160	180	205	234	264	282
0.34	149	164	184	209	238	268	290
0.35	153	168	187	212	241	272	298
0.36	158	173	191	216	245	275	303
0.37	162	177	196	220	248	278	308
0.38	166	182	200	223	250	281	313
0.39	171	185	203	227	254	285	317
0.40	175	189	207	231	257	288	320

[60 FR 65468, Dec. 19, 1995, as amended at 61 FR 39300, July 29, 1996; 72 FR 49500, Aug. 28, 2007; 73 FR 5722, Jan. 31, 2008]

[2]Changes to RT_{PTS} values are considered significant if either the previous value or the current value, or both values, exceed the screening criterion before the expiration of the operating license or the combined license under part 52 of this chapter, including any renewed term, if applicable for the plant.

[3] The class of material for estimating RTNDT(U) is generally determined for welds by the type of welding flux (Linde 80, or other), and for base metal by the material specification.

[4] Data from reactor vessels fabricated to the same material specification in the same shop as the vessel in question and in the same time period is an example of "generic data."

[5] Surveillance program results means any data that demonstrates the embrittlement trends for the limiting beltline material, including but not limited to data from test reactors or from surveillance programs at other plants with or without surveillance program integrated per 10 CFR part 50, appendix H.

§ 50.62 Requirements for reduction of risk from anticipated transients without scram (ATWS) events for light-water-cooled nuclear power plants.

[Top of File]

(a) *Applicability*. The requirements of this section apply to all commercial light-water-cooled nuclear power plants, other than nuclear power reactor facilities for which the certifications required under § 50.82(a)(1) have been submitted.

(b) *Definition*. For purposes of this section, *Anticipated Transient Without Scram* (ATWS) means an anticipated operational occurrence as defined in appendix A of this part followed by the failure of the reactor trip portion of the protection system specified in General Design Criterion 20 of appendix A of this part.

(c) *Requirements*. (1) Each pressurized water reactor must have equipment from sensor output to final actuation device, that is diverse from the reactor trip system, to automatically initiate the auxiliary (or emergency) feedwater system and initiate a turbine trip under conditions indicative of an ATWS. This equipment must be designed to perform its function in a reliable manner and be independent (from sensor output to the final actuation device) from the existing reactor trip system.

(2) Each pressurized water reactor manufactured by Combustion Engineering or by Babcock and Wilcox must have a diverse scram system from the sensor output to interruption of power to the control rods. This scram system must be designed to perform its function in a reliable manner and be independent from the existing reactor trip system (from sensor output to interruption of power to the control rods).

(3) Each boiling water reactor must have an alternate rod injection (ARI) system that is diverse (from the reactor trip system) from sensor output to the final actuation device. The ARI system must have redundant scram air header exhaust valves. The ARI must be designed to perform its function in a reliable manner and be independent (from the existing reactor trip system) from sensor output to the final actuation device.

(4) Each boiling water reactor must have a standby liquid control system (SLCS) with the capability of injecting into the reactor pressure vessel a borated water solution at such a flow rate, level of boron concentration and boron-10 isotope enrichment, and accounting for reactor pressure vessel volume, that the resulting reactivity control is at least equivalent to that resulting from injection of 86 gallons per minute of 13 weight percent sodium pentaborate decahydrate solution at the natural boron-10 isotope abundance into a 251-inch inside diameter reactor pressure vessel for a given core design. The SLCS and its injection location must be designed to perform its function in a reliable manner. The SLCS initiation must be automatic and must be designed to perform its function in a reliable manner for plants granted a construction permit after July 26, 1984, and for plants granted a construction permit prior to July 26, 1984, that have already been designed and built to include this feature.

(5) Each boiling water reactor must have equipment to trip the reactor coolant recirculating pumps automatically under conditions indicative of an ATWS. This equipment must be designed to perform its function in a reliable manner.

(6) Information sufficient to demonstrate to the Commission the adequacy of items in paragraphs (c)(1) through (c)(5) of this section shall be submitted to the Commission as specified in § 50.4.

(d) *Implementation*. For each light-water-cooled nuclear power plant operating license issued before September 27, 2007, by 180 days after the issuance of the QA guidance for non-safety related components, each licensee shall develop and submit to the Commission, as specified in § 50.4, a proposed schedule for meeting the requirements of paragraphs (c)(1) through (c)(5) of this section. Each shall include an explanation of the schedule along with a justification if the schedule calls for final implementation later than the second refueling outage after July 26, 1984, or the date of issuance of a license authorizing operation above 5 percent of full power. A final schedule shall then be mutually agreed upon by the Commission and licensee. For each light-water-cooled nuclear power plant operating license application submitted after September 27, 2007, the applicant shall submit information in its final safety analysis report demonstrating how it will comply with paragraphs (c)(1) through (c)(5) of this section.

[49 FR 26044, June 26, 1984; 49 FR 27736, July 6, 1984, as amended at 51 FR 40310, Nov. 6, 1986; 54 FR 13362, Apr. 3, 1989; 61 FR 39301, July 29, 1996; 72 FR 49500, Aug. 28, 2007]

§ 50.63 Loss of all alternating current power.

[Top of File]

(a) *Requirements*. (1) Each light-water-cooled nuclear power plant licensed to operate under this part, each light-water-cooled nuclear power plant licensed under subpart C of 10 CFR part 52 after the Commission makes the finding under § 52.103(g) of this chapter, and each design for a light-water-cooled nuclear power plant approved under a standard design approval, standard design certification, and manufacturing license under part 52 of this chapter must be able to withstand for a specified duration and recover from a station blackout as defined in § 50.2. The specified station blackout duration shall be based on the following factors:

(i) The redundancy of the onsite emergency ac power sources;

(ii) The reliability of the onsite emergency ac power sources;

(iii) The expected frequency of loss of offsite power; and

(iv) The probable time needed to restore offsite power.

(2) The reactor core and associated coolant, control, and protection systems, including station batteries and any other necessary support systems, must provide sufficient capacity and capability to ensure that the core is cooled and appropriate containment integrity is maintained in the event of a station blackout for the specified duration. The capability for coping with a station blackout of specified duration shall be determined by an appropriate coping analysis. Licensees are expected to have the baseline assumptions, analyses, and related information used in their coping evaluations available for NRC review.

(b) *Limitation of scope*. Paragraph (c) of this section does not apply to those plants licensed to operate prior to *July 21, 1988*, if the capability to withstand station blackout was specifically addressed in the operating license proceeding and was explicitly approved by the NRC.

(c) *Implementation*. (1) *Information Submittal*. For each light-water-cooled nuclear power plant licensed to operate on or before July 21, 1988, the licensee shall submit the information defined below to the Director of the Office of Nuclear Reactor Regulation by April 17, 1989. For each light-water-cooled nuclear power plant licensed to operate after July 21, 1988, but before September 27, 2007, the licensee shall submit the information defined in this section to the Director of the Office of Nuclear Reactor Regulation, by 270 days after the date of license issuance. For each light-water-cooled
nuclear power plant operating license application submitted after September 27, 2007, the applicant shall submit the information defined below in its final safety analysis report.

(i) A proposed station blackout duration to be used in determining compliance with paragraph (a) of this section, including a justification for the selection based on the four factors identified in paragraph (a) of this section;

(ii) A description of the procedures that will be implemented for station blackout events for the duration determined in paragraph (c)(1)(i) of this section and for recovery therefrom; and

(iii) A list of modifications to equipment and associated procedures, if any, necessary to meet the requirements of paragraph (a) of this section, for the specified station blackout duration determined in paragraph (c)(1)(i) of this section, and a proposed schedule for implementing the stated modifications.

(2) *Alternate ac source*: The alternate ac power source(s), as defined in § 50.2, will constitute acceptable capability to withstand station blackout provided an analysis is performed which demonstrates that the plant has this capability from onset of the station blackout until the alternate ac source(s) and required shutdown equipment are started and lined up to operate. The time required for startup and alignment of the alternate ac power source(s) and this equipment shall be demonstrated by test. Alternate ac source(s) serving a multiple unit site where onsite emergency ac sources are not shared between units must have, as a minimum, the capacity and capability for coping with a station blackout in any of the units. At sites where onsite emergency ac sources are shared between units, the alternate ac source(s) must have the capacity and capability as required to ensure that all units can be brought to and maintained in safe shutdown (non-DBA) as defined in § 50.2. If the alternate ac source(s) meets the above requirements and can be demonstrated by test to be available to power the shutdown buses within 10 minutes of the onset of station blackout, then no coping analysis is required.

(3) *Regulatory Assessment*: After consideration of the information submitted in accordance with paragraph (c)(1) of this section, the Director, Office of Nuclear Reactor Regulation, will notify the licensee of the Director's conclusions regarding the adequacy of the proposed specified station blackout duration, the proposed equipment modifications and procedures, and the proposed schedule for implementing the procedures and modifications for compliance with paragraph (a) this section.

(4) *Implementation Schedule*: For each light-water-cooled nuclear power plant licensed to operate on or before June 21, 1988, the licensee shall, within 30 days of the notification provided in accordance with paragraph (c)(3) of this section, submit to the Director of the Office of Nuclear Reactor Regulation a schedule commitment for implementing any equipment and associated procedure modifications necessary to meet the requirements of paragraph (a) of this section. This submittal must include an explanation of the schedule and a justification if the schedule does not provide for completion of the modifications within two years of the notification provided in accordance with paragraph (c)(3) of this section. A final schedule for implementing modifications necessary to comply with the requirements of paragraph (a) of this section will be established by the NRC staff in consultation and coordination with the affected licensee.

[53 FR 23215, June 21, 1988 as amended at 63 FR 50480, Sept. 22, 1998; 72 FR 49501, Aug. 28, 2007]

§ 50.64 Limitations on the use of highly enriched uranium (HEU) in domestic non-power reactors.

[Top of File]

(a) *Applicability*. The requirements of this section apply to all non-power reactors.

(b) *Requirements*. (1) The Commission will not issue a construction permit after March 27, 1986 for a non-power reactor where the applicant proposes to use highly enriched uranium (HEU) fuel, unless the applicant demonstrates that the proposed reactor will have a unique purpose as defined in § 50.2.

(2) Unless the Commission has determined, based on a request submitted in accordance with paragraph (c)(1) of this section, that the non-power reactor has a unique purpose, each licensee authorized to possess and use HEU fuel in connection with the reactor's operation shall:

(i) Not initiate acquisition of additional HEU fuel, if low enriched uranium (LEU) fuel acceptable to the Commission for that reactor is available when it proposes that acquisition; and

(ii) Replace all HEU fuel in its possession with available LEU fuel acceptable to the Commission for that reactor, in accordance with a schedule determined pursuant to paragraph (c)(2) of this section.

(3) If not required by paragraphs (b) (1) and (2) of this section to use LEU fuel, the applicant or licensee must use HEU fuel of enrichment as close to 20% as is available and acceptable to the Commisson.

(c) *Implementation*. (1) Any request by a licensee for a determination that a non-power reactor has a unique purpose as defined in § 50.2 should be submitted with supporting documentation to the Director of the Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555, by September 29, 1986.

(2) (i) By March 27, 1987 and at 12-month intervals thereafter, each licensee of a non-power reactor authorized to possess and use HEU fuel shall develop and submit to the Director of the Office of Nuclear Reactor Regulation a written proposal for meeting the requirements of paragraph (b) (2) or (3) of this section. The licensee shall include in the proposal a certification that Federal Government funding for conversion is available through the Department of Energy (DOE) or other appropriate Federal Agency. The licensee shall also include in the proposal a schedule for conversion, based upon availability of replacement fuel acceptable to the Commisson for that reactor and upon consideration of other factors such as the availability of shipping casks, implementation of arrangements for the available financial support, and reactor usage.

(ii) If Federal Government funding for conversion cannot be certified, the proposal's contents may be limited to a statement of this fact. If a statement of non-availability of Federal Government funding for conversion is submitted by a licensee, then it shall be required to resubmit a proposal for meeting the requirements of paragraph (b) (2) or (3) of this section at 12-month intervals.

(iii) The proposal shall include, to the extent required to effect the conversion, all necessary changes in the license, facility, or procedures. Supporting safety analyses should be provided so as to meet the schedule established for conversion. As long as Federal Government funding for conversion is not available, the resubmittal may be a reiteration of the original proposal. The Director of the Office of Nuclear Reactor Regulation shall review the proposal and confirm the status of Federal Government funding for conversion and, if a schedule for conversion has been submitted by the licensee, will then determine a final schedule.

(3) After review of the safety analysis required by paragraph (c)(2), the Director of the Office of Nuclear Reactor Regulation will issue an appropriate enforcement order directing both the conversion and, to the extent consistent with protection of the public health and safety, any necessary changes to the license, facility, or procedures.

[51 FR 6519, Feb. 25, 1986]

§ 50.65 Requirements for monitoring the effectiveness of maintenance at nuclear power plants.

[Top of File]

The requirements of this section are applicable during all conditions of plant operation, including normal shutdown operations.

(a)(1) Each holder of an operating license for a nuclear power plant under this part and each holder of a combined license under part 52 of this chapter after the Commission makes the finding under § 52.103(g) of this chapter, shall monitor the performance or condition of structures, systems, or components, against licensee-established goals, in a manner sufficient to provide reasonable assurance that these structures, systems, and components, as defined in paragraph (b) of this section, are capable of fulfilling their intended functions. These goals shall be established commensurate with safety and, where practical, take into account industrywide operating experience. When the performance or condition of a structure, system, or component does not meet established goals, appropriate corrective action shall be taken. For a nuclear power plant for which the licensee has submitted the certifications specified in § 50.82(a)(1) or 52.110(a)(1) of this chapter, as applicable, this section shall only apply to the extent that the licensee shall monitor the performance or condition of all structures, systems, or components associated with the storage, control, and maintenance of spent fuel in a safe condition, in a manner sufficient to provide reasonable assurance that these structures, systems, and components are capable of fulfilling their intended functions.

(2) Monitoring as specified in paragraph (a)(1) of this section is not required where it has been demonstrated that the performance or condition of a structure, system, or component is being effectively controlled through the performance of appropriate preventive maintenance, such that the structure, system, or component remains capable of performing its intended function.

(3) Performance and condition monitoring activities and associated goals and preventive maintenance activities shall be evaluated at least every refueling cycle provided the interval between evaluations does not exceed 24 months. The evaluations shall take into account, where practical, industry-wide operating experience. Adjustments shall be made where necessary to ensure that the objective of preventing failures of structures, systems, and components through maintenance is appropriately balanced against the objective of minimizing unavailability of structures, systems, and components due to monitoring or preventive maintenance.

(4) Before performing maintenance activities (including but not limited to surveillance, post-maintenance testing, and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. The scope of the assessment may be limited to structures, systems, and components that a risk-informed evaluation process has shown to be significant to public health and safety.

(b) The scope of the monitoring program specified in paragraph (a)(1) of this section shall include safety related and nonsafety related structures, systems, and components, as follows:

(1) Safety-related structures, systems and components that are relied upon to remain functional during and following design basis events to ensure the integrity of the reactor coolant pressure boundary, the capability to shut down the reactor and maintain it in a safe shutdown condition, or the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposure comparable to the guidelines in Sec. 50.34(a)(1), Sec. 50.67(b)(2), or Sec. 100.11 of this chapter, as applicable.

(2) Nonsafety related structures, systems, or components:

(i) That are relied upon to mitigate accidents or transients or are used in plant emergency operating procedures (EOPs); or

(ii) Whose failure could prevent safety-related structures, systems, and components from fulfilling their safety-related function; or

(iii) Whose failure could cause a reactor scram or actuation of a safety-related system.

(c) The requirements of this section shall be implemented by each licensee no later than July 10, 1996.

[56 FR 31324, July 10, 1991, as amended at 58 FR 33996, June 23, 1993; 61 FR 39301, July 29, 1996; 61 FR 65173, Dec. 11, 1996; 62 FR 47271, Sept. 8, 1997; 62 FR 59276, Nov. 3, 1997; 64 FR 38557, July 19, 1999; 64 FR 72001, Dec. 23, 1999; 72 FR 49501, Aug. 28, 2007]

§ 50.66 Requirements for thermal annealing of the reactor pressure vessel.

(a) For those light water nuclear power reactors where neutron radiation has reduced the fracture toughness of the reactor vessel materials, a thermal annealing may be applied to the reactor vessel to recover the fracture toughness of the material. The use of a thermal annealing treatment is subject to the requirements in this section. A report describing the licensee's plan for conducting the thermal annealing must be submitted in accordance with § 50.4 at least three years prior to the date at which the limiting fracture toughness criteria in § 50.61 or appendix G to part 50 would be exceeded. Within three years of the submittal of the Thermal Annealing Report and at least thirty days prior to the start of the thermal annealing, the NRC will review the Thermal Annealing Report and make available the results of its evaluation at the NRC Web site, *http://www.nrc.gov.* The licensee may begin the thermal anneal after:

(1) Submitting the Thermal Annealing Report required by paragraph (b) of this section;

(2) The NRC makes available the results of its evaluation of the Thermal Annealing Report at the NRC Web site, *http://www.nrc.gov;* and

(3) The requirements of paragraph (f)(1) of this section have been satisfied.

(b) *Thermal Annealing Report*. The Thermal Annealing Report must include: a Thermal Annealing Operating Plan; a Requalification Inspection and Test Program; a Fracture Toughness Recovery and Reembrittlement Trend Assurance Program; and Identification of Unreviewed Safety Questions and Technical Specification Changes.

(1) Thermal Annealing Operating Plan.

The thermal annealing operating plan must include:

(i) A detailed description of the pressure vessel and all structures and components that are expected to experience significant thermal or stress effects during the thermal annealing operation;

(ii) An evaluation of the effects of mechanical and thermal stresses and temperatures on the vessel, containment, biological shield, attached piping and appurtenances, and adjacent equipment and components to demonstrate that operability of the reactor will not be detrimentally affected. This evaluation must include:

(A) Detailed thermal and structural analyses to establish the time and temperature profile of the annealing operation. These analyses must include heatup and cooldown rates, and must demonstrate that localized temperatures, thermal stress gradients, and subsequent residual stresses will not result in unacceptable dimensional changes or distortions in the vessel, attached piping and appurtenances, and that the thermal annealing cycle will not result in unacceptable degradation of the fatigue life of these components.

(B) The effects of localized high temperatures on degradation of the concrete adjacent to the vessel and changes in thermal and mechanical properties, if any, of the reactor vessel insulation, and on detrimental effects, if any, on containment and the biological shield. If the design temperature limitations for the adjacent concrete structure are to be exceeded during the thermal annealing operation, an acceptable maximum temperature for the concrete must be established for the annealing operation using appropriate test data.

(iii) The methods, including heat source, instrumentation and procedures proposed for performing the thermal annealing. This shall include any special precautions necessary to minimize occupational exposure, in accordance with the As Low As Reasonably Achievable (ALARA) principle and the provisions of § 20.1206.

(iv) The proposed thermal annealing operating parameters, including bounding conditions for temperatures and times, and heatup and cooldown schedules.

(A) The thermal annealing time and temperature parameters selected must be based on projecting sufficient recovery of fracture toughness, using the procedures of paragraph (e) of this section, to satisfy the requirements of § 50.60 and § 50.61 for the proposed period of operation addressed in the application.

(B) The time and temperature parameters evaluated as part of the thermal annealing operating plan, and supported by the evaluation results of paragraph (b)(1)(ii) of this section, represent the bounding times and temperatures for the thermal annealing operation. If these bounding conditions for times and temperatures are violated during the thermal annealing operation, then the annealing operation is considered not in accordance with the Thermal Annealing Operating Plan, as required by paragraph (c)(1) of this section, and the licensee must comply with paragraph (c)(2) of this section.

(2) Requalification Inspection and Test Program. The inspection and test program to requalify the annealed reactor vessel must include the detailed monitoring, inspections, and tests proposed to demonstrate that the limitations on temperatures, times and temperature profiles, and stresses evaluated for the proposed thermal annealing conditions of paragraph (b)(1)(iv) of this section have not been exceeded, and to determine the thermal annealing time and temperature to be used in quantifying the fracture toughness recovery. The requalification inspection and test program must demonstrate that the thermal annealing operation has not degraded the reactor vessel, attached piping or appurtenances, or the adjacent concrete structures to a degree that could affect the safe operation of the reactor.

(3) Fracture Toughness Recovery and Reembrittlement Trend Assurance Program. The percent recovery of RT_{NDT} and Charpy upper-shelf energy due to the thermal annealing treatment must be determined based on the time and temperature of the actual vessel thermal anneal. The recovery of RT_{NDT} and Charpy upper-shelf energy provide the basis for establishing the post-anneal RT_{NDT} and Charpy upper-shelf energy for each vessel material. Changes in the RT_{NDT} and Charpy upper-shelf energy with subsequent plant operation must be

determined using the post-anneal values of these parameters in conjunction with the projected reembrittlement trend determined in accordance with paragraph (b)(3)(ii) of this section. Recovery and reembrittlement evaluations shall include:

(i) Recovery Evaluations. (A) The percent recovery of both RT_{NDT} and Charpy upper-shelf energy must be determined by one of the procedures described in paragraph (e) of this section, using the proposed lower bound thermal annealing time and temperature conditions described in the operating plan.

(B) If the percent recovery is determined from testing surveillance specimens or from testing materials removed from the reactor vessel, then it shall be demonstrated that the proposed thermal annealing parameters used in the test program are equal to or bounded by those used in the vessel annealing operation.

(C) If generic computational methods are used, appropriate justification must be submitted as a part of the application.

(ii) Reembrittlement Evaluations. (A) The projected post-anneal reembrittlement of RT_{NDT} must be calculated using the procedures in § 50.61(c), or must be determined using the same basis as that used for the pre-anneal operating period. The projected change due to post-anneal reembrittlement for Charpy upper-shelf energy must be determined using the same basis as that used for the pre-anneal operating period.

(B) The post-anneal reembrittlement trend of both RT_{NDT} and Charpy upper-shelf energy must be estimated, and must be monitored using a surveillance program defined in the Thermal Annealing Report and which conforms to the intent of Appendix H of this part, "Reactor Vessel Material Surveillance Program Requirements."

(4) Identification of Unreviewed Safety Questions and Technical Specification Changes. Any changes to the facility as described in the updated final safety analysis report constituting unreviewed safety questions, and any changes to the technical specifications, which are necessary to either conduct the thermal annealing or operate the nuclear power reactor following the annealing, must be identified. The section shall demonstrate that the Commission's requirements continue to be complied with, and that there is reasonable assurance of adequate protection to the public health and safety following the changes.

(c) *Completion or Termination of Thermal Annealing*. (1) If the thermal annealing was completed in accordance with the Thermal Annealing Operating Plan and the Requalification Inspection and Test Program, the licensee shall so confirm in writing to the Director, Office of Nuclear Reactor Regulation. The licensee may restart its reactor after the requirements of paragraph (f)(2) of this section have been met.

(2) If the thermal annealing was completed but the annealing was not performed in accordance with the Thermal Annealing Operating Plan and the Requalification Inspection and Test Program, the licensee shall submit a summary of lack of compliance with the Thermal Annealing Operating Plan and the Requalification Inspection and Test Program and a justification for subsequent operation to the Director, Office of Nuclear Reactor Regulation. Any changes to the facility as described in the updated final safety analysis report which are attributable to the noncompliances and constitute unreviewed safety questions, and any changes to the technical specifications which are required as a result of the noncompliances, shall also be identified.

(i) If no unreviewed safety questions or changes to technical specifications are identified, the licensee may restart its reactor after the requirements of paragraph (f)(2) of this section have been met.

(ii) If any unreviewed safety questions or changes to technical specifications are identified, the licensee may not restart its reactor until approval is obtained from the Director, Office of Nuclear Reactor Regulation and the requirements of paragraph (f)(2) of this section have been met.

(3) If the thermal annealing was terminated prior to completion, the licensee shall immediately notify the NRC of the premature termination of the thermal anneal.

(i) If the partial annealing was otherwise performed in accordance with the Thermal Annealing Operating Plan and relevant portions of the Requalification Inspection and Test Program, and the licensee does not elect to take credit for any recovery, the licensee need not submit the Thermal Annealing Results Report required by paragraph (d) of this section but instead shall confirm in writing to the Director, Office of Nuclear Reactor Regulation that the partial annealing was otherwise performed in accordance with the Thermal Annealing Operating Plan and relevant portions of the Requalification Inspection and Test Program. The licensee may restart its reactor after the requirements of paragraph (f)(2) of this section have been met.

(ii) If the partial annealing was otherwise performed in accordance with the Thermal Annealing Operating Plan and relevant portions of the Requalification Inspection and Test Program, and the licensee elects to take full or partial credit for the partial annealing, the licensee shall confirm in writing to the Director, Office of Nuclear Reactor Regulation that the partial annealing was otherwise performed in compliance with the Thermal Annealing Operating Plan and relevant portions of the Requalification Inspection and Test Program. The licensee may restart its reactor after the requirements of paragraph (f)(2) of this section have been met.

(iii) If the partial annealing was not performed in accordance with the Thermal Annealing Operating Plan and relevant portions of the Requalification Inspection and Test Program, the licensee shall submit a summary of lack of compliance with the Thermal Annealing Operating Plan and the Requalification Inspection and Test Program and a justification for subsequent operation to the Director, Office of Nuclear Reactor Regulation. Any changes to the facility as described in the updated final safety analysis report which are attributable to the noncompliances and constitute unreviewed safety questions, and any changes to the technical specifications which are required as a result of the noncompliances, shall also be identified.

(A) If no unreviewed safety questions or changes to technical specifications are identified, the licensee may restart its reactor after the

requirements of paragraph (f)(2) of this section have been met.

(B) If any unreviewed safety questions or changes to technical specifications are identified, the licensee may not restart its reactor until approval is obtained from the Director, Office of Nuclear Reactor Regulation and the requirements of paragraph (f)(2) of this section have been met.

(d) *Thermal Annealing Results Report*. Every licensee that either completes a thermal annealing, or that terminates an annealing but elects to take full or partial credit for the annealing, shall provide the following information within three months of completing the thermal anneal, unless an extension is authorized by the Director, Office of Nuclear Reactor Regulation:

(1) The time and temperature profiles of the actual thermal annealing;

(2) The post-anneal RT_{NDT} and Charpy upper-shelf energy values of the reactor vessel materials for use in subsequent reactor operation;

(3) The projected post-anneal reembrittlement trends for both RT_{NDT} and Charpy upper-shelf energy; and

(4) The projected values of RT_{PTS} and Charpy upper-shelf energy at the end of the proposed period of operation addressed in the Thermal Annealing Report.

(e) *Procedures for Determining the Recovery of Fracture Toughness*. The procedures of this paragraph must be used to determine the percent recovery of RT_{NDT}, R_t, and percent recovery of Charpy upper-shelf energy, R_u. In all cases, R_t and R_u may not exceed 100.

(1) For those reactors with surveillance programs which have developed credible surveillance data as defined in § 50.61, percent recovery due to thermal annealing (R_t and R_u) must be evaluated by testing surveillance specimens that have been withdrawn from the surveillance program and that have been annealed under the same time and temperature conditions as those given the beltline material.

(2) Alternatively, the percent recovery due to thermal annealing (R_t and R_u) may be determined from the results of a verification test program employing materials removed from the beltline region of the reactor vessel[6] and that have been annealed under the same time and temperature conditions as those given the beltline material.

(3) Generic computational methods may be used to determine recovery if adequate justification is provided.

(f) *Public information and participation*. (1) Upon receipt of a Thermal Annealing Report, and a minimum of 30 days before the licensee starts thermal annealing, the Commission shall:

(i) Notify and solicit comments from local and State governments in the vicinity of the site where the thermal annealing will take place and any Indian Nation or other indigenous people that have treaty or statutory rights that could be affected by the thermal annealing,

(ii) Publish a notice of a public meeting in the FEDERAL REGISTER and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, to solicit comments from the public, and

(iii) Hold a public meeting on the licensee's Thermal Annealing Report.

(2) Within 15 days after the NRC's receipt of the licensee submissions required by paragraphs (c)(1), (c)(2) and (c)(3)(i) through (iii) of this section, the NRC staff shall make available at the NRC Web site, *http://www.nrc.gov,* a summary of its inspection of the licensee's thermal annealing, and the Commission shall hold a public meeting:

(i) For the licensee to explain to NRC and the public the results of the reactor pressure vessel annealing,

(ii) for the NRC to discuss its inspection of the reactor vessel annealing, and

(iii) for the NRC to receive public comments on the annealing.

(3) Within 45 days of NRC's receipt of the licensee submissions required by paragraphs (c)(1), (c)(2) and (c)(3)(i) through (iii) of this section, the NRC staff shall complete full documentation of its inspection of the licensee's annealing process and make available this documentation at the NRC Web site, *http://www.nrc.gov.*

[60 FR 65472, Dec. 19, 1995, as amended at 64 FR 48952, Sept. 9, 1999; 64 FR 53613, Oct. 4, 1999]

Effective Date Note: See 64 FR 53582, Oct. 4, 1999, for effectiveness of Sec. 50.66 (b) introductory text, paragraphs (b)(4), (c)(2), and (c)(3)(iii).

[6] For those cases where materials are removed from the beltline of the pressure vessel, the stress limits of the applicable portions of the ASME Code Section III must be satisfied, including consideration of fatigue and corrosion, regardless of the Code of record for the vessel design.

§ 50.67 Accident source term.

[Top of File]

(a) *Applicability.* The requirements of this section apply to all holders of operating licenses issued prior to January 10, 1997, and holders of renewed licenses under part 54 of this chapter whose initial operating license was issued prior to January 10, 1997, who seek to revise the current accident source term used in their design basis radiological analyses.

(b) *Requirements.* (1) A licensee who seeks to revise its current accident source term in design basis radiological consequence analyses shall apply for a license amendment under § 50.90. The application shall contain an evaluation of the consequences of applicable design basis accidents[1] previously analyzed in the safety analysis report.

(2) The NRC may issue the amendment only if the applicant's analysis demonstrates with reasonable assurance that:

(i) An individual located at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 0.25 Sv (25 rem)[2] total effective dose equivalent (TEDE).

(ii) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage), would not receive a radiation dose in excess of 0.25 Sv (25 rem) total effective dose equivalent (TEDE).

(iii) Adequate radiation protection is provided to permit access to and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 0.05 Sv (5 rem) total effective dose equivalent (TEDE) for the duration of the accident.

[64 FR 72001, Dec. 23, 1999]

[1] The fission product release assumed for these calculations should be based upon a major accident, hypothesized for purposes of design analyses or postulated from considerations of possible accidental events, that would result in potential hazards not exceeded by those from any accident considered credible. Such accidents have generally been assumed to result in substantial meltdown of the core with subsequent release of appreciable quantities of fission products.

[2] The use of 0.25 Sv (25 rem) TEDE is not intended to imply that this value constitutes an acceptable limit for emergency doses to the public under accident conditions. Rather, this 0.25 Sv (25 rem) TEDE value has been stated in this section as a reference value, which can be used in the evaluation of proposed design basis changes with respect to potential reactor accidents of exceedingly low probability of occurrence and low risk of public exposure to radiation.

§ 50.68 Criticality accident requirements.

[Top of File]

(a) Each holder of a construction permit or operating license for a nuclear power reactor issued under this part or a combined license for a nuclear power reactor issued under Part 52 of this chapter, shall comply with either 10 CFR 70.24 of this chapter or the requirements in paragraph (b) of this section.

(b) Each licensee shall comply with the following requirements in lieu of maintaining a monitoring system capable of detecting a criticality as described in 10 CFR 70.24:

(1) Plant procedures shall prohibit the handling and storage at any one time of more fuel assemblies than have been determined to be safely subcritical under the most adverse moderation conditions feasible by unborated water.

(2) The estimated ratio of neutron production to neutron absorption and leakage (k-effective) of the fresh fuel in the fresh fuel storage racks shall be calculated assuming the racks are loaded with fuel of the maximum fuel assembly reactivity and flooded with unborated water and must not exceed 0.95, at a 95 percent probability, 95 percent confidence level. This evaluation need not be performed if administrative controls and/or design features prevent such flooding or if fresh fuel storage racks are not used.

(3) If optimum moderation of fresh fuel in the fresh fuel storage racks occurs when the racks are assumed to be loaded with fuel of the maximum fuel assembly reactivity and filled with low-density hydrogenous fluid, the k-effective corresponding to this optimum moderation must not exceed 0.98, at a 95 percent probability, 95 percent confidence level. This evaluation need not be performed if administrative controls and/or design features prevent such moderation or if fresh fuel storage racks are not used.

(4) If no credit for soluble boron is taken, the k-effective of the spent fuel storage racks loaded with fuel of the maximum fuel assembly reactivity must not exceed 0.95, at a 95 percent probability, 95 percent confidence level, if flooded with unborated water. If credit is taken for soluble boron, the k-effective of the spent fuel storage racks loaded with fuel of the maximum fuel assembly reactivity must not exceed 0.95, at a 95 percent probability, 95 percent confidence level, if flooded with borated water, and the k-effective must remain below 1.0 (subcritical), at a 95 percent probability, 95 percent confidence level, if flooded with unborated water.

(5) The quantity of SNM, other than nuclear fuel stored onsite, is less than the quantity necessary for a critical mass.

(6) Radiation monitors are provided in storage and associated handling areas when fuel is present to detect excessive radiation levels and to initiate appropriate safety actions.

(7) The maximum nominal U-235 enrichment of the fresh fuel assemblies is limited to five (5.0) percent by weight.

(8) The FSAR is amended no later than the next update which § 50.71(e) of this part requires, indicating that the licensee has chosen to comply with § 50.68(b).

(c) While a spent fuel transportation package approved under Part 71 of this chapter or spent fuel storage cask approved under Part 72 of this chapter is in the spent fuel pool:

(1) The requirements in § 50.68(b) do not apply to the fuel located within that package or cask; and

(2) The requirements in Part 71 or 72 of this chapter, as applicable, and the requirements of the Certificate of Compliance for that package or cask, apply to the fuel within that package or cask.

[63 FR 63130, Nov. 12, 1998; as amended at 71 FR 66648, Nov. 16, 2006]

§ 50.69 Risk-informed categorization and treatment of structures, systems and components for nuclear power reactors.

[Top of File]

a) Definitions.

Risk-Informed Safety Class (RISC)-1 structures, systems, and components (SSCs) means safety-related SSCs that perform safety significant functions.

Risk-Informed Safety Class (RISC)-2 structures, systems and components (SSCs) means nonsafety-related SSCs that perform safety significant functions.

Risk-Informed Safety Class (RISC)-3 structures, systems and components (SSCs) means safety-related SSCs that perform low safety significant functions.

Risk-Informed Safety Class (RISC)-4 structures, systems and components (SSCs) means nonsafety-related SSCs that perform low safety significant functions.

Safety significant function means a function whose degradation or loss could result in a significant adverse effect on defense-in-depth, safety margin, or risk.

(b) Applicability and scope of risk-informed treatment of SSCs and submittal/approval process. (1) A holder of a license to operate a light water reactor (LWR) nuclear power plant under this part; a holder of a renewed LWR license under part 54 of this chapter; an applicant for a construction permit or operating license under this part; or an applicant for a design approval, a combined license, or manufacturing license under part 52 of this chapter; may voluntarily comply with the requirements in this section as an alternative to compliance with the following requirements for RISC-3 and RISC-4 SSCs:

(i) 10 CFR part 21.

(ii) The portion of 10 CFR 50.46a(b) that imposes requirements to conform to Appendix B to 10 CFR part 50.

(iii) 10 CFR 50.49.

(iv) 10 CFR 50.55(e).

(v) The inservice testing requirements in 10 CFR 50.55a(f); the inservice inspection, and repair and replacement (with the exception of fracture toughness), requirements for ASME Class 2 and Class 3 SSCs in 10 CFR 50.55a(g); and the electrical component quality and qualification requirements in Section 4.3 and 4.4 of IEEE 279, and Sections 5.3 and 5.4 of IEEE 603-1991, as incorporated by reference in 10 CFR 50.55a(h).

(vi) 10 CFR 50.65, except for paragraph (a)(4).

(vii) 10 CFR 50.72.

(viii) 10 CFR 50.73.

(ix) Appendix B to 10 CFR part 50.

(x) The Type B and Type C leakage testing requirements in both Options A and B of Appendix J to 10 CFR part 50, for penetrations and valves meeting the following criteria:

(A) Containment penetrations that are either 1-inch nominal size or less, or continuously pressurized.

(B) Containment isolation valves that meet one or more of the following criteria:

(1) The valve is required to be open under accident conditions to prevent or mitigate core damage events;

(2) The valve is normally closed and in a physically closed, water- filled system;

(3) The valve is in a physically closed system whose piping pressure rating exceeds the containment design pressure rating and is not connected to the reactor coolant pressure boundary; or

(4) The valve is 1-inch nominal size or less.

(xi) Appendix A to part 100, Sections VI(a)(1) and VI(a)(2), to the extent that these regulations require qualification testing and specific engineering methods to demonstrate that SSCs are designed to withstand the Safe Shutdown Earthquake and Operating Basis Earthquake.

(2) A licensee voluntarily choosing to implement this section shall submit an application for license amendment under § 50.90 that contains the following information:

(i) A description of the process for categorization of RISC-1, RISC-2, RISC-3 and RISC-4 SSCs.

(ii) A description of the measures taken to assure that the quality and level of detail of the systematic processes that evaluate the plant for internal and external events during normal operation, low power, and shutdown (including the plant-specific probabilistic risk assessment (PRA), margins-type approaches, or other systematic evaluation techniques used to evaluate severe accident vulnerabilities) are adequate for the categorization of SSCs.

(iii) Results of the PRA review process conducted to meet § 50.69(c)(1)(i).

(iv) A description of, and basis for acceptability of, the evaluations to be conducted to satisfy § 50.69(c)(1)(iv). The evaluations must include the effects of common cause interaction susceptibility, and the potential impacts from known degradation mechanisms for both active and passive functions, and address internally and externally initiated events and plant operating modes (e.g., full power and shutdown conditions).

(3) The Commission will approve a licensee's implementation of this section if it determines that the process for categorization of RISC-1, RISC-2, RISC-3, and RISC-4 SSCs satisfies the requirements of § 50.69(c) by issuing a license amendment approving the licensee's use of this section.

(4) An applicant choosing to implement this section shall include the information in § 50.69(b)(2) as part of application. The Commission will approve an applicant's implementation of this section if it determines that the process for categorization of RISC-1, RISC-2, RISC-3, and RISC-4 SSCs satisfies the requirements of § 50.69(c).

(c) SSC Categorization Process. (1) SSCs must be categorized as RISC-1, RISC-2, RISC-3, or RISC-4 SSCs using a categorization process that determines if an SSC performs one or more safety significant functions and identifies those functions. The process must:

(i) Consider results and insights from the plant-specific PRA. This PRA must at a minimum model severe accident scenarios resulting from internal initiating events occurring at full power operation. The PRA must be of sufficient quality and level of detail to support the categorization process, and must be subjected to a peer review process assessed against a standard or set of acceptance criteria that is endorsed by the NRC.

(ii) Determine SSC functional importance using an integrated, systematic process for addressing initiating events (internal and external), SSCs, and plant operating modes, including those not modeled in the plant-specific PRA. The functions to be identified and considered include design bases functions and functions credited for mitigation and prevention of severe accidents. All aspects of the integrated, systematic process used to characterize SSC importance must reasonably reflect the current plant configuration and operating practices, and applicable plant and industry operational experience.

(iii) Maintain defense-in-depth.

(iv) Include evaluations that provide reasonable confidence that for SSCs categorized as RISC-3, sufficient safety margins are maintained and that any potential increases in core damage frequency (CDF) and large early release frequency (LERF) resulting from changes in treatment permitted by implementation of § § 50.69(b)(1) and (d)(2) are small.

(v) Be performed for entire systems and structures, not for selected components within a system or structure.

(2) The SSCs must be categorized by an Integrated Decision-Making Panel (IDP) staffed with expert, plant-knowledgeable members whose expertise includes, at a minimum, PRA, safety analysis, plant operation, design engineering, and system engineering.

(d) Alternative treatment requirements.--(1) RISC-1 and RISC 2 SSCs. The licensee or applicant shall ensure that RISC-1 and RISC-2 SSCs perform their functions consistent with the categorization process assumptions by evaluating treatment being applied to these SSCs to ensure that it supports the key assumptions in the categorization process that relate to their assumed performance.

(2) RISC-3 SSCs. The licensee or applicant shall ensure, with reasonable confidence, that RISC-3 SSCs remain capable of performing their safety-related functions under design basis conditions, including seismic conditions and environmental conditions and effects throughout their service life. The treatment of RISC-3 SSCs must be consistent with the categorization process. Inspection and testing, and corrective action shall be provided for RISC-3 SSCs.

(i) Inspection and testing. Periodic inspection and testing activities must be conducted to determine that RISC-3 SSCs will remain capable of performing their safety-related functions under design basis conditions; and

(ii) Corrective action. Conditions that would prevent a RISC-3 SSC from performing its safety-related functions under design basis conditions must be corrected in a timely manner. For significant conditions adverse to quality, measures must be taken to provide reasonable confidence that the cause of the condition is determined and corrective action taken to preclude repetition.

(e) Feedback and process adjustment.--(1) RISC-1, RISC-2, RISC-3 and RISC-4 SSCs. The licensee shall review changes to the plant, operational practices, applicable plant and industry operational experience, and, as appropriate, update the PRA and SSC categorization and treatment processes. The licensee shall perform this review in a timely manner but no longer than once every two refueling outages.

(2) RISC-1 and RISC-2 SSCs. The licensee shall monitor the performance of RISC-1 and RISC-2 SSCs. The licensee shall make adjustments as necessary to either the categorization or treatment processes so that the categorization process and results are maintained valid.

(3) RISC-3 SSCs. The licensee shall consider data collected in § 50.69(d)(2)(i) for RISC-3 SSCs to determine if there are any adverse changes in performance such that the SSC unreliability values approach or exceed the values used in the evaluations conducted to satisfy § 50.69(c)(1)(iv). The licensee shall make adjustments as necessary to the categorization or treatment processes so that the categorization process and results are maintained valid.

(f) Program documentation, change control and records. (1) The licensee or applicant shall document the basis for its categorization of any SSC under paragraph (c) of this section before removing any requirements under § 50.69(b)(1) for those SSCs.

(2) Following implementation of this section, licensees and applicants shall update their final safety analysis report (FSAR) to reflect which systems have been categorized, in accordance with § 50.71(e).

(3) When a licensee first implements this section for a SSC, changes to the FSAR for the implementation of the changes in accordance with § 50.69(d) need not include a supporting § 50.59 evaluation of the changes directly related to implementation. Thereafter, changes to the programs and procedures for implementation of § 50.69(d), as described in the FSAR, may be made if the requirements of this section and § 50.59 continue to be met.

(4) When a licensee first implements this section for a SSC, changes to the quality assurance plan for the implementation of the changes in accordance with § 50.69(d) need not include a supporting § 50.54(a) review of the changes directly related to implementation. Thereafter, changes to the programs and procedures for implementation of § 50.69(d), as described in the quality assurance plan may be made if the requirements of this section and § 50.54(a) continue to be met.

(g) *Reporting*. The licensee shall submit a licensee event report under § 50.73(b) for any event or condition that prevented, or would have prevented, a RISC-1 or RISC-2 SSC from performing a safety significant function.

[69 FR 68047, Nov. 22, 2004]

Inspections, Records, Reports, Notifications

[Top of File]

§ 50.70 Inspections.

(a) Each applicant for or holder of a license, including a construction permit or an early site permit, shall permit inspection, by duly authorized representatives of the Commission, of his records, premises, activities, and of licensed materials in possession or use, related to the license or construction permit or early site permit as may be necessary to effectuate the purposes of the Act, as amended, including Section 105 of the Act, and the Energy Reorganization Act of 1974, as amended.

(b)(1) Each licensee and each holder of a construction permit shall, upon request by the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, provide rent-free office space for the exclusive use of the Commission inspection personnel. Heat, air conditioning, light, electrical outlets, and janitorial services shall be furnished by each licensee and each holder of a construction permit. The office shall be convenient to and have full access to the facility and shall provide the inspector both visual and acoustic privacy.

(2) For a site with a single power reactor or fuel facility licensed under part 50 or part 52 of this chapter, or a facility issued a manufacturing license under part 52, the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary and transient NRC personnel and will be generally commensurate with other office facilities at the site. A

space of 250 square feet either within the site's office complex or in an office trailer or other onsite space is suggested as a guide. For sites containing multiple power reactor units or fuel facilities, additional space may be requested to accommodate additional full-time inspector (s). The office space that is provided shall be subject to the approval of the Director, Office of New Reactors, or the Director, Office of Nuclear Reactor Regulation. All
furniture, supplies and communication equipment will be furnished by the Commission.

(3) The licensee or construction permit holder shall afford any NRC resident inspector assigned to that site, or other NRC inspectors identified by the Regional Administrator as likely to inspect the facility, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control meaures for security, radiological protection and personal safety.

(4) The licensee or construction permit holder (nuclear power reactor only) shall ensure that the arrival and presence of an NRC inspector, who has been properly authorized facility access as described in paragraph (b)(3) of this section, is not announced or otherwise communicated by its employees or contractors to other persons at the facility unless specifically requested by the NRC inspector.

[21 FR 355, Jan. 19, 1956; 44 FR 47919, Aug. 16, 1979, as amended at 52 FR 31612, Aug. 21, 1987; 53 FR 42942, Oct. 25, 1988; 72 FR 49501, Aug. 28, 2007; 73 FR 5722, Jan. 31, 2008]

§ 50.71 Maintenance of records, making of reports.

[Top of File]

(a) Each licensee, including each holder of a construction permit or early site permit, shall maintain all records and make all reports, in connection with the activity, as may be required by the conditions of the license or permit or by the regulations, and orders of the Commission in effectuating the purposes of the Act, including Section 105 of the Act, and the Energy Reorganization Act of 1974, as amended. Reports must be submitted in accordance with § 50.4 or 10 CFR 52.3, as applicable.

(b) With respect to any production or utilization facility of a type described in § 50.21(b) or 50.22, or a testing facility, each licensee and each holder of a construction permit shall submit its annual financial report, including the certified financial statements, to the Commission, as specified in § 50.4, upon issuance of the report. However, licensees and holders of a construction permit who submit a Form 10-Q with the Securities and Exchange Commission or a Form 1 with the Federal Energy Regulatory Commission, need not submit the annual financial report or the certified financial statement under this paragraph.

(c) Records that are required by the regulations in this part or part 52 of this chapter, by license condition, or by
technical specifications must be retained for the period specified by the appropriate regulation, license condition, or technical specification. If a retention period is not otherwise specified, these records must be retained until the Commission terminates the facility license or, in the case of an early site permit, until the permit expires.

(d)(1) Records which must be maintained under this part or part 52 of this chapter may be the original or a reproduced copy or microform if the reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability of producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with, and loss of records.

(2) If there is a conflict between the Commission's regulations in this part, license condition, or technical specification, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for such records shall apply unless the Commission, pursuant to § 50.12 of this part, has granted a specific exemption from the record retention requirements specified in the regulations in this part.

(e) Each person licensed to operate a nuclear power reactor under the provisions of § 50.21 or § 50.22, and each applicant for a combined license under part 52 of this chapter, shall update periodically, as provided in paragraphs (e) (3) and (4) of this section, the final safety analysis report (FSAR) originally submitted as part of the application for the license, to assure that the information included in the report contains the latest information developed. This submittal shall contain all the changes necessary to reflect information and analyses submitted to the Commission by the applicant or licensee or prepared by the applicant or licensee pursuant to Commission requirement since the submittal of the original FSAR, or as appropriate, the last update to the FSAR under this section. The submittal shall include the effects [1] of all changes made in the facility or procedures as described in the FSAR; all safety analyses and evaluations performed by the applicant or licensee either in support of approved license amendments or in support of conclusions that changes did not require a license amendment in accordance with § 50.59(c)(2) or, in the case of a license that references a certified design, in accordance with § 52.98(c) of this chapter; and all analyses of new safety issues performed by or on behalf of the applicant or licensee at Commission request. The updated information shall be
appropriately located within the update to the FSAR.

(1) The licensee shall submit revisions containing updated information to the Commission, as specified in § 50.4, on a replacement-page basis that is accompanied by a list which identifies the current pages of the FSAR following page replacement.

(2) The submittal shall include (i) a certification by a duly authorized officer of the licensee that either the information accurately presents changes made since the previous submittal, necessary to reflect information and analyses submitted to the Commission or prepared pursuant to Commission requirement, or that no such changes were made; and (ii) an identification of changes made under the provisions of § 50.59 but not previously submitted to the Commission.

(3)(i) A revision of the original FSAR containing those original pages that are still applicable plus new replacement pages shall be filed within 24 months of either July 22, 1980, or the date of issuance of the operating license, whichever is later, and shall bring the FSAR up to date as of a maximum of 6 months prior to the date of filing the revision.

(ii) Not less than 15 days before § 50.71(e) becomes effective, the Director of the Office of Nuclear Reactor Regulation shall notify by letter the licensees of those nuclear power plants initially subject to the NRC's systematic evaluation program that they need not comply with the provisions of this section while the program is being conducted at their plant. The Director of the Office of Nuclear Reactor Regulation will notify by letter the licensee of each nuclear power plant being evaluated when the systematic evaluation program has been completed. Within 24 months after receipt of this notification, the licensee shall file a complete FSAR which is up to date as of a maximum of 6 months prior to the date of filing the revision.

(iii) During the period from the docketing of an application for a combined license under subpart C of part 52 of this chapter until the Commission makes the finding under § 52.103(g) of this chapter, the update to the FSAR must be submitted annually.

(4) Subsequent revisions must be filed annually or 6 months after each refueling outage provided the interval between successive updates does not exceed 24 months. The revisions must reflect all changes up to a maximum of 6 months prior to the date of filling. For nuclear power reactor facilities that have submitted the certifications required by § 50.82(a)(1), subsequent revisions must be filed every 24 months.

(5) Each replacement page shall include both a change indicator for the area changed, e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed, and a page change identification (date of change or change number or both).

(6) The updated FSAR shall be retained by the licensee until the Commission terminates their license.

(f) Each person licensed to manufacture a nuclear power reactor under subpart F of 10 CFR part 52 shall update the FSAR originally submitted as part of the application to reflect any modification to the design that is approved by the Commission under § 52.171 of this chapter, and any new analyses of the design performed by or on behalf of the licensee at the NRC's request. This submittal shall contain all the changes necessary to reflect information and analyses submitted to the Commission by the licensee or prepared by the licensee with respect to the modification approved under § 52.171 of this chapter or the analyses requested by the Commission under § 52.171 of this chapter. The updated information shall be appropriately located within the update to the FSAR.

(g) The provisions of this section apply to nuclear power reactor licensees that have submitted the certification of permanent cessation of operations required under §§ 50.82(a)(1)(i) or 52.110(a)(1) of this chapter. The provisions of paragraphs (a), (c), and (d) of this section also apply to non-power reactor licensees that are no longer authorized to operate.

(h)(1) No later than the scheduled date for initial loading of fuel, each holder of a combined license under subpart C of 10 CFR part 52 shall develop a level 1 and a level 2 probabilistic risk assessment (PRA). The PRA must cover those initiating events and modes for which NRC-endorsed consensus standards on PRA exist one year prior to the scheduled date for initial loading of fuel.

(2) Each holder of a combined license shall maintain and upgrade the PRA required by paragraph (h)(1) of this section. The upgraded PRA must cover initiating events and modes of operation contained in NRC-endorsed consensus standards on PRA in effect one year prior to each required upgrade. The PRA must be upgraded every four years until
the permanent cessation of operations under § 52.110(a) of this chapter.

(3) Each holder of a combined license shall, no later than the date on which the licensee submits an application for a renewed license, upgrade the PRA required by paragraph (h)(1) of this section to cover all modes and all initiating events.

[33 FR 9704, July 4, 1968, as amended at 41 FR 18303, May 3, 1976; 45 FR 30615, May 9, 1980; 51 FR 40310, Nov. 6, 1986; 53 FR 19250, May 27, 1988; 57 FR 39358, Aug. 31, 1992; 61 FR 39301, July 29, 1996; 64 FR 53614, Oct. 4, 1999; 71 FR 29246, May 22, 2006; 72 FR 49501, Aug. 28, 2007]

Effective Date Note: See 64 FR 53582, Oct. 4, 1999, for effectiveness of § 50.71(e) introductory text.

[1] Effects of changes includes appropriate revisions of descriptions in the FSAR such that the FSAR (as updated) is complete and accurate.

§ 50.72 Immediate notification requirements for operating nuclear power reactors.

[Top of File]

(a) General requirements.[1] (1) Each nuclear power reactor licensee licensed under §§ 50.21(b) or 50.22 holding an operating license under this part or a combined license under part 52 of this chapter after the Commission makes the finding under § 52.103(g), shall notify the NRC Operations Center via the Emergency Notification System of:

(i) The declaration of any of the Emergency Classes specified in the licensee's approved Emergency Plan; [2] or

(ii) Those non-emergency events specified in paragraph (b) of this section that occurred within three years of the date of discovery.

(2) If the Emergency Notification System is inoperative, the licensee shall make the required notifications via commercial telephone service, other dedicated telephone system, or any other method which will ensure that a report is made as soon as practical to the NRC Operations

Center.[3]

(3) The licensee shall notify the NRC immediately after notification of the appropriate State or local agencies and not later than one hour after the time the licensee declares one of the Emergency Classes.

(4) The licensee shall activate the Emergency Response Data System (ERDS) [4] as soon as possible but not later than one hour after declaring an Emergency Class of alert, site area emergency, or general emergency. The ERDS may also be activated by the licensee during emergency drills or exercises if the licensee's computer system has the capability to transmit the exercise data.

(5) When making a report under paragraph (a)(1) of this section, the licensee shall identify:

(i) The Emergency Class declared; or

(ii) Paragraph (b)(1), ``One-hour reports,'' paragraph (b)(2), ``Four-hour reports,'' or paragraph (b)(3), ``Eight-hour reports,'' as the paragraph of this section requiring notification of the non-emergency event.

(b) Non-emergency events--(1) One-hour reports. If not reported as a declaration of an Emergency Class under paragraph (a) of this section, the licensee shall notify the NRC as soon as practical and in all cases within one hour of the occurrence of any deviation from the plant's Technical Specifications authorized pursuant to Sec. 50.54(x) of this part.

(2) Four-hour reports. If not reported under paragraphs (a) or (b)(1) of this section, the licensee shall notify the NRC as soon as practical and in all cases, within four hours of the occurrence of any of the following:

(i) The initiation of any nuclear plant shutdown required by the plant's Technical Specifications.

(ii)-(iii) [Reserved]

(iv)(A) Any event that results or should have resulted in emergency core cooling system (ECCS) discharge into the reactor coolant system as a result of a valid signal except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation.

(B) Any event or condition that results in actuation of the reactor protection system (RPS) when the reactor is critical except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation.

(v)-(x) [Reserved]

(xi) Any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made. Such an event may include an onsite fatality or inadvertent release of radioactively contaminated materials.

(3) Eight-hour reports. If not reported under paragraphs (a), (b)(1) or (b)(2) of this section, the licensee shall notify the NRC as soon as practical and in all cases within eight hours of the occurrence of any of the following:

(i) [Reserved]

(ii) Any event or condition that results in:

(A) The condition of the nuclear power plant, including its principal safety barriers, being seriously degraded; or

(B) The nuclear power plant being in an unanalyzed condition that significantly degrades plant safety.

(iii) [Reserved]

(iv)(A) Any event or condition that results in valid actuation of any of the systems listed in paragraph (b)(3)(iv)(B) of this section, except when the actuation results from and is part of a pre-planned sequence during testing or reactor operation.

(B) The systems to which the requirements of paragraph (b)(3)(iv)(A) of this section apply are:

(1) Reactor protection system (RPS) including: Reactor scram and reactor trip. [5]

(2) General containment isolation signals affecting containment isolation valves in more than one system or multiple main steam isolation valves (MSIVs).

(3) Emergency core cooling systems (ECCS) for pressurized water reactors (PWRs) including: High-head, intermediate-head, and low-head injection systems and the low pressure injection function of residual (decay) heat removal systems.

(4) ECCS for boiling water reactors (BWRs) including: High-pressure and low-pressure core spray systems; high-pressure coolant injection system; low pressure injection function of the residual heat removal system.

(5) BWR reactor core isolation cooling system; isolation condenser system; and feedwater coolant injection system.

(6) PWR auxiliary or emergency feedwater system.

(7) Containment heat removal and depressurization systems, including containment spray and fan cooler systems.

(8) Emergency ac electrical power systems, including: Emergency diesel generators (EDGs); hydroelectric facilities used in lieu of EDGs at the Oconee Station; and BWR dedicated Division 3 EDGs.

(v) Any event or condition that at the time of discovery could have prevented the fulfillment of the safety function of structures or systems that are needed to:

(A) Shut down the reactor and maintain it in a safe shutdown condition;

(B) Remove residual heat;

(C) Control the release of radioactive material; or

(D) Mitigate the consequences of an accident.

(vi) Events covered in paragraph (b)(3)(v) of this section may include one or more procedural errors, equipment failures, and/or discovery of design, analysis, fabrication, construction, and/or procedural inadequacies. However, individual component failures need not be reported pursuant to paragraph (b)(3)(v) of this section if redundant equipment in the same system was operable and available to perform the required safety function.

(vii)-(xi) [Reserved]

(xii) Any event requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment.

(xiii) Any event that results in a major loss of emergency assessment capability, offsite response capability, or offsite communications capability (e.g., significant portion of control room indication, Emergency Notification System, or offsite notification system).

(c) *Followup notification*. With respect to the telephone notifications made under paragraphs (a) and (b) of this section, in addition to making the required initial notification, each licensee, shall during the course of the event:

(1) *Immediately report* (i) any further degradation in the level of safety of the plant or other worsening plant conditions, including those that require the declaration of any of the Emergency Classes, if such a declaration has not been previously made, or (ii) any change from one Emergency Class to another, or (iii) a termination of the Emergency Class.

(2) *Immediately report* (i) the results of ensuing evaluations or assessments of plant conditions, (ii) the effectiveness of response or protective measures taken, and (iii) information related to plant behavior that is not understood.

(3) Maintain an open, continuous communication channel with the NRC Operations Center upon request by the NRC.

[48 FR 39046, Aug. 29, 1983; 48 FR 40882, Sept. 12, 1983; 55 FR 29194, July 18, 1990, as amended at 56 FR 944, Jan. 10, 1991; 56 FR 23473, May 21, 1991; 56 FR 40184, Aug. 13, 1991; 57 FR 41381, Sept. 10, 1992; 58 FR 67661, Dec. 22, 1993; 59 FR 14087, Mar. 25, 1994; 65 FR 63786, Oct. 25, 2000; 72 FR 49502, Aug. 28, 2007]

1. Other requirements for immediate notification of the NRC by licensed operating nuclear power rectors are contained elsewhere in this chapter, in particular Secs. 20.1906, 20.2202, 50.36, 72.216, and 73.71.

2. These Emergency Classes are addressed in Appendix E of this part.

3. Commercial telephone number of the NRC Operations Center is (301) 816-5100.

4. Requirements for ERDS are addressed in Appendix E, Section VI.

5. Actuation of the RPS when the reactor is critical is reportable under paragraph (b)(2)(iv)(B) of this section.

§ 50.73 Licensee event report system.

[Top of File]

(a) Reportable events. (1) The holder of an operating license under this part or a combined license under part 52 of this chapter (after the Commission has made the finding under § 52.103(g) of this chapter) for a nuclear power plant (licensee) shall submit a Licensee Event Report (LER) for any event of the type described in this paragraph within 60 days after the discovery of the event. In the case of an invalid

actuation reported under § 50.73(a)(2)(iv), other than actuation of the reactor protection system (RPS) when the reactor is critical, the licensee may, at its option, provide a telephone notification to the NRC Operations Center within 60 days after discovery of the event instead of submitting a written LER. Unless otherwise specified in this section, the licensee shall report an event if it occurred within 3 years of the date of discovery regardless of the plant mode or power level, and regardless of the significance of the structure, system, or component that initiated the event.

(2) The licensee shall report:

(i)(A) The completion of any nuclear plant shutdown required by the plant's Technical Specifications.

(B) Any operation or condition which was prohibited by the plant's Technical Specifications except when:

(1) The Technical Specification is administrative in nature;

(2) The event consisted solely of a case of a late surveillance test where the oversight was corrected, the test was performed, and the equipment was found to be capable of performing its specified safety functions; or

(3) The Technical Specification was revised prior to discovery of the event such that the operation or condition was no longer prohibited at the time of discovery of the event.

(C) Any deviation from the plant's Technical Specifications authorized pursuant to Sec. 50.54(x) of this part.

(ii) Any event or condition that resulted in:

(A) The condition of the nuclear power plant, including its principal safety barriers, being seriously degraded; or

(B) The nuclear power plant being in an unanalyzed condition that significantly degraded plant safety.

(iii) Any natural phenomenon or other external condition that posed an actual threat to the safety of the nuclear power plant or significantly hampered site personnel in the performance of duties necessary for the safe operation of the nuclear power plant.

(iv)(A) Any event or condition that resulted in manual or automatic actuation of any of the systems listed in paragraph (a)(2)(iv)(B) of this section, except when:

(1) The actuation resulted from and was part of a pre-planned sequence during testing or reactor operation; or

(2) The actuation was invalid and;

(i) Occurred while the system was properly removed from service; or

(ii) Occurred after the safety function had been already completed.

(B) The systems to which the requirements of paragraph (a)(2)(iv)(A) of this section apply are:

(1) Reactor protection system (RPS) including: reactor scram or reactor trip.

(2) General containment isolation signals affecting containment isolation valves in more than one system or multiple main steam isolation valves (MSIVs).

(3) Emergency core cooling systems (ECCS) for pressurized water reactors (PWRs) including: high-head, intermediate-head, and low-head injection systems and the low pressure injection function of residual (decay) heat removal systems.

(4) ECCS for boiling water reactors (BWRs) including: high-pressure and low-pressure core spray systems; high-pressure coolant injection system; low pressure injection function of the residual heat removal system.

(5) BWR reactor core isolation cooling system; isolation condenser system; and feedwater coolant injection system.

(6) PWR auxiliary or emergency feedwater system.

(7) Containment heat removal and depressurization systems, including containment spray and fan cooler systems.

(8) Emergency ac electrical power systems, including: emergency diesel generators (EDGs); hydroelectric facilities used in lieu of EDGs at the Oconee Station; and BWR dedicated Division 3 EDGs.

(9) Emergency service water systems that do not normally run and that serve as ultimate heat sinks.

(v) Any event or condition that could have prevented the fulfillment of the safety function of structures or systems that are needed to:

(A) Shut down the reactor and maintain it in a safe shutdown condition;

(B) Remove residual heat;

(C) Control the release of radioactive material; or

(D) Mitigate the consequences of an accident.

(vi) Events covered in paragraph (a)(2)(v) of this section may include one or more procedural errors, equipment failures, and/or discovery of design, analysis, fabrication, construction, and/or procedural inadequacies. However, individual component failures need not be reported pursuant to paragraph (a)(2)(v) of this section if redundant equipment in the same system was operable and available to perform the required safety function.

(vii) Any event where a single cause or condition caused at least one independent train or channel to become inoperable in multiple systems or two independent trains or channels to become inoperable in a single system designed to:

(A) Shut down the reactor and maintain it in a safe shutdown condition;

(B) Remove residual heat;

(C) Control the release of radioactive material; or

(D) Mitigate the consequences of an accident.

(viii)(A) Any airborne radioactive release that, when averaged over a time period of 1 hour, resulted in airborne radionuclide concentrations in an unrestricted area that exceeded 20 times the applicable concentration limits specified in appendix B to part 20, table 2, column 1.

(B) Any liquid effluent release that, when averaged over a time period of 1 hour, exceeds 20 times the applicable concentrations specified in appendix B to part 20, table 2, column 2, at the point of entry into the receiving waters (i.e., unrestricted area) for all radionuclides except tritium and dissolved noble gases.

(ix)(A) Any event or condition that as a result of a single cause could have prevented the fulfillment of a safety function for two or more trains or channels in different systems that are needed to:

(1) Shut down the reactor and maintain it in a safe shutdown condition;

(2) Remove residual heat;

(3) Control the release of radioactive material; or

(4) Mitigate the consequences of an accident.

(B) Events covered in paragraph (a)(2)(ix)(A) of this section may include cases of procedural error, equipment failure, and/or discovery of a design, analysis, fabrication, construction, and/or procedural inadequacy. However, licensees are not required to report an event pursuant to paragraph (a)(2)(ix)(A) of this section if the event results from:

(1) A shared dependency among trains or channels that is a natural or expected consequence of the approved plant design; or

(2) Normal and expected wear or degradation.

(x) Any event that posed an actual threat to the safety of the nuclear power plant or significantly hampered site personnel in the performance of duties necessary for the safe operation of the nuclear power plant including fires, toxic gas releases, or radioactive releases.

(b) Contents. The Licensee Event Report shall contain:

(1) A brief abstract describing the major occurrences during the event, including all component or system failures that contributed to the event and significant corrective action taken or planned to prevent recurrence.

(2)(i) A clear, specific, narrative description of what occurred so that knowledgeable readers conversant with the design of commercial nuclear power plants, but not familiar with the details of a particular plant, can understand the complete event.

(ii) The narrative description must include the following specific information as appropriate for the particular event:

(A) Plant operating conditions before the event.

(B) Status of structures, components, or systems that were inoperable at the start of the event and that contributed to the event.

(C) Dates and approximate times of occurrences.

(D) The cause of each component or system failure or personnel error, if known.

(E) The failure mode, mechanism, and effect of each failed component, if known.

(F) The Energy Industry Identification System component function identifier and system name of each component or system referred to in the LER.

(1) The Energy Industry Identification System is defined in: IEEE Std 803-1983 (May 16, 1983) Recommended Practice for Unique Identification in Power Plants and Related Facilities--Principles and Definitions.

(2) IEEE Std 803-1983 has been approved for incorporation by reference by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(3) A notice of any changes made to the material incorporated by reference will be published in the Federal Register. Copies may be obtained from the Institute of Electrical and Electronics Engineers, 445 Hoes Lane, P.O. Box 1331, Piscataway, NJ 08855-1331. IEEE Std 803-1983 is available for inspection at the NRC's Technical Library, which is located in the Two White Flint North Building, 11545 Rockville Pike, Rockville, Maryland 20852-2738; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(G) For failures of components with multiple functions, include a list of systems or secondary functions that were also affected.

(H) For failure that rendered a train of a safety system inoperable, an estimate of the elapsed time from the discovery of the failure until the train was returned to service.

(I) The method of discovery of each component or system failure or procedural error.

(J) For each human performance related root cause, the licensee shall discuss the cause(s) and circumstances.

(K) Automatically and manually initiated safety system responses.

(L) The manufacturer and model number (or other identification) of each component that failed during the event.

(3) An assessment of the safety consequences and implications of the event. This assessment must include:

(i) The availability of systems or components that could have performed the same function as the components and systems that failed during the event, and

(ii) For events that occurred when the reactor was shutdown, the availability of systems or components that are needed to shutdown the reactor and maintain safe shutdown conditions, remove residual heat, control the release of radioactive material, or mitigate the consequences of an accident.

(4) A description of any corrective actions planned as a result of the event, including those to reduce the probability of similar events occurring in the future.

(5) Reference to any previous similar events at the same plant that are known to the licensee.

(6) The name and telephone number of a person within the licensee's organization who is knowledgeable about the event and can provide additional information concerning the event and the plant's characteristics.

(c) *Supplemental information*. The Commission may require the licensee to submit specific additional information beyond that required by paragraph (b) of this section if the Commission finds that supplemental material is necessary for complete understanding of an unusually complex or significant event. These requests for supplemental information will be made in writing and the licensee shall submit, as specified in § 50.4, the requested information as a supplement to the initial LER.

(d) *Submission of reports*. Licensee Event Reports must be prepared on Form NRC 366 and submitted to the U.S. Nuclear Regulatory Commission, as specified in § 50.4.

(e) *Report legibility*. The reports and copies that licensees are required to submit to the Commission under the provisions of this section must be of sufficient quality to permit legible reproduction and micrographic processing.

(f) [Reserved]

(g) *Reportable occurrences.* The requirements contained in this section replace all existing requirements for licensees to report "Reportable Occurrences" as defined in individual plant Technical Specifications.

[48 FR 33858, July 26, 1983, as amended at 49 FR 47824, Dec. 7, 1984; 51 FR 40310, Nov. 6, 1986; 56 FR 23473, May 21, 1991; 56 FR 61352, Dec. 3, 1991; 57 FR 41381, Sept. 10, 1992; 58 FR 67661, Dec. 22, 1993; 59 FR 50689, Oct. 5, 1994; 63 FR 50480, Sept. 22, 1998; 65 FR 63787, Oct. 25, 2000; 69 FR 18803, Apr. 9, 2004; 72 FR 49502, Aug. 28, 2007]

§ 50.74 Notification of change in operator or senior operator status.

[Top of File]

Each licensee shall notify the appropriate Regional Administrator as listed in appendix D to part 20 of this chapter within 30 days of the following in regard to a licensed operator or senior operator:

(a) Permanent reassignment from the position for which the licensee has certified the need for a licensed operator or senior operator under § 55.31(a)(3) of this chapter;

(b) Termination of any operator or senior operator;

(c) Permanent disability or illness as described in § 55.25 of this chapter.

[52 FR 9469, Mar. 25, 1987, as amended at 60 FR 13616, Mar. 14, 1995; 68 FR 58809, Oct. 10, 2003]

§ 50.75 Reporting and recordkeeping for decommissioning planning.

[Top of File]

(a) This section establishes requirements for indicating to NRC how a licensee will provide reasonable assurance that funds will be available for the decommissioning process. For power reactor licensees (except a holder of a manufacturing license under part 52 of this chapter), reasonable assurance consists of a series of steps as provided in paragraphs (b), (c), (e), and (f) of this section. Funding for the decommissioning of power reactors may also be subject to the regulation of Federal or State Government agencies (e.g., Federal Energy Regulatory Commission (FERC) and State Public Utility Commissions) that have jurisdiction over rate regulation. The requirements of this section, in particular paragraph (c) of this section, are in addition to, and not substitution for, other requirements, and are not intended to be used by themselves or by other agencies to establish rates.

(b) Each power reactor applicant for or holder of an operating license, and each applicant for a combined license under subpart C of 10 CFR part 52 for a production or utilization facility of the type and power level specified in paragraph (c) of this section shall submit a decommissioning report, as required by § 50.33(k).

(1) For an applicant for or holder of an operating license under part 50, the report must contain a certification that financial assurance for decommissioning will be (for a license applicant), or has been (for a license holder), provided in an amount which may be more, but not less, than the amount stated in the table in paragraph (c)(1) of this section adjusted using a rate at least equal to that stated in paragraph (c)(2) of this section. For an applicant for a combined license under subpart C of 10 CFR part 52, the report must contain a certification that financial assurance for decommissioning will be provided no later than 30 days after the Commission publishes notice in the **Federal Register** under § 52.103(a) in an amount which may be more, but not less, than the amount stated in the table in paragraph (c)(1) of this section, adjusted using a rate at least equal to that stated in paragraph (c)(2) of this section.

(2) The amount to be provided must be adjusted annually using a rate at least equal to that stated in paragraph (c)(2) of this section.

(3) The amount must be covered by one or more of the methods described in paragraph (e) of this section as acceptable to the NRC.

(4) The amount stated in the applicant's or licensee's certification may be based on a cost estimate for decommissioning the facility. As part of the certification, a copy of the financial instrument obtained to satisfy the requirements of paragraph (e) of this section must be submitted to NRC; *provided, however*, that an applicant for or holder of a combined license need not obtain such financial instrument or submit a copy to the Commission except as provided in paragraph (e)(3) of this section.

(c) Table of minimum amounts (January 1986 dollars) required to demonstrate reasonable assurance of funds for decommissioning by reactor type and power level, P (in MWt); adjustment factor.[1]

		Millions
(1)(i) For a PWR:	greater than or equal to 3400 MWt	$105
	between 1200 Mwt and 3400 Mwt (For a PWR of less than 1200 Mwt, use P=1200 Mwt)	$(75+0.0088P)
(ii) For a BWR:	greater than or equal to 3400 MWt	$135
	between 1200 Mwt and 3400 Mwt (For a BWR of less than 1200 Mwt, use P=1200 MWt)	$(104+0.009P)

(2) An adjustment factor at least equal to 0.65 L + 0.13 E + 0.22 B is to be used where L and E are escalation factors for labor and energy, respectively, and are to be taken from regional data of U.S. Department of Labor Bureau of Labor Statistics and B is an escalation factor for waste burial and is to be taken from NRC report NUREG-1307, "Report on Waste Burial Charges."

(d)(1) Each non-power reactor applicant for or holder of an operating license for a production or utilization facility shall submit a decommissioning report as required by § 50.33(k) of this part.

(2) The report must:

(i) Contain a cost estimate for decommissioning the facility;

(ii) Indicate which method or methods described in paragraph (e) of this section as acceptable to the NRC will be used to provide funds for decommissioning; and

(iii) Provide a description of the means of adjusting the cost estimate and associated funding level periodically over the life of the facility.

(e)(1) Financial assurance is to be provided by the following methods.

(i) *Prepayment.* Prepayment is the deposit made preceding the start of operation or the transfer of a license under § 50.80 into an account segregated from licensee assets and outside the administrative control of the licensee and its subsidiaries or affiliates of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs at the time permanent termination of operations is expected. Prepayment may be in the form of a trust, escrow account, or Government fund with payment by, certificate of deposit, deposit of government or other securities or other method acceptable to the NRC. This trust, escrow account, Government fund, or other type of agreement shall be established in writing and maintained at all times in the United States with an entity that is an appropriate State or Federal government agency, or an entity whose operations in which the prepayment deposit is managed are regulated and examined by a Federal or State agency. A licensee that has prepaid funds based on a site-specific estimate under § 50.75(b)(1) of this section may take credit for projected earnings on the prepaid decommissioning trust funds, using up to a 2 percent annual real rate of return from the time of future funds' collection through the projected decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate. This includes the periods of safe storage, final dismantlement, and license termination. A licensee that has prepaid funds based on the formulas in § 50.75(c) of this section may take credit for projected earnings on the prepaid decommissioning funds using up to a 2 percent annual real rate of return up to the time of permanent termination of operations. A licensee may use a credit of greater than 2 percent if the licensee's rate-setting authority has specifically authorized a higher rate. However, licensees certifying only to the formula amounts (i.e., not a site-specific estimate) can take a pro-rata credit during the immediate dismantlement period (i.e., recognizing both cash expenditures and earnings the first 7 years after shutdown). Actual earnings on existing funds may be used to calculate future fund needs.

(ii) *External sinking fund.* An external sinking fund is a fund established and maintained by setting funds aside periodically in an account segregated from licensee assets and outside the administrative control of the licensee and its subsidiaries or affiliates in which the total amount of funds would be sufficient to pay decommissioning costs at the time permanent termination of operations is expected. An external sinking fund may be in the form of a trust, escrow account, or Government fund, with payment by certificate of deposit, deposit of Government or other securities, or other method acceptable to the NRC. This trust, escrow account, Government fund, or other type of agreement shall be established in writing and maintained at all times in the United States with an entity that is an appropriate State or Federal government agency, or an entity whose operations in which the external linking fund is managed are regulated and examined by a Federal or State agency. A licensee that has collected funds based on a site-specific estimate under § 50.75(b)(1) of this section may take credit for projected earnings on the external sinking funds using up to a 2 percent annual real rate of return from the time of future funds' collection through the decommissioning period, provided that the site-specific estimate is based on a period of safe storage that is specifically described in the estimate. This includes the periods of safe storage, final dismantlement, and license termination. A licensee that has collected funds based on the formulas in § 50.75(c) of this section may take credit for collected earnings on the decommissioning funds using up to a 2 percent annual real rate of return up to the time of permanent termination of operations. A licensee may use a credit of greater than 2 percent if the licensee's rate-setting authority has specifically authorized a higher rate. However, licensees certifying only to the formula amounts (i.e., not a site-specific estimate) can take a pro-rata credit during the dismantlement period (i.e., recognizing both cash expenditures and earnings the first 7 years after shutdown). Actual earnings on existing funds may be used to calculate future fund needs. A licensee, whose rates for decommissioning costs cover only a portion of these costs, may make use of this method only for the portion of these costs that are collected in one of the manners described in this paragraph, (e)(1)(ii). This method may be used as the exclusive mechanism relied upon for providing financial assurance for decommissioning in the following circumstances:

(A) By a licensee that recovers, either directly or indirectly, the estimated total cost of decommissioning through rates established by "cost of service" or similar ratemaking regulation. Public utility districts, municipalities, rural electric cooperatives, and State and Federal agencies, including associations of any of the foregoing, that establish their own rates and are able to recover their cost of service allocable to decommissioning, are assumed to meet this condition.

(B) By a licensee whose source of revenues for its external sinking fund is a "non-bypassable charge," the total amount of which will provide funds estimated to be needed for decommissioning pursuant to §§ 50.75(c), 50.75(f), or 50.82 of this part.

(iii) A surety method, insurance, or other guarantee method:

(A) These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(1) The surety method or insurance must be open-ended, or, if written for a specified term, such as 5 years, must be renewed automatically, unless 90 days or more prior to the renewal day the issuer notifies the NRC, the beneficiary, and the licensee of its intention

not to renew. The surety or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the NRC within 30 days after receipt of notification of cancellation.

(2) The surety or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the NRC. An acceptable trustee includes an appropriate State or Federal government agency or an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(B) A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to 10 CFR part 30.

(C) For commercial companies that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to 10 CFR part 30. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to 10 CFR part 30. For non-profit entities, such as colleges, universities, and non-profit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are as contained in appendix E to 10 CFR part 30. A guarantee by the applicant or licensee may not be used in any situation in which the applicant or licensee has a parent company holding majority control of voting stock of the company.

(iv) For a power reactor licensee that is a Federal licensee, or for a non-power reactor licensee that is a Federal, State, or local government licensee, a statement of intent containing a cost estimate for decommissioning, and indicating that funds for decommissioning will be obtained when necessary.

(v) Contractual obligation(s) on the part of a licensee's customer(s), the total amount of which over the duration of the contract(s) will provide the licensee's total share of uncollected funds estimated to be needed for decommissioning pursuant to Secs. 50.75(c), 50.75(f), or § 50.82. To be acceptable to the NRC as a method of decommissioning funding assurance, the terms of the contract(s) shall include provisions that the electricity buyer(s) will pay for the decommissioning obligations specified in the contract(s), notwithstanding the operational status either of the licensed power reactor to which the contract(s) pertains or force majeure provisions. All proceeds from the contract(s) for decommissioning funding will be deposited to the external sinking fund. The NRC reserves the right to evaluate the terms of any contract(s) and the financial qualifications of the contracting entity(ies) offered as assurance for decommissioning funding.

(vi) Any other mechanism, or combination of mechanisms, that provides, as determined by the NRC upon its evaluation of the specific circumstances of each licensee submittal, assurance of decommissioning funding equivalent to that provided by the mechanisms specified in paragraphs (e)(1)(i) through (v) of this section. Licensees who do not have sources of funding described in paragraph (e)(1)(ii) of this section may use an external sinking fund in combination with a guarantee mechanism, as specified in paragraph (e)(1)(iii) of this section, provided that the total amount of funds estimated to be necessary for decommissioning is assured.

(2) The NRC reserves the right to take the following steps in order to ensure a licensee's adequate accumulation of decommissioning funds: review, as needed, the rate of accumulation of decommissioning funds; and, either independently or in cooperation with the FERC and the licensee's State PUC, take additional actions as appropriate on a case- by-case basis, including modification of a licensee's schedule for the accumulation of decommissioning funds.

(3) Each holder of a combined license under subpart C of 10 CFR part 52 shall, 2 years before and 1 year before the scheduled date for initial loading of fuel, consistent with the schedule required by § 52.99(a), submit a report to the NRC containing a certification updating the information described under paragraph (b)(1) of this section, including a copy of the financial instrument to be used. No later than 30 days after the Commission publishes notice in the **Federal Register** under 10 CFR 52.103(a), the licensee shall submit a report containing a certification that financial assurance for decommissioning is being provided in an amount specified in the licensee's most recent updated certification,
including a copy of the financial instrument obtained to satisfy the requirements of paragraph (e) of this section.

(f)(1) Each power reactor licensee shall report, on a calendar-year basis, to the NRC by March 31, 1999, and at least once every 2 years on the status of its decommissioning funding for each reactor or part of a reactor that it owns.
However, each holder of a combined license under part 52 of this chapter need not begin reporting until the date that the Commission has made the finding under § 52.103(g) of this chapter. The information in this report must include, at a minimum the amount of decommissioning funds estimated to be required under 10 CFR 50.75(b) and (c); the amount accumulated to the end of the calendar year preceding the date of the report; a schedule of the annual amounts remaining to be collected; the assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections; any contracts upon
which the licensee is relying under paragraph (e)(1)(v) of this section; any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and any material changes to trust agreements. Any licensee for a plant that is within 5 years of the projected end of its operation, or where conditions have changed so that it will close within 5 years (before the end of its licensed life), or has already closed (before the end of its licensed life), or for plants involved in mergers or acquisitions shall submit this report annually.

(2) Each power reactor licensee shall report, on a calendar-year basis, to the NRC by March 31, 1999, and at least once every 2 years thereafter on the status of its decommissioning funding for each reactor or part of a reactor that it owns. The information in this report must include, at a minimum: the amount of decommissioning funds estimated to be required pursuant to 10 CFR 50.75(b) and (c); the amount accumulated to the end of the calendar year preceding the date of the report; a schedule of the annual amounts remaining to be collected; the assumptions used regarding rates of escalation in decommissioning costs, rates of earnings on decommissioning funds, and rates of other factors used in funding projections; any contracts upon which the licensee is relying pursuant to paragraph (e)(1)(v) of this section; any modifications occurring to a licensee's current method of providing financial assurance since the last submitted report; and any material changes to trust agreements. Any licensee for a plant that is within 5 years of the projected end of its operation, or where conditions have changed such that it will close within 5 years (before the end of its licensed life), or has already closed (before the end of

its licensed life), or for plants involved in mergers or acquisitions shall submit this report annually.

(3) Each power reactor licensee shall at or about 5 years prior to the projected end of operations submit a preliminary decommissioning cost estimate which includes an up-to-date assessment of the major factors that could affect the cost to decommission.

(4) Each non-power reactor licensee shall at or about 2 years prior to the projected end of operations submit a preliminary decommissioning plan containing a cost estimate for decommissioning and an up-to-date assessment of the major factors that could affect planning for decommissioning. Factors to be considered in submitting this preliminary plan information include--

(i) The decommissioning alternative anticipated to be used. The requirements of § 50.82(b)(4)(i) must be considered at this time;

(ii) Major technical actions necessary to carry out decommissioning safely;

(iii) The current situation with regard to disposal of high-level and low-level radioactive waste;

(iv) Residual radioactivity criteria;

(v) Other site specific factors which could affect decommissioning planning and cost.

(5) If necessary, the cost estimate, for power and non-power reactors, shall also include plans for adjusting levels of funds assured for decommissioning to demonstrate that a reasonable level of assurance will be provided that funds will be available when needed to cover the cost of decommissioning.

(g) Each licensee shall keep records of information important to the safe and effective decommissioning of the facility in an identified location until the license is terminated by the Commission. If records of relevant information are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of--

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when significant contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

(4) Records of:

(i) The licensed site area, as originally licensed, which must include a site map and any acquisition or use of property outside the originally licensed site area for the purpose of receiving, possessing, or using licensed materials;

(ii) The licensed activities carried out on the acquired or used property; and

(iii) The release and final disposition of any property recorded in paragraph (g)(4)(i) of this section, the historical site assessment performed for the release, radiation surveys performed to support release of the property, submittals to the NRC made in accordance with § 50.83, and the methods employed to ensure that the property met the radiological criteria of 10 CFR Part 20, Subpart E, at the time the property was released.

(h)(1) Licensees that are not "electric utilities" as defined in § 50.2 that use prepayment or an external sinking fund to provide financial assurance shall provide in the terms of the arrangements governing the trust, escrow account, or Government fund, used to segregate and manage the funds that--

(i) The trustee, manager, investment advisor, or other person directing investment of the funds:

(A) Is prohibited from investing the funds in securities or other obligations of the licensee or any other owner or operator of any nuclear power reactor or their affiliates, subsidiaries, successors or assigns, or in a mutual fund in which at least 50 percent of the fund is invested in the securities of a licensee or parent company whose subsidiary is an owner or operator of a foreign or domestic nuclear power plant. However, the funds may be invested in securities tied to market indices or other non-nuclear sector collective, commingled, or mutual funds, provided that this subsection shall not operate in such a way as to require the sale or transfer either in whole or in part, or other disposition of any such prohibited investment that was made before the publication date of this rule, and provided further that no more than 10 percent of trust assets may be indirectly invested in securities of any entity owning or operating one or more nuclear power plants.

(B) Is obligated at all times to adhere to a standard of care set forth in the trust, which either shall be the standard of care, whether in investing or otherwise, required by State or Federal law or one or more State or Federal regulatory agencies with jurisdiction over the trust

funds, or, in the absence of any such standard of care, whether in investing or otherwise, that a prudent investor would use in the same circumstances. The term "prudent investor," shall have the same meaning as set forth in the Federal Energy Regulatory Commission's "Regulations Governing Nuclear Plant Decommissioning Trust Funds" at 18 CFR 35.32(a)(3), or any successor regulation.

(ii) The licensee, its affiliates, and its subsidiaries are prohibited from being engaged as investment manager for the funds or from giving day-to-day management direction of the funds' investments or direction on individual investments by the funds, except in the case of passive fund management of trust funds where management is limited to investments tracking market indices.

(iii) The trust, escrow account, Government fund, or other account used to segregate and manage the funds may not be amended in any material respect without written notification to the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, at least 30 working days before the proposed effective date of the amendment. The licensee shall provide the text of the proposed amendment and a statement of the reason for the proposed amendment. The trust, escrow account, Government fund, or other account may not be amended if the person responsible for managing the trust, escrow account, Government fund, or other account receives written notice of objection from the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, within the notice period; and

(iv) Except for withdrawals being made under § 50.82(a)(8) or for payments of ordinary administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, no disbursement or payment may be made from the trust, escrow account, Government fund, or other account used to segregate and manage the funds until written notice of the intention to make a disbursement or payment has been given to the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, at least 30 working days before the date of the intended disbursement or payment. The disbursement or payment from the trust, escrow account, Government fund or other account may be made following the 30-working day notice period if the person responsible for managing the trust, escrow account, Government fund, or other account does not receive written notice of objection from the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, within the notice period. Disbursements or payments from the trust, escrow account, Government fund, or other account used to segregate and manage the funds, other than for payment of ordinary administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, are restricted to decommissioning expenses or transfer to another financial assurance method acceptable under paragraph (e) of this section until final decommissioning has been completed. After decommissioning has begun and withdrawals from the decommissioning fund are made under § 50.82(a)(8), no further notification need be made to the NRC.

(2) Licensees that are "electric utilities" under § 50.2 that use prepayment or an external sinking fund to provide financial assurance shall include a provision in the terms of the trust, escrow account, Government fund, or other account used to segregate and manage funds that except for withdrawals being made under § 50.82(a)(8) or for payments of ordinary administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, no disbursement or payment may be made from the trust, escrow account, Government fund, or other account used to segregate and manage the funds until written notice of the intention to make a disbursement or payment has been given the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, at least 30 working days before the date of the intended disbursement or payment. The disbursement or payment from the trust, escrow account, Government fund or other account may be made following the 30-working day notice period if the person responsible for managing the trust, escrow account, Government fund, or other account does not receive written notice of objection from the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, or Director, Office of Nuclear Material Safety and Safeguards, as applicable, within the notice period. Disbursements or payments from the trust, escrow account, Government fund, or other account used to segregate and manage the funds, other than for payment of ordinary administrative costs (including taxes) and other incidental expenses of the fund (including legal, accounting, actuarial, and trustee expenses) in connection with the operation of the fund, are restricted to decommissioning expenses or transfer to another financial assurance method acceptable under paragraph (e) of this section until final decommissioning has been completed. After decommissioning has begun and withdrawals from the decommissioning fund are made under § 50.82(a)(8), no further notification need be made to the NRC.

(3) A licensee that is not an "electric utility" under § 50.2 and using a surety method, insurance, or other guarantee method to provide financial assurance shall provide that the trust established for decommissioning costs to which the surety or insurance is payable contains in its terms the requirements in paragraphs (h)(1)(i), (ii), (iii), and (iv) of this section.

(4) Unless otherwise determined by the Commission with regard to a specific application, the Commission has determined that any amendment to the license of a utilization facility that does no more than delete specific license conditions relating to the terms and conditions of decommissioning trust agreements involves "no significant hazards consideration."

(5) The provisions of paragraphs (h)(1) through (h)(3) of this section do not apply to any licensee that as of December 24, 2003, has existing license conditions relating to decommissioning trust agreements, so long as the licensee does not elect to amend those license conditions. If a licensee with existing license conditions relating to decommissioning trust agreements elects to amend those conditions, the license amendment shall be in accordance with the provisions of paragraph (h) of this section.

[53 FR 24049, June 27, 1988, as amended at 58 FR 68731, Dec. 29, 1993; 59 FR 1618, Jan. 12, 1994; 61 FR 39301, July 29, 1996; 63 FR 50480, Sept. 22, 1998; 63 FR 57236, Oct. 27, 1998; 67 FR 78350, Dec. 24, 2002; 68 FR 12571, Mar. 17, 2003; 68 FR 19727, Apr. 22, 2003; 68 FR 65388, Nov. 20, 2003; 72 FR 49502, Aug. 28, 2007; 73 FR 5722, Jan. 31, 2008]

[1] Amounts are based on activities related to the definition of "Decommission" in § 50.2 of this part and do not include the cost of removal and disposal of spent fuel or of nonradioactive structures and materials beyond that necessary to terminate the license.

§ 50.76. Licensee's change of status; financial qualifications.

[Top of File]

An electric utility licensee holding an operating license (including a renewed license) for a nuclear power reactor, no later than seventy-five (75) days prior to ceasing to be an electric utility in any manner not involving a license transfer under § 50.80, shall provide the NRC with the financial qualifications information that would be required for obtaining an initial operating license as specified in § 50.33(f)(2). The financial qualifications information must address the first full five years of operation after the date the licensee ceases to be an electric utility.

[69 FR 4448, Jan. 30, 2004]

US/IAEA Safeguards Agreement

[Top of File]

§ 50.78 Facility information and verification.

(a) In response to a written request by the Commission, each applicant for a construction permit or license and each recipient of a construction permit or a license shall submit facility information, as described in § 75.10 of this chapter, on Form N–71, and associated forms and site information on DOC/NRC Form AP–A and associated forms;

(b) As required by the Additional Protocol, shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms; and

(c) Shall permit verification thereof by the International Atomic Energy Agency (IAEA) and take other action as necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

[49 FR 19627, May 9, 1984; 72 FR 49503, Aug. 28, 2007; 73 FR 78605, Dec. 23, 2008]

Transfers of Licenses--Creditors' Rights--Surrender of Licenses

[Top of File]

§ 50.80 Transfer of licenses.

(a) No license for a production or utilization facility (including, but not limited to, permits under this part and part 52 of this chapter, and licenses under parts 50 and 52 of this chapter), or any right thereunder, shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

(b)(1) An application for transfer of a license shall include:

(i) For a construction permit or operating license under this part, as much of the information described in §§ 50.33 and 50.34 of this part with respect to the identity and technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. The Commission may require additional information such as data respecting proposed safeguards against hazards from radioactive materials and the applicant's qualifications to protect against such hazards.

(ii) For an early site permit under part 52 of this chapter, as much of the information described in §§ 52.16 and 52.17 of this chapter with respect to the identity and technical qualifications of the proposed transferee as would be required by those sections if the application were for an initial license.

(iii) For a combined license under part 52 of this chapter, as much of the information described in §§ 52.77 and 52.79 of this chapter with respect to the identity and technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. The Commission may require additional information such as data respecting proposed safeguards against hazards from radioactive materials and the applicant's qualifications to protect against such hazards.

(iv) For a manufacturing license under part 52 of this chapter, as much of the information described in §§ 52.156 and 52.157 of this chapter with respect to the identity and technical qualifications of the proposed transferee as would be required by those sections if the application were for an initial license.

(2) The application shall include also a statement of the purposes for which the transfer of the license is requested, the nature of the transaction necessitating or making desirable the transfer of the license, and an agreement to limit access to Restricted Data pursuant to § 50.37. The Commission may require any person who submits an application for license pursuant to the provisions of this section to file a written consent from the existing licensee or a certified copy of an order or judgment of a court of competent jurisdiction attesting to the person's right (subject to the licensing requirements of the Act and these regulations) to possession of the facility or site involved.

(c) After appropriate notice to interested persons, including the existing licensee, and observance of such procedures as may be required by the Act or regulations or orders of the Commission, the Commission will approve an application for the transfer of a license, if the Commission determines:

(1) That the proposed transferee is qualified to be the holder of the license; and

(2) That transfer of the license is otherwise consistent with applicable provisions of law, regulations, and orders issued by the Commission pursuant thereto.

[26 FR 9546, Oct. 10, 1961, as amended at 35 FR 19661, Dec. 29, 1970; 38 FR 3956, Feb. 9, 1973; 65 FR 44660, July 19, 2000; 70 FR 61888, Oct. 27, 2005; 72 FR 49503, Aug. 28, 2007]

§ 50.81 Creditor regulations.

[Top of File]

(a) Pursuant to section 184 of the Act, the Commission consents, without individual application, to the creation of any mortgage, pledge, or other lien upon any production or utilization facility not owned by the United States which is the subject of a license or upon any leasehold or other interest in such facility: *Provided*:

(1) That the rights of any creditor so secured may be exercised only in compliance with and subject to the same requirements and restrictions as would apply to the licensee pursuant to the provisions of the license, the Atomic Energy Act of 1954, as amended, and regulations issued by the Commission pursuant to said Act; and

(2) That no creditor so secured may take possession of the facility pursuant to the provisions of this section prior to either the issuance of a license from the Commission authorizing such possession or the transfer of the license.

(b) Any creditor so secured may apply for transfer of the license covering such facility by filing an application for transfer of the license pursuant to § 50.80(b). The Commission will act upon such application pursuant to § 50.80 (c).

(c) Nothing contained in this regulation shall be deemed to affect the means of acquiring, or the priority of, any tax lien or other lien provided by law.

(d) As used in this section: (1) *License* includes any license under this chapter, any construction permit under this part, and any early site permit under part 52 of this chapter, which may be issued by the Commission with regard to a facility;

(2) "Creditor" includes, without implied limitation, the trustee under any mortgage, pledge or lien on a facility made to secure any creditor, any trustee or receiver of the facility appointed by a court of competent jurisdiction in any action brought for the benefit of any creditor secured by such mortgage, pledge or lien, any purchaser of such facility at the sale thereof upon foreclosure of such mortgage, pledge, or lien or upon exercise of any power of sale contained therein, or any assignee of any such purchaser.

(3) *Facility* includes but is not limited to, a site which is the subject of an early site permit under subpart A of part 52 of this chapter, and a reactor manufactured under a manufacturing license under subpart F of part 52 of this chapter.

[26 FR 9546, Oct. 10, 1961, as amended at 32 FR 2562, Feb. 7, 1967; 72 FR 49504, Aug. 28, 2007]

§ 50.82 Termination of license.

[Top of File]

For power reactor licensees who, before the effective date of this rule, either submitted a decommissioning plan for approval or possess an approved decommissioning plan, the plan is considered to be the PSDAR submittal required under paragraph (a)(4) of this section and the provisions of this section apply accordingly. For power reactor licensees whose decommissioning plan approval activities have been relegated to notice of opportunity for a hearing under subpart G of 10 CFR part 2, the public meeting convened and 90-day delay of major decommissioning activities required in paragraphs (a)(4)(ii) and (a)(5) of this section shall not apply, and any orders arising from proceedings under subpart G of 10 CFR part 2 shall continue and remain in effect absent any orders from the Commission.

(a) For power reactor licensees--

(1) (i) When a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC, consistent with the requirements of § 50.4(b)(8);

(ii) Once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC that meets the requirements of § 50.4(b)(9) and;

(iii) For licensees whose licenses have been permanently modified to allow possession but not operation of the facility, before the effective date of this rule, the certifications required in paragraphs (a)(1) (i)-(ii) of this section shall be deemed to have been submitted.

(2) Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect, the 10 CFR part 50 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.

(3) Decommissioning will be completed within 60 years of permanent cessation of operations. Completion of decommissioning beyond 60 years will be approved by the Commission only when necessary to protect public health and safety. Factors that will be considered by the Commission in evaluating an alternative that provides for completion of decommissioning beyond 60 years of permanent cessation of operations include unavailability of waste disposal capacity and other site-specific factors affecting the licensee's capability to carry out decommissioning, including presence of other nuclear facilities at the site.

(4) (i) Prior to or within 2 years following permanent cessation of operations, the licensee shall submit a post-shutdown decommissioning activities report (PSDAR) to the NRC, and a copy to the affected State(s). The report must include a description of the planned decommissioning activities along with a schedule for their accomplishment, an estimate of expected costs, and a discussion that provides the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements.

(ii) The NRC shall notice receipt of the PSDAR and make the PSDAR available for public comment. The NRC shall also schedule a public meeting in the vicinity of the licensee's facility upon receipt of the PSDAR. The NRC shall publish a notice in the Federal Register and in a forum, such as local newspapers, that is readily accessible to individuals in the vicinity of the site, announcing the date, time and location of the meeting, along with a brief description of the purpose of the meeting.

(5) Licensees shall not perform any major decommissioning activities, as defined in § 50.2, until 90 days after the NRC has received the licensee's PSDAR submittal and until certifications of permanent cessation of operations and permanent removal of fuel from the reactor vessel, as required under § 50.82(a)(1), have been submitted.

(6) Licensees shall not perform any decommissioning activities, as defined in § 50.2, that--

(i) Foreclose release of the site for possible unrestricted use;

(ii) Result in significant environmental impacts not previously reviewed; or

(iii) Result in there no longer being reasonable assurance that adequate funds will be available for decommissioning.

(7) In taking actions permitted under § 50.59 following submittal of the PSDAR, the licensee shall notify the NRC, in writing and send a copy to the affected State(s), before performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR, including changes that significantly increase the decommissioning cost.

(8)(i) Decommissioning trust funds may be used by licensees if--

(A) The withdrawals are for expenses for legitimate decommissioning activities consistent with the definition of decommissioning in § 50.2;

(B) The expenditure would not reduce the value of the decommissioning trust below an amount necessary to place and maintain the reactor in a safe storage condition if unforeseen conditions or expenses arise and;

(C) The withdrawals would not inhibit the ability of the licensee to complete funding of any shortfalls in the decommissioning trust needed to ensure the availability of funds to ultimately release the site and terminate the license.

(ii) Initially, 3 percent of the generic amount specified in § 50.75 may be used for decommissioning planning. For licensees that have submitted the certifications required under § 50.82(a)(1) and commencing 90 days after the NRC has received the PSDAR, an additional 20 percent may be used. A site-specific decommissioning cost estimate must be submitted to the NRC prior to the licensee using any funding in excess of these amounts.

(iii) Within 2 years following permanent cessation of operations, if not already submitted, the licensee shall submit a site-specific decommissioning cost estimate.

(iv) For decommissioning activities that delay completion of decommissioning by including a period of storage or surveillance, the licensee shall provide a means of adjusting cost estimates and associated funding levels over the storage or surveillance period.

(9) All power reactor licensees must submit an application for termination of license. The application for termination of license must be accompanied or preceded by a license termination plan to be submitted for NRC approval.

(i) The license termination plan must be a supplement to the FSAR or equivalent and must be submitted at least 2 years before termination of the license date.

(ii) The license termination plan must include--

(A) A site characterization;

(B) Identification of remaining dismantlement activities;

(C) Plans for site remediation;

(D) Detailed plans for the final radiation survey;

(E) A description of the end use of the site, if restricted;

(F) An updated site-specific estimate of remaining decommissioning costs;

(G) A supplement to the environmental report, pursuant to § 51.53, describing any new information or significant environmental change associated with the licensee's proposed termination activities; and

(H) Identification of parts, if any, of the facility or site that were released for use before approval of the license termination plan.

(iii) The NRC shall notice receipt of the license termination plan and make the license termination plan available for public comment. The NRC shall also schedule a public meeting in the vicinity of the licensee's facility upon receipt of the license termination plan. The NRC shall publish a notice in the Federal Register and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time and location of the meeting, along with a brief description of the purpose of the meeting.

(10) If the license termination plan demonstrates that the remainder of decommissioning activities will be performed in accordance with the regulations in this chapter, will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment and after notice to interested persons, the Commission shall approve the plan, by license amendment, subject to such conditions and limitations as it deems appropriate and necessary and authorize implementation of the license termination plan.

(11) The Commission shall terminate the license if it determines that--

(i) The remaining dismantlement has been performed in accordance with the approved license termination plan, and

(ii) The final radiation survey and associated documentation, including an assessment of dose contributions associated with parts released for use before approval of the license termination plan, demonstrate that the facility and site have met the criteria for decommissioning in 10 CFR part 20, subpart E.

(b) For non-power reactor licensees--

(1) A licensee that permanently ceases operations must make application for license termination within 2 years following permanent cessation of operations, and in no case later than 1 year prior to expiration of the operating license. Each application for termination of a license must be accompanied or preceded by a proposed decommissioning plan. The contents of the decommissioning plan are specified in paragraph (b)(4) of this section.

(2) For decommissioning plans in which the major dismantlement activities are delayed by first placing the facility in storage, planning for these delayed activities may be less detailed. Updated detailed plans must be submitted and approved prior to the start of these activities.

(3) For decommissioning plans that delay completion of decommissioning by including a period of storage or surveillance, the licensee shall provide that--

(i) Funds needed to complete decommissioning be placed into an account segregated from the licensee's assets and outside the licensee's administrative control during the storage or surveillance period, or a surety method or fund statement of intent be maintained in accordance with the criteria of § 50.75(e); and

(ii) Means be included for adjusting cost estimates and associated funding levels over the storage or surveillance period.

(4) The proposed decommissioning plan must include--

(i) The choice of the alternative for decommissioning with a description of activities involved. An alternative is acceptable if it provides for completion of decommissioning without significant delay. Consideration will be given to an alternative which provides for delayed completion of decommissioning only when necessary to protect the public health and safety. Factors to be considered in evaluating an alternative which provides for delayed completion of decommissioning include unavailability of waste disposal capacity and other site-specific factors affecting the licensee's capability to carry out decommissioning, including the presence of other nuclear facilities at the site.

(ii) A description of the controls and limits on procedures and equipment to protect occupational and public health and safety;

(iii) A description of the planned final radiation survey;

(iv) An updated cost estimate for the chosen alternative for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and plan for assuring the availability of adequate funds for completion of decommissioning; and

(v) A description of technical specifications, quality assurance provisions and physical security plan provisions in place during decommissioning.

(5) If the decommissioning plan demonstrates that the decommissioning will be performed in accordance with the regulations in this chapter and will not be inimical to the common defense and security or to the health and safety of the public, and after notice to interested persons, the Commission will approve, by amendment, the plan subject to such conditions and limitations as it deems appropriate and necessary. The approved decommissioning plan will be a supplement to the Safety Analysis report or equivalent.

(6) The Commission will terminate the license if it determines that--

(i) The decommissioning has been performed in accordance with the approved decommissioning plan, and

(ii) The terminal radiation survey and associated documentation demonstrate that the facility and site are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E.

(c) For a facility that has permanently ceased operation before the expiration of its license, the collection period for any shortfall of funds will be determined, upon application by the licensee, on a case-by-case basis taking into account the specific financial situation of each licensee.

[61 FR 39301, July 29, 1996, as amended at 62 FR 39091, July 21, 1997; 68 FR 19727, Apr. 22, 2003]

§ 50.83 Release of part of a power reactor facility or site for unrestricted use.

[Top of File]

(a) Prior written NRC approval is required to release part of a facility or site for unrestricted use at any time before receiving approval of a license termination plan. Section 50.75 specifies recordkeeping requirements associated with partial release. Nuclear power reactor licensees seeking NRC approval shall--

(1) Evaluate the effect of releasing the property to ensure that--

(i) The dose to individual members of the public does not exceed the limits and standards of 10 CFR Part 20, Subpart D;

(ii) There is no reduction in the effectiveness of emergency planning or physical security;

(iii) Effluent releases remain within license conditions;

(iv) The environmental monitoring program and offsite dose calculation manual are revised to account for the changes;

(v) The siting criteria of 10 CFR Part 100 continue to be met; and

(vi) All other applicable statutory and regulatory requirements continue to be met.

(2) Perform a historical site assessment of the part of the facility or site to be released; and

(3) Perform surveys adequate to demonstrate compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402 for impacted areas.

(b) For release of non-impacted areas, the licensee may submit a written request for NRC approval of the release if a license amendment is not otherwise required. The request submittal must include--

(1) The results of the evaluations performed in accordance with paragraphs (a)(1) and (a)(2) of this section;

(2) A description of the part of the facility or site to be released;

(3) The schedule for release of the property;

(4) The results of the evaluations performed in accordance with § 50.59; and

(5) A discussion that provides the reasons for concluding that the environmental impacts associated with the licensee's proposed release of the property will be bounded by appropriate previously issued environmental impact statements.

(c) After receiving an approval request from the licensee for the release of a non-impacted area, the NRC shall--

(1) Determine whether the licensee has adequately evaluated the effect of releasing the property as required by paragraph (a)(1) of this section;

(2) Determine whether the licensee's classification of any release areas as non-impacted is adequately justified; and

(3) Upon determining that the licensee's submittal is adequate, inform the licensee in writing that the release is approved.

(d) For release of impacted areas, the licensee shall submit an application for amendment of its license for the release of the property. The application must include--

(1) The information specified in paragraphs (b)(1) through (b)(3) of this section;

(2) The methods used for and results obtained from the radiation surveys required to demonstrate compliance with the radiological criteria for unrestricted use specified in 10 CFR 20.1402; and

(3) A supplement to the environmental report, under § 51.53, describing any new information or significant environmental change associated with the licensee's proposed release of the property.

(e) After receiving a license amendment application from the licensee for the release of an impacted area, the NRC shall--

(1) Determine whether the licensee has adequately evaluated the effect of releasing the property as required by paragraph (a)(1) of this section;

(2) Determine whether the licensee's classification of any release areas as non-impacted is adequately justified;

(3) Determine whether the licensee's radiation survey for an impacted area is adequate; and

(4) Upon determining that the licensee's submittal is adequate, approve the licensee's amendment application.

(f) The NRC shall notice receipt of the release approval request or license amendment application and make the approval request or license amendment application available for public comment. Before acting on an approval request or license amendment application submitted in accordance with this section, the NRC shall conduct a public meeting in the vicinity of the licensee's facility for the purpose of obtaining public comments on the proposed release of part of the facility or site. The NRC shall publish a document in the Federal Register and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time, and location of the meeting, along with a brief description of the purpose of the meeting.

[68 FR 19727, Apr. 22, 2003]

Amendment of License or Construction Permit at Request of Holder

[Top of File]

§ 50.90 Application for amendment of license, construction permit, or early site permit.

Whenever a holder of a license, including a construction permit and operating license under this part, and an early site permit, combined license, and manufacturing license under part 52 of this chapter, desires to amend the license or permit, application for an amendment must be filed with the Commission, as specified in §§ 50.4 or 52.3 of this chapter, as applicable, fully describing the changes desired, and following as far as applicable, the form prescribed for original applications.

[64 FR 53614, Oct. 4, 1999; 72 FR 49504, Aug. 28, 2007]

§ 50.91 Notice for public comment; State consultation.

[Top of File]

The Commission will use the following procedures for an application requesting an amendment to an operating license under this part or a combined license under part 52 of this chapter for a facility licensed under §§ 50.21(b) or 50.22, or for a testing facility, except for amendments subject to hearings governed by 10 CFR part 2, subpart L. For amendments subject to 10 CFR part 2, subpart L, the following procedures will apply only to the extent specifically referenced in § 2.309(b) of this chapter, except that notice of opportunity for hearing must be published in the **Federal Register** at least 30 days before the requested amendment is issued by the Commission:

(a) *Notice for public comment.* (1) At the time a licensee requests an amendment, it must provide to the Commission, in accordance with the distribution requirements specified in § 50.4, its analysis about the issue of no significant hazards consideration using the standards in § 50.92.

(2)(i) The Commission may publish in the Federal Register under § 2.105 an individual notice of proposed action for an amendment for which it makes a proposed determination that no significant hazards consideration is involved, or, at least once every 30 days, publish a periodic Federal Register notice of proposed actions which identifies each amendment issued and each amendment proposed to be issued since the last such periodic notice, or it may publish both such notices.

(ii) For each amendment proposed to be issued, the notice will (A) contain the staff's proposed determination, under the standards in § 50.92, (B) provide a brief description of the amendment and of the facility involved, (C) solicit public comments on the proposed determination, and (D) provide for a 30-day comment period.

(iii) The comment period will begin on the day after the date of the publication of the first notice, and, normally, the amendment will not be granted until after this comment period expires.

(3) The Commission may inform the public about the final disposition of an amendment request for which it has made a proposed determination of no significant hazards consideration either by issuing an individual notice of issuance under § 2.106 of this chapter or by publishing such a notice in its periodic system of Federal Register notices. In either event, it will not make and will not publish a final determination on no significant hazards consideration, unless it receives a request for a hearing on that amendment request.

(4) Where the Commission makes a final determination that no significant hazards consideration is involved and that the amendment should be issued, the amendment will be effective on issuance, even if adverse public comments have been received and even if an interested person meeting the provisions for intervention called for in § 2.309 of this chapter has filed a request for a hearing. The Commission need hold any required hearing only after it issues an amendment, unless it determines that a significant hazards consideration is involved, in which case the Commission will provide an opportunity for a prior hearing.

(5) Where the Commission finds that an emergency situation exists, in that failure to act in a timely way would result in derating or shutdown of a nuclear power plant, or in prevention of either resumption of operation or of increase in power output up to the plant's licensed power level, it may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment. In such a situation, the Commission will not publish a notice of proposed determination on no significant hazards consideration, but will publish a notice of issuance under § 2.106 of this chapter, providing for opportunity for a hearing and for public comment after issuance. The Commission expects its licensees to apply for license amendments in timely fashion. It will decline to dispense with notice and comment on the determination of no significant hazards consideration if it determines that the licensee has abused the emergency provision by failing to make timely application for the amendment and thus itself creating the emergency. Whenever an emergency situation exists, a licensee requesting an amendment must explain why this emergency situation occurred and why it could not avoid this situation, and the Commission will assess the licensee's reasons for failing to file an application sufficiently in advance of that event.

(6) Where the Commission finds that exigent circumstances exist, in that a licensee and the Commission must act quickly and that time does not permit the Commission to publish a Federal Register notice allowing 30 days for prior public comment, and it also determines that the amendment involves no significant hazards considerations, it:

(i)(A) Will either issue a Federal Register notice providing notice of an opportunity for hearing and allowing at least two weeks from the date of the notice for prior public comment; or

(B) Will use local media to provide reasonable notice to the public in the area surrounding a licensee's facility of the licensee's amendment and of its proposed determination as described in paragraph (a)(2) of this section, consulting with the licensee on the proposed media release and on the geographical area of its coverage;

(ii) Will provide for a reasonable opportunity for the public to comment, using its best efforts to make available to the public whatever means of communication it can for the public to respond quickly, and, in the case of telephone comments, have these comments recorded or transcribed, as necessary and appropriate;

(iii) When it has issued a local media release, may inform the licensee of the public's comments, as necessary and appropriate;

(iv) Will publish a notice of issuance under § 2.106;

(v) Will provide a hearing after issuance, if one has been requested by a person who satisfies the provisions for intervention specified in § 2.309 of this chapter;

(vi) Will require the licensee to explain the exigency and why the licensee cannot avoid it, and use its normal public notice and comment procedures in paragraph (a)(2) of this section if it determines that the licensee has failed to use its best efforts to make a timely application for the amendment in order to create the exigency and to take advantage of this procedure.

(7) Where the Commission finds that significant hazards considerations are involved, it will issue a Federal Register notice providing an opportunity for a prior hearing even in an emergency situation, unless it finds an imminent danger to the health or safety of the public, in which case it will issue an appropriate order or rule under 10 CFR part 2.

(b) *State consultation*. (1) At the time a licensee requests an amendment, it must notify the State in which its facility is located of its request by providing that State with a copy of its application and its reasoned analysis about no significant hazards considerations and indicate on the application that it has done so. (The Commission will make available to the licensee the name of the appropriate State official designated to receive such amendments.)

(2) The Commission will advise the State of its proposed determination about no significant hazards consideration normally by sending it a copy of the Federal Register notice.

(3) The Commission will make available to the State official designated to consult with it about its proposed determination the names of the Project Manager or other NRC personnel it designated to consult with the State. The Commission will consider any comments of that State official. If it does not hear from the State in a timely manner, it will consider that the State has no interest in its determination;

nonetheless, to ensure that the State is aware of the application, before it issues the amendment, it will make a good faith effort to telephone that official. (Inability to consult with a responsible State official following good faith attempts will not prevent the Commission from making effective a license amendment involving no significant hazards consideration.)

(4) The Commission will make a good faith attempt to consult with the State before it issues a license amendment involving no significant hazards consideration. If, however, it does not have time to use its normal consultation procedures because of an emergency situation, it will attempt to telephone the appropriate State official. (Inability to consult with a responsible State official following good faith attempts will not prevent the Commission from making effective a license amendment involving no significant hazards consideration, if the Commission deems it necessary in an emergency situation.)

(5) After the Commission issues the requested amendment, it will send a copy of its determination to the State.

(c) *Caveats about State consultation.* (1) The State consultation procedures in paragraph (b) of this section do not give the State a right:

(i) To veto the Commission's proposed or final determination;

(ii) To a hearing on the determination before the amendment becomes effective; or

(iii) To insist upon a postponement of the determination or upon issuance of the amendment.

(2) These procedures do not alter present provisions of law that reserve to the Commission exclusive responsibility for setting and enforcing radiological health and safety requirements for nuclear power plants.

[51 FR 7765, Mar. 6, 1986, as amended at 51 FR 40310, Nov. 6, 1986; 61 FR 39303, July 29, 1996; 69 FR 2276, Jan. 14, 2004; 72 FR 49504, Aug. 28, 2007]

§ 50.92 Issuance of amendment.

[Top of File]

(a) In determining whether an amendment to a license, construction permit, or early site permit will be issued to the applicant, the Commission will be guided by the considerations which govern the issuance of initial licenses, construction permits, or early site permits to the extent applicable and appropriate. If the application involves the material alteration of a licensed facility, a construction permit will be issued before the issuance of the amendment to the license, provided however, that if the application involves a material alteration to a nuclear power reactor manufactured under part 52 of this chapter before its installation at a site, or a combined license before the date that the Commission makes the finding under § 52.103(g) of this chapter, no application for a construction permit is required. If the amendment involves a significant hazards consideration, the Commission will give notice of its proposed action:

(1) Under § 2.105 of this chapter before acting thereon; and

(2) As soon as practicable after the application has been docketed.

(b) The Commission will be particularly sensitive to a license amendment request that involves irreversible consequences (such as one that permits a significant increase in the amount of effluents or radiation emitted by a nuclear power plant).

(c) The Commission may make a final determination, under the procedures in § 50.91, that a proposed amendment to an operating license or a combined license for a facility or reactor licensed under §§ 50.21(b) or 50.22, or for a testing facility involves no significant hazards consideration, if operation of the facility in accordance with the proposed amendment would not:

(1) Involve a significant increase in the probability or consequences of an accident previously evaluated; or

(2) Create the possibility of a new or different kind of accident from any accident previously evaluated; or

(3) Involve a significant reduction in a margin of safety.

[51 FR 7767, Mar. 6, 1986; 72 FR 49504, Aug. 28, 2007]

Revocation, Suspension, Modification, Amendment of Licenses and Construction Permits, Emergency Operations by the Commission

[Top of File]

§ 50.100 Revocation, suspension, modification of licenses, permits, and approvals for cause.

A license, permit, or standard design approval under parts 50 or 52 of this chapter may be revoked, suspended, or modified, in whole or in part, for any material false statement in the application or in the supplemental or other statement of fact required of the applicant; or because of conditions revealed by the application or statement of fact of any report, record, inspection, or other means

which would warrant the Commission to refuse to grant a license, permit, or approval on an original application (other than those relating to §§ 50.51, 50.42(a), and 50.43(b)); or for failure to manufacture a reactor, or construct or operate a facility in accordance with the terms of the permit or license, provided, however, that failure to make timely completion of the proposed construction or alteration of a facility under a construction permit under part 50 of this chapter or a combined license under part 52 of this chapter shall be governed by the provisions of § 50.55(b); or for violation of, or failure to observe, any of the terms and provisions of the act, regulations, license, permit, approval, or order of the Commission.

[; 72 FR 49504, Aug. 28, 2007]

§ 50.101 Retaking possession of special nuclear material.

[Top of File]

Upon revocation of a license, the Commission may immediately cause the retaking of possession of all special nuclear material held by the licensee.

[21 FR 355, Jan. 19, 1956, as amended at 40 FR 8790, Mar. 3, 1975]

§ 50.102 Commission order for operation after revocation.

[Top of File]

Whenever the Commission finds that the public convenience and necessity, or the Department finds that the production program of the Department requires continued operation of a production or utilization facility, the license for which has been revoked, the Commission may, after consultation with the appropriate federal or state regulatory agency having jurisdiction, order that possession be taken of such facility and that it be operated for a period of time as, in the judgment of the Commission, the public convenience and necessity or the production program of the Department may require, or until a license for operation of the facility shall become effective. Just compensation shall be paid for the use of the facility.

[40 FR 8790, Mar. 3, 1975]

§ 50.103 Suspension and operation in war or national emergency.

[Top of File]

(a) Whenever Congress declares that a state of war or national emergency exists, the Commission, if it finds it necessary to the common defense and security, may,

(1) Suspend any license it has issued.

(2) Cause the recapture of special nuclear material.

(3) Order the operation of any licensed facility.

(4) Order entry into any plant or facility in order to recapture special nuclear material or to operate the facility.

(b) Just compensation shall be paid for any damages caused by recapture of special nuclear material or by operation of any facility, pursuant to this section.

[21 FR 355, Jan. 19, 1956, as amended at 35 FR 11416, July 17, 1970; 40 FR 8790, Mar. 3, 1975]

Backfitting

[Top of File]

§ 50.109 Backfitting.

(a)(1) Backfitting is defined as the modification of or addition to systems, structures, components, or design of a facility; or the design approval or manufacturing license for a facility; or the procedures or organization required to design, construct or operate a facility; any of which may result from a new or amended provision in the Commission's regulations or the imposition of a regulatory staff position interpreting the Commission's regulations that is either new or different from a previously applicable staff position after:

(i) The date of issuance of the construction permit for the facility for facilities having construction permits issued after October 21, 1985;

(ii) Six (6) months before the date of docketing of the operating license application for the facility for facilities having construction permits

issued before October 21, 1985;

(iii) The date of issuance of the operating license for the facility for facilities having operating licenses;

(iv) The date of issuance of the design approval under subpart E of part 52 of this chapter;

(v) The date of issuance of a manufacturing license under subpart F of part 52 of this chapter;

(vi) The date of issuance of the first construction permit issued for a duplicate design under appendix N of this part; or

(vii) The date of issuance of a combined license under subpart C of part 52 of this chapter, provided that if the combined license references an early site permit, the provisions in § 52.39 of this chapter apply with respect to the site characteristics, design parameters, and terms and conditions specified in the early site permit. If the combined license references a standard design certification rule under subpart B of 10 CFR part 52, the provisions in § 52.63 of this chapter apply with respect to the design matters resolved in the standard design certification rule, provided however, that if any specific backfitting limitations are included in a referenced design certification rule, those limitations shall govern. If the combined license references a standard design approval under subpart E of 10 CFR part 52, the provisions in § 52.145 of this chapter apply with respect to the design matters resolved in the standard design approval. If the combined license uses a reactor manufactured under a manufacturing license under subpart F of 10 CFR part 52, the provisions of § 52.171 of this chapter apply with respect to matters resolved in the manufacturing license proceeding.

(2) Except as provided in paragraph (a)(4) of this section, the Commission shall require a systematic and documented analysis pursuant to paragraph (c) of this section for backfits which it seeks to impose.

(3) Except as provided in paragraph (a)(4) of this section, the Commission shall require the backfitting of a facility only when it determines, based on the analysis described in paragraph (c) of this section, that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of implementation for that facility are justified in view of this increased protection.

(4) The provisions of paragraphs (a)(2) and (a)(3) of this section are inapplicable and, therefore, backfit analysis is not required and the standards in paragraph (a)(3) of this section do not apply where the Commission or staff, as appropriate, finds and declares, with appropriated documented evaluation for its finding, either:

(i) That a modification is necessary to bring a facility into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by the licensee; or

(ii) That regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public and is in accord with the common defense and security; or

(iii) That the regulatory action involves defining or redefining what level of protection to the public health and safety or common defense and security should be regarded as adequate.

(5) The Commission shall always require the backfitting of a facility if it determines that such regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public and is in accord with the common defense and security.

(6) The documented evaluation required by paragraph (a)(4) of this section shall include a statement of the objectives of and reasons for the modification and the basis for invoking the exception. If immediately effective regulatory action is required, then the documented evaluation may follow rather than precede the regulatory action.

(7) If there are two or more ways to achieve compliance with a license or the rules or orders of the Commission, or with written licensee commitments, or there are two or more ways to reach a level of protection which is adequate, then ordinarily the applicant or licensee is free to choose the way which best suits its purposes. However, should it be necessary or appropriate for the Commission to prescribe a specific way to comply with its requirements or to achieve adequate protection, then cost may be a factor in selecting the way, provided that the objective of compliance or adequate protection is met.

(b) Paragraph (a)(3) of this section shall not apply to backfits imposed prior to October 21, 1985.

(c) In reaching the determination required by paragraph (a)(3) of this section, the Commission will consider how the backfit should be scheduled in light of other ongoing regulatory activities at the facility and, in addition, will consider information available concerning any of the following factors as may be appropriate and any other information relevant and material to the proposed backfit:

(1) Statement of the specific objectives that the proposed backfit is designed to achieve;

(2) General description of the activity that would be required by the licensee or applicant in order to complete the backfit;

(3) Potential change in the risk to the public from the accidental off-site release of radioactive material;

(4) Potential impact on radiological exposure of facility employees;

(5) Installation and continuing costs associated with the backfit, including the cost of facility downtime or the cost of construction delay;

(6) The potential safety impact of changes in plant or operational complexity, including the relationship to proposed and existing regulatory requirements;

(7) The estimated resource burden on the NRC associated with the proposed backfit and the availability of such resources;

(8) The potential impact of differences in facility type, design or age on the relevancy and practicality of the proposed backfit;

(9) Whether the proposed backfit is interim or final and, if interim, the justification for imposing the proposed backfit on an interim basis.

(d) No licensing action will be withheld during the pendency of backfit analyses required by the Commission's rules.

(e) The Executive Director for Operations shall be responsible for implementation of this section, and all analyses required by this section shall be approved by the Executive Director for Operations or his designee.

[53 FR 20610, June 6, 1988, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49504, Aug. 28, 2007]]

Enforcement

[Top of File]

§ 50.110 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under Section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55075, Nov. 24, 1992]

§ 50.111 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 50 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in 10 CFR Part 50 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 50.1, 50.2, 50.3, 50.4, 50.8, 50.11, 50.12, 50.13, 50.20, 50.21, 50.22, 50.23, 50.30, 50.31, 50.32, 50.33, 50.34a, 50.35, 50.36b, 50.37, 50.38, 50.39, 50.40, 50.41, 50.42, 50.43, 50.45, 50.50, 50.51, 50.52, 50.53, 50.56, 50.57, 50.58, 50.81, 50.90, 50.91, 50.92, 50.100, 50.101, 50.102, 50.103, 50.109, 50.110, 50.111.

[57 FR 55075, Nov. 24, 1992, as amended at 61 FR 39303, July 29, 1996]

§ 50.120 Training and qualification of nuclear power plant personnel.

[Top of File]

(a) *Applicability*. The requirements of this section apply to each applicant for and each holder of an operating license issued under this part and each holder of a combined license issued under part 52 of this chapter for a nuclear power plant of the type specified in § 50.21(b) or § 50.22.

(b) *Requirements*. (1)(i) Each nuclear power plant operating license applicant, by 18 months prior to fuel load, and each holder of an operating license shall establish, implement, and maintain a training program that meets the requirements of paragraphs (b)(2) and (b)(3) of this section.

(ii) Each holder of a combined license shall establish, implement, and maintain the training program that meets the requirements of paragraphs (b)(2) and (b)(3) of this section, as described in the final safety analysis report no later than 18 months before the scheduled date for initial loading of fuel.

(2) The training program must be derived from a systems approach to training as defined in 10 CFR 55.4, and must provide for the training and qualification of the following categories of nuclear power plant personnel:

(i) Non-licensed operator.
(ii) Shift supervisor.
(iii) Shift technical advisor.
(iv) Instrument and control technician.
(v) Electrical maintenance personnel.
(vi) Mechanical maintenance personnel.
(vii) Radiological protection technician.
(viii) Chemistry technician.
(ix) Engineering support personnel.

(3) The training program must incorporate the instructional requirements necessary to provide qualified personnel to operate and maintain the facility in a safe manner in all modes of operation. The training program must be developed to be in compliance with the facility license, including all technical specifications and applicable regulations. The training program must be periodically evaluated and revised as appropriate to reflect industry experience as well as changes to the facility, procedures, regulations, and quality assurance requirements. The training program must be periodically reviewed by licensee management for effectiveness. Sufficient records must be maintained by the licensee to maintain program integrity and kept available for NRC inspection to verify the adequacy of the program.

[58 FR 21912, Apr. 26, 1993; 58 FR 39092, July 21, 1993; 72 FR 49505, Aug. 28, 2007]

Appendix A to Part 50--General Design Criteria for Nuclear Power Plants

[Top of File]

Table of Contents

- Introduction
- Definitions
  - Nuclear Power Unit
  - Loss of Coolant Accidents
  - Single Failure
  - Anticipated Operational Occurrences

CRITERIA

		Number
I. Overall Requirements:	Quality Standards and Records	1
	Design Bases for Protection Against Natural Phenomena	2
	Fire Protection	3
	Environmental and Dynamic Effects Design Bases	4
	Sharing of Structures, Systems, and Components	5
II. Protection by Multiple Fission Product Barriers:	Reactor Design	10
	Reactor inherent Protection	11
	Suppression of Reactor Power Oscillations	12
	Instrumentation and Control	13
	Reactor Coolant Pressure Boundary	14

	Reactor Coolant System Design	15
	Containment Design	16
	Electric Power Systems	17
	Inspection and Testing of Electric Power Systems	18
	Control Room	19
III. Protection and Reactivity Control Systems:	Protection System Functions	20
	Protection System Reliability and Testability	21
	Protection System Independence	22
	Protection System Failure Modes	23
	Separation of Protection and Control Systems	24
	Protection System Requirements for Reactivity Control Malfunctions	25
	Reactivity Control System Redundancy and Capability	26
	Combined Reactivity Control Systems Capability	27
	Reactivity Limits	28
	Protection Against Anticipated Operational Occurrences	29
IV. Fluid Systems:	Quality of Reactor Coolant Pressure Boundary	30
	Fracture Prevention of Reactor Coolant Pressure Boundary	31
	Inspection of Reactor Coolant Pressure Boundary	32
	Reactor Coolant Makeup	33
	Residual Heat Removal	34
	Emergency Core Cooling	35
	Inspection of Emergency Core Cooling System	36
	Testing of Emergency Core Cooling System	37
	Containment Heat Removal	38
	Inspection of Containment Heat Removal System	39
	Testing of Containment Heat Removal System	40
	Containment Atmosphere Cleanup	41
	Inspection of Containment Atmosphere Cleanup Systems	42
	Testing of Containment Atmosphere Cleanup Systems	43
	Cooling Water	44
	Inspection of Cooling Water System	45
	Testing of Cooling Water System	46
V. Reactor Containment:	Containment Design Basis	50
	Fracture Prevention of Containment Pressure Boundary	51
	Capability for Containment Leakage Rate Testing	52
	Provisions for Containment Testing and Inspection	53
	Systems Penetrating Containment	54
	Reactor Coolant Pressure Boundary Penetrating Containment	55
	Primary Containment Isolation	56
	Closed Systems Isolation Valves	57
VI. Fuel and Radioactivity Control:	Control of Releases of Radioactive Materials to the Environment	60
	Fuel Storage and Handling and Radioactivity Control	61
	Prevention of Criticality in Fuel Storage and Handling	62
	Monitoring Fuel and Waste Storage	63
	Monitoring Radioactivity Releases	64

Introduction

Under the provisions of § 50.34, an application for a construction permit must include the principal design criteria for a proposed facility. Under the provisions of 10 CFR 52.47, 52.79, 52.137, and 52.157, an application for a design certification, combined

license, design approval, or manufacturing license, respectively, must include the principal design criteria for a proposed facility. The principal design criteria establish the necessary design, fabrication, construction, testing, and performance requirements for structures, systems, and components important to safety;
that is, structures, systems, and components that provide reasonable assurance that the facility can be operated without undue risk to the health and safety of the public.

These General Design Criteria establish minimum requirements for the principal design criteria for water-cooled nuclear power plants similar in design and location to plants for which construction permits have been issued by the Commission. The General Design Criteria are also considered to be generally applicable to other types of nuclear power units and are intended to provide guidance in establishing the principal design criteria for such other units.

The development of these General Design Criteria is not yet complete. For example, some of the definitions need further amplification. Also, some of the specific design requirements for structures, systems, and components important to safety have not as yet been suitably defined. Their omission does not relieve any applicant from considering these matters in the design of a specific facility and satisfying the necessary safety requirements. These matters include:

(1) Consideration of the need to design against single failures of passive components in fluid systems important to safety. (See Definition of Single Failure.)

(2) Consideration of redundancy and diversity requirements for fluid systems important to safety. A "system" could consist of a number of subsystems each of which is separately capable of performing the specified system safety function. The minimum acceptable redundancy and diversity of subsystems and components within a subsystem, and the required interconnection and independence of the subsystems have not yet been developed or defined. (See Criteria 34, 35, 38, 41, and 44.)

(3) Consideration of the type, size, and orientation of possible breaks in components of the reactor coolant pressure boundary in determining design requirements to suitably protect against postulated loss-of-coolant accidents. (See Definition of Loss of Coolant Accidents.)

(4) Consideration of the possibility of systematic, nonrandom, concurrent failures of redundant elements in the design of protection systems and reactivity control systems. (See Criteria 22, 24, 26, and 29.)

It is expected that the criteria will be augmented and changed from time to time as important new requirements for these and other features are developed.

There will be some water-cooled nuclear power plants for which the General Design Criteria are not sufficient and for which additional criteria must be identified and satisfied in the interest of public safety. In particular, it is expected that additional or different criteria will be needed to take into account unusual sites and environmental conditions, and for water-cooled nuclear power units of advanced design. Also, there may be water-cooled nuclear power units for which fulfillment of some of the General Design Criteria may not be necessary or appropriate. For plants such as these, departures from the General Design Criteria must be identified and justified.

Definitions and Explanations

Nuclear power unit. A nuclear power unit means a nuclear power reactor and associated equipment necessary for electric power generation and includes those structures, systems, and components required to provide reasonable assurance the facility can be operated without undue risk to the health and safety of the public.

Loss of coolant accidents. Loss of coolant accidents mean those postulated accidents that result from the loss of reactor coolant at a rate in excess of the capability of the reactor coolant makeup system from breaks in the reactor coolant pressure boundary, up to and including a break equivalent in size to the double-ended rupture of the largest pipe of the reactor coolant system.[1]

Single failure. A single failure means an occurrence which results in the loss of capability of a component to perform its intended safety functions. Multiple failures resulting from a single occurrence are considered to be a single failure. Fluid and electric systems are considered to be designed against an assumed single failure if neither (1) a single failure of any active component (assuming passive components function properly) nor (2) a single failure of a passive component (assuming active components function properly), results in a loss of the capability of the system to perform its safety functions.[2]

Anticipated operational occurrences. Anticipated operational occurrences mean those conditions of normal operation which are expected to occur one or more times during the life of the nuclear power unit and include but are not limited to loss of power to all recirculation pumps, tripping of the turbine generator set, isolation of the main condenser, and loss of all offsite power.

Criteria

I. Overall Requirements

Criterion 1--Quality standards and records. Structures, systems, and components important to safety shall be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions to be performed. Where generally recognized codes and standards are used, they shall be identified and evaluated to determine their applicability, adequacy, and sufficiency and shall be supplemented or modified as necessary to assure a quality product in keeping with the required safety function. A quality assurance program shall be established and implemented in order to provide adequate assurance that these structures, systems, and components will satisfactorily perform their safety functions. Appropriate records of the design, fabrication, erection, and testing of structures, systems, and

components important to safety shall be maintained by or under the control of the nuclear power unit licensee throughout the life of the unit.

Criterion 2--Design bases for protection against natural phenomena. Structures, systems, and components important to safety shall be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The design bases for these structures, systems, and components shall reflect: (1) Appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated, (2) appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena and (3) the importance of the safety functions to be performed.

Criterion 3--Fire protection. Structures, systems, and components important to safety shall be designed and located to minimize, consistent with other safety requirements, the probability and effect of fires and explosions. Noncombustible and heat resistant materials shall be used wherever practical throughout the unit, particularly in locations such as the containment and control room. Fire detection and fighting systems of appropriate capacity and capability shall be provided and designed to minimize the adverse effects of fires on structures, systems, and components important to safety. Firefighting systems shall be designed to assure that their rupture or inadvertent operation does not significantly impair the safety capability of these structures, systems, and components.

Criterion 4--Environmental and dynamic effects design bases. Structures, systems, and components important to safety shall be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents. These structures, systems, and components shall be appropriately protected against dynamic effects, including the effects of missiles, pipe whipping, and discharging fluids, that may result from equipment failures and from events and conditions outside the nuclear power unit. However, dynamic effects associated with postulated pipe ruptures in nuclear power units may be excluded from the design basis when analyses reviewed and approved by the Commission demonstrate that the probability of fluid system piping rupture is extremely low under conditions consistent with the design basis for the piping.

Criterion 5--Sharing of structures, systems, and components. Structures, systems, and components important to safety shall not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, an orderly shutdown and cooldown of the remaining units.

II. Protection by Multiple Fission Product Barriers

Criterion 10--Reactor design. The reactor core and associated coolant, control, and protection systems shall be designed with appropriate margin to assure that specified acceptable fuel design limits are not exceeded during any condition of normal operation, including the effects of anticipated operational occurrences.

Criterion 11--Reactor inherent protection. The reactor core and associated coolant systems shall be designed so that in the power operating range the net effect of the prompt inherent nuclear feedback characteristics tends to compensate for a rapid increase in reactivity.

Criterion 12--Suppression of reactor power oscillations. The reactor core and associated coolant, control, and protection systems shall be designed to assure that power oscillations which can result in conditions exceeding specified acceptable fuel design limits are not possible or can be reliably and readily detected and suppressed.

Criterion 13--Instrumentation and control. Instrumentation shall be provided to monitor variables and systems over their anticipated ranges for normal operation, for anticipated operational occurrences, and for accident conditions as appropriate to assure adequate safety, including those variables and systems that can affect the fission process, the integrity of the reactor core, the reactor coolant pressure boundary, and the containment and its associated systems. Appropriate controls shall be provided to maintain these variables and systems within prescribed operating ranges.

Criterion 14--Reactor coolant pressure boundary. The reactor coolant pressure boundary shall be designed, fabricated, erected, and tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture.

Criterion 15--Reactor coolant system design. The reactor coolant system and associated auxiliary, control, and protection systems shall be designed with sufficient margin to assure that the design conditions of the reactor coolant pressure boundary are not exceeded during any condition of normal operation, including anticipated operational occurrences.

Criterion 16--Containment design. Reactor containment and associated systems shall be provided to establish an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment and to assure that the containment design conditions important to safety are not exceeded for as long as postulated accident conditions require.

Criterion 17--Electric power systems. An onsite electric power system and an offsite electric power system shall be provided to permit functioning of structures, systems, and components important to safety. The safety function for each system (assuming the other system is not functioning) shall be to provide sufficient capacity and capability to assure that (1) specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded as a result of anticipated operational occurrences and (2) the core is cooled and containment integrity and other vital functions are maintained in the event of postulated accidents.

The onsite electric power supplies, including the batteries, and the onsite electric distribution system, shall have sufficient independence, redundancy, and testability to perform their safety functions assuming a single failure.

Electric power from the transmission network to the onsite electric distribution system shall be supplied by two physically independent circuits (not necessarily on separate rights of way) designed and located so as to minimize to the extent practical the likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. A switchyard common to both circuits is

acceptable. Each of these circuits shall be designed to be available in sufficient time following a loss of all onsite alternating current power supplies and the other offsite electric power circuit, to assure that specified acceptable fuel design limits and design conditions of the reactor coolant pressure boundary are not exceeded. One of these circuits shall be designed to be available within a few seconds following a loss-of-coolant accident to assure that core cooling, containment integrity, and other vital safety functions are maintained.

Provisions shall be included to minimize the probability of losing electric power from any of the remaining supplies as a result of, or coincident with, the loss of power generated by the nuclear power unit, the loss of power from the transmission network, or the loss of power from the onsite electric power supplies.

Criterion 18--Inspection and testing of electric power systems. Electric power systems important to safety shall be designed to permit appropriate periodic inspection and testing of important areas and features, such as wiring, insulation, connections, and switchboards, to assess the continuity of the systems and the condition of their components. The systems shall be designed with a capability to test periodically (1) the operability and functional performance of the components of the systems, such as onsite power sources, relays, switches, and buses, and (2) the operability of the systems as a whole and, under conditions as close to design as practical, the full operation sequence that brings the systems into operation, including operation of applicable portions of the protection system, and the transfer of power among the nuclear power unit, the offsite power system, and the onsite power system.

Criterion 19--Control room. A control room shall be provided from which actions can be taken to operate the nuclear power unit safely under normal conditions and to maintain it in a safe condition under accident conditions, including loss-of-coolant accidents. Adequate radiation protection shall be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of 5 rem whole body, or its equivalent to any part of the body, for the duration of the accident. Equipment at appropriate locations outside the control room shall be provided (1) with a design capability for prompt hot shutdown of the reactor, including necessary instrumentation and controls to maintain the unit in a safe condition during hot shutdown, and (2) with a potential capability for subsequent cold shutdown of the reactor through the use of suitable procedures.

Applicants for and holders of construction permits and operating licenses under this part who apply on or after January 10, 1997, applicants for design approvals or certifications under part 52 of this chapter who apply on or after January 10, 1997, applicants for and holders of combined licenses or manufacturing licenses under part 52 of this chapter who do not reference a standard design approval or certification, or holders of operating licenses using an alternative source term under § 50.67, shall meet the requirements of this criterion, except that with regard to control room
access and occupancy, adequate radiation protection shall be provided to ensure that radiation exposures shall not exceed 0.05 Sv (5 rem) total effective dose equivalent (TEDE) as defined in § 50.2 for the duration of the accident.

III. Protection and Reactivity Control Systems

Criterion 20--Protection system functions. The protection system shall be designed (1) to initiate automatically the operation of appropriate systems including the reactivity control systems, to assure that specified acceptable fuel design limits are not exceeded as a result of anticipated operational occurrences and (2) to sense accident conditions and to initiate the operation of systems and components important to safety.

Criterion 21--Protection system reliability and testability. The protection system shall be designed for high functional reliability and inservice testability commensurate with the safety functions to be performed. Redundancy and independence designed into the protection system shall be sufficient to assure that (1) no single failure results in loss of the protection function and (2) removal from service of any component or channel does not result in loss of the required minimum redundancy unless the acceptable reliability of operation of the protection system can be otherwise demonstrated. The protection system shall be designed to permit periodic testing of its functioning when the reactor is in operation, including a capability to test channels independently to determine failures and losses of redundancy that may have occurred.

Criterion 22--Protection system independence. The protection system shall be designed to assure that the effects of natural phenomena, and of normal operating, maintenance, testing, and postulated accident conditions on redundant channels do not result in loss of the protection function, or shall be demonstrated to be acceptable on some other defined basis. Design techniques, such as functional diversity or diversity in component design and principles of operation, shall be used to the extent practical to prevent loss of the protection function.

Criterion 23--Protection system failure modes. The protection system shall be designed to fail into a safe state or into a state demonstrated to be acceptable on some other defined basis if conditions such as disconnection of the system, loss of energy (e.g., electric power, instrument air), or postulated adverse environments (e.g., extreme heat or cold, fire, pressure, steam, water, and radiation) are experienced.

Criterion 24--Separation of protection and control systems. The protection system shall be separated from control systems to the extent that failure of any single control system component or channel, or failure or removal from service of any single protection system component or channel which is common to the control and protection systems leaves intact a system satisfying all reliability, redundancy, and independence requirements of the protection system. Interconnection of the protection and control systems shall be limited so as to assure that safety is not significantly impaired.

Criterion 25--Protection system requirements for reactivity control malfunctions. The protection system shall be designed to assure that specified acceptable fuel design limits are not exceeded for any single malfunction of the reactivity control systems, such as accidental withdrawal (not ejection or dropout) of control rods.

Criterion 26--Reactivity control system redundancy and capability. Two independent reactivity control systems of different design principles shall be provided. One of the systems shall use control rods, preferably including a positive means for inserting the rods, and shall be capable of reliably controlling reactivity changes to assure that under conditions of normal operation, including anticipated operational occurrences, and with appropriate margin for malfunctions such as stuck rods, specified acceptable fuel design limits are not exceeded. The second reactivity control system shall be capable of reliably controlling the rate of reactivity changes resulting from planned, normal power

changes (including xenon burnout) to assure acceptable fuel design limits are not exceeded. One of the systems shall be capable of holding the reactor core subcritical under cold conditions.

Criterion 27--Combined reactivity control systems capability. The reactivity control systems shall be designed to have a combined capability, in conjunction with poison addition by the emergency core cooling system, of reliably controlling reactivity changes to assure that under postulated accident conditions and with appropriate margin for stuck rods the capability to cool the core is maintained.

Criterion 28--Reactivity limits. The reactivity control systems shall be designed with appropriate limits on the potential amount and rate of reactivity increase to assure that the effects of postulated reactivity accidents can neither (1) result in damage to the reactor coolant pressure boundary greater than limited local yielding nor (2) sufficiently disturb the core, its support structures or other reactor pressure vessel internals to impair significantly the capability to cool the core. These postulated reactivity accidents shall include consideration of rod ejection (unless prevented by positive means), rod dropout, steam line rupture, changes in reactor coolant temperature and pressure, and cold water addition.

Criterion 29--Protection against anticipated operational occurrences. The protection and reactivity control systems shall be designed to assure an extremely high probability of accomplishing their safety functions in the event of anticipated operational occurrences.

IV. Fluid Systems

Criterion 30--Quality of reactor coolant pressure boundary. Components which are part of the reactor coolant pressure boundary shall be designed, fabricated, erected, and tested to the highest quality standards practical. Means shall be provided for detecting and, to the extent practical, identifying the location of the source of reactor coolant leakage.

Criterion 31--Fracture prevention of reactor coolant pressure boundary. The reactor coolant pressure boundary shall be designed with sufficient margin to assure that when stressed under operating, maintenance, testing, and postulated accident conditions (1) the boundary behaves in a nonbrittle manner and (2) the probability of rapidly propagating fracture is minimized. The design shall reflect consideration of service temperatures and other conditions of the boundary material under operating, maintenance, testing, and postulated accident conditions and the uncertainties in determining (1) material properties, (2) the effects of irradiation on material properties, (3) residual, steady state and transient stresses, and (4) size of flaws.

Criterion 32--Inspection of reactor coolant pressure boundary. Components which are part of the reactor coolant pressure boundary shall be designed to permit (1) periodic inspection and testing of important areas and features to assess their structural and leaktight integrity, and (2) an appropriate material surveillance program for the reactor pressure vessel.

Criterion 33--Reactor coolant makeup. A system to supply reactor coolant makeup for protection against small breaks in the reactor coolant pressure boundary shall be provided. The system safety function shall be to assure that specified acceptable fuel design limits are not exceeded as a result of reactor coolant loss due to leakage from the reactor coolant pressure boundary and rupture of small piping or other small components which are part of the boundary. The system shall be designed to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished using the piping, pumps, and valves used to maintain coolant inventory during normal reactor operation.

Criterion 34--Residual heat removal. A system to remove residual heat shall be provided. The system safety function shall be to transfer fission product decay heat and other residual heat from the reactor core at a rate such that specified acceptable fuel design limits and the design conditions of the reactor coolant pressure boundary are not exceeded.

Suitable redundancy in components and features, and suitable interconnections, leak detection, and isolation capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

Criterion 35--Emergency core cooling. A system to provide abundant emergency core cooling shall be provided. The system safety function shall be to transfer heat from the reactor core following any loss of reactor coolant at a rate such that (1) fuel and clad damage that could interfere with continued effective core cooling is prevented and (2) clad metal-water reaction is limited to negligible amounts.

Suitable redundancy in components and features, and suitable interconnections, leak detection, isolation, and containment capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

Criterion 36--Inspection of emergency core cooling system. The emergency core cooling system shall be designed to permit appropriate periodic inspection of important components, such as spray rings in the reactor pressure vessel, water injection nozzles, and piping, to assure the integrity and capability of the system.

Criterion 37--Testing of emergency core cooling system. The emergency core cooling system shall be designed to permit appropriate periodic pressure and functional testing to assure (1) the structural and leaktight integrity of its components, (2) the operability and performance of the active components of the system, and (3) the operability of the system as a whole and, under conditions as close to design as practical, the performance of the full operational sequence that brings the system into operation, including operation of applicable portions of the protection system, the transfer between normal and emergency power sources, and the operation of the associated cooling water system.

Criterion 38--Containment heat removal. A system to remove heat from the reactor containment shall be provided. The system safety function shall be to reduce rapidly, consistent with the functioning of other associated systems, the containment pressure and temperature

following any loss-of-coolant accident and maintain them at acceptably low levels.

Suitable redundancy in components and features, and suitable interconnections, leak detection, isolation, and containment capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

Criterion 39--Inspection of containment heat removal system. The containment heat removal system shall be designed to permit appropriate periodic inspection of important components, such as the torus, sumps, spray nozzles, and piping to assure the integrity and capability of the system.

Criterion 40--Testing of containment heat removal system. The containment heat removal system shall be designed to permit appropriate periodic pressure and functional testing to assure (1) the structural and leaktight integrity of its components, (2) the operability and performance of the active components of the system, and (3) the operability of the system as a whole, and under conditions as close to the design as practical the performance of the full operational sequence that brings the system into operation, including operation of applicable portions of the protection system, the transfer between normal and emergency power sources, and the operation of the associated cooling water system.

Criterion 41--Containment atmosphere cleanup. Systems to control fission products, hydrogen, oxygen, and other substances which may be released into the reactor containment shall be provided as necessary to reduce, consistent with the functioning of other associated systems, the concentration and quality of fission products released to the environment following postulated accidents, and to control the concentration of hydrogen or oxygen and other substances in the containment atmosphere following postulated accidents to assure that containment integrity is maintained.

Each system shall have suitable redundancy in components and features, and suitable interconnections, leak detection, isolation, and containment capabilities to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) its safety function can be accomplished, assuming a single failure.

Criterion 42--Inspection of containment atmosphere cleanup systems. The containment atmosphere cleanup systems shall be designed to permit appropriate periodic inspection of important components, such as filter frames, ducts, and piping to assure the integrity and capability of the systems.

Criterion 43--Testing of containment atmosphere cleanup systems. The containment atmosphere cleanup systems shall be designed to permit appropriate periodic pressure and functional testing to assure (1) the structural and leaktight integrity of its components, (2) the operability and performance of the active components of the systems such as fans, filters, dampers, pumps, and valves and (3) the operability of the systems as a whole and, under conditions as close to design as practical, the performance of the full operational sequence that brings the systems into operation, including operation of applicable portions of the protection system, the transfer between normal and emergency power sources, and the operation of associated systems.

Criterion 44--Cooling water. A system to transfer heat from structures, systems, and components important to safety, to an ultimate heat sink shall be provided. The system safety function shall be to transfer the combined heat load of these structures, systems, and components under normal operating and accident conditions.

Suitable redundancy in components and features, and suitable interconnections, leak detection, and isolation capabilities shall be provided to assure that for onsite electric power system operation (assuming offsite power is not available) and for offsite electric power system operation (assuming onsite power is not available) the system safety function can be accomplished, assuming a single failure.

Criterion 45--Inspection of cooling water system. The cooling water system shall be designed to permit appropriate periodic inspection of important components, such as heat exchangers and piping, to assure the integrity and capability of the system.

Criterion 46--Testing of cooling water system. The cooling water system shall be designed to permit appropriate periodic pressure and functional testing to assure (1) the structural and leaktight integrity of its components, (2) the operability and the performance of the active components of the system, and (3) the operability of the system as a whole and, under conditions as close to design as practical, the performance of the full operational sequence that brings the system into operation for reactor shutdown and for loss-of-coolant accidents, including operation of applicable portions of the protection system and the transfer between normal and emergency power sources.

V. Reactor Containment

Criterion 50--Containment design basis. The reactor containment structure, including access openings, penetrations, and the containment heat removal system shall be designed so that the containment structure and its internal compartments can accommodate, without exceeding the design leakage rate and with sufficient margin, the calculated pressure and temperature conditions resulting from any loss-of-coolant accident. This margin shall reflect consideration of (1) the effects of potential energy sources which have not been included in the determination of the peak conditions, such as energy in steam generators and as required by § 50.44 energy from metal-water and other chemical reactions that may result from degradation but not total failure of emergency core cooling functioning, (2) the limited experience and experimental data available for defining accident phenomena and containment responses, and (3) the conservatism of the calculational model and input parameters.

Criterion 51--Fracture prevention of containment pressure boundary. The reactor containment boundary shall be designed with sufficient margin to assure that under operating, maintenance, testing, and postulated accident conditions (1) its ferritic materials behave in a nonbrittle manner and (2) the probability of rapidly propagating fracture is minimized. The design shall reflect consideration of service temperatures and other conditions of the containment boundary material during operation, maintenance, testing, and postulated accident conditions, and the uncertainties in determining (1) material properties, (2) residual, steady state, and transient stresses, and (3) size of flaws.

Criterion 52--Capability for containment leakage rate testing. The reactor containment and other equipment which may be subjected to containment test conditions shall be designed so that periodic integrated leakage rate testing can be conducted at containment design pressure.

Criterion 53--Provisions for containment testing and inspection. The reactor containment shall be designed to permit (1) appropriate periodic inspection of all important areas, such as penetrations, (2) an appropriate surveillance program, and (3) periodic testing at containment design pressure of the leaktightness of penetrations which have resilient seals and expansion bellows.

Criterion 54--Piping systems penetrating containment. Piping systems penetrating primary reactor containment shall be provided with leak detection, isolation, and containment capabilities having redundancy, reliability, and performance capabilities which reflect the importance to safety of isolating these piping systems. Such piping systems shall be designed with a capability to test periodically the operability of the isolation valves and associated apparatus and to determine if valve leakage is within acceptable limits.

Criterion 55--Reactor coolant pressure boundary penetrating containment. Each line that is part of the reactor coolant pressure boundary and that penetrates primary reactor containment shall be provided with containment isolation valves as follows, unless it can be demonstrated that the containment isolation provisions for a specific class of lines, such as instrument lines, are acceptable on some other defined basis:

(1) One locked closed isolation valve inside and one locked closed isolation valve outside containment; or

(2) One automatic isolation valve inside and one locked closed isolation valve outside containment; or

(3) One locked closed isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment; or

(4) One automatic isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment.

Isolation valves outside containment shall be located as close to containment as practical and upon loss of actuating power, automatic isolation valves shall be designed to take the position that provides greater safety.

Other appropriate requirements to minimize the probability or consequences of an accidental rupture of these lines or of lines connected to them shall be provided as necessary to assure adequate safety. Determination of the appropriateness of these requirements, such as higher quality in design, fabrication, and testing, additional provisions for inservice inspection, protection against more severe natural phenomena, and additional isolation valves and containment, shall include consideration of the population density, use characteristics, and physical characteristics of the site environs.

Criterion 56--Primary containment isolation. Each line that connects directly to the containment atmosphere and penetrates primary reactor containment shall be provided with containment isolation valves as follows, unless it can be demonstrated that the containment isolation provisions for a specific class of lines, such as instrument lines, are acceptable on some other defined basis:

(1) One locked closed isolation valve inside and one locked closed isolation valve outside containment; or

(2) One automatic isolation valve inside and one locked closed isolation valve outside containment; or

(3) One locked closed isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment; or

(4) One automatic isolation valve inside and one automatic isolation valve outside containment. A simple check valve may not be used as the automatic isolation valve outside containment.

Isolation valves outside containment shall be located as close to the containment as practical and upon loss of actuating power, automatic isolation valves shall be designed to take the position that provides greater safety.

Criterion 57--Closed system isolation valves. Each line that penetrates primary reactor containment and is neither part of the reactor coolant pressure boundary nor connected directly to the containment atmosphere shall have at least one containment isolation valve which shall be either automatic, or locked closed, or capable of remote manual operation. This valve shall be outside containment and located as close to the containment as practical. A simple check valve may not be used as the automatic isolation valve.

VI. Fuel and Radioactivity Control

Criterion 60--Control of releases of radioactive materials to the environment. The nuclear power unit design shall include means to control suitably the release of radioactive materials in gaseous and liquid effluents and to handle radioactive solid wastes produced during normal reactor operation, including anticipated operational occurrences. Sufficient holdup capacity shall be provided for retention of gaseous and liquid effluents containing radioactive materials, particularly where unfavorable site environmental conditions can be expected to impose unusual operational limitations upon the release of such effluents to the environment.

Criterion 61--Fuel storage and handling and radioactivity control. The fuel storage and handling, radioactive waste, and other systems which may contain radioactivity shall be designed to assure adequate safety under normal and postulated accident conditions. These systems shall

be designed (1) with a capability to permit appropriate periodic inspection and testing of components important to safety, (2) with suitable shielding for radiation protection, (3) with appropriate containment, confinement, and filtering systems, (4) with a residual heat removal capability having reliability and testability that reflects the importance to safety of decay heat and other residual heat removal, and (5) to prevent significant reduction in fuel storage coolant inventory under accident conditions.

Criterion 62--Prevention of criticality in fuel storage and handling. Criticality in the fuel storage and handling system shall be prevented by physical systems or processes, preferably by use of geometrically safe configurations.

Criterion 63--Monitoring fuel and waste storage. Appropriate systems shall be provided in fuel storage and radioactive waste systems and associated handling areas (1) to detect conditions that may result in loss of residual heat removal capability and excessive radiation levels and (2) to initiate appropriate safety actions.

Criterion 64--Monitoring radioactivity releases. Means shall be provided for monitoring the reactor containment atmosphere, spaces containing components for recirculation of loss-of-coolant accident fluids, effluent discharge paths, and the plant environs for radioactivity that may be released from normal operations, including anticipated operational occurrences, and from postulated accidents.

[36 FR 3256, Feb. 20, 1971, as amended at 36 FR 12733, July 7, 1971; 41 FR 6258, Feb. 12, 1976; 43 FR 50163, Oct. 27, 1978; 51 FR 12505, Apr. 11, 1986; 52 FR 41294, Oct. 27, 1987; 64 FR 72002, Dec. 23, 1999; 72 FR 49505, Aug. 28, 2007]

[1] Further details relating to the type, size, and orientation of postulated breaks in specific components of the reactor coolant pressure boundary are under development.

[2] Single failures of passive components in electric systems should be assumed in designing against a single failure. The conditions under which a single failure of a passive component in a fluid system should be considered in designing the system against a single failure are under development.

Appendix B to Part 50--Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants

[Top of File]

Introduction. Every applicant for a construction permit is required by the provisions of § 50.34 to include in its preliminary safety analysis report a description of the quality assurance program to be applied to the design, fabrication, construction, and testing of the structures, systems, and components of the facility. Every applicant for an operating license is required to include, in its final safety analysis report, information pertaining to the managerial and administrative controls to be used to assure safe operation. Every applicant for a combined license under part 52 of this chapter is required by the provisions of § 52.79 of this chapter to include in its final safety analysis report a description of the quality assurance applied to the design, and to be applied to the fabrication, construction, and testing of the structures, systems, and components of the facility and to the managerial and administrative controls to be used to assure safe operation. For applications submitted after September 27, 2007, every applicant for an early site permit under part 52 of this chapter is required by the provisions of § 52.17 of this chapter to include in its site safety analysis report a description of the quality assurance program applied to site activities related to the design, fabrication, construction, and testing of the structures, systems, and components of a facility or facilities that may be constructed on the site. Every applicant for a design approval or design certification under part 52 of this chapter is required by the provisions of 10 CFR 52.137 and 52.47, respectively, to include in its final safety analysis report a description of the quality assurance program applied to the design of the structures, systems, and components of the facility. Every applicant for a manufacturing license under part 52 of this chapter is required by the provisions of 10 CFR 52.157 to include in its final safety analysis report a description of the quality assurance program applied to the design, and to be applied to the manufacture of, the structures, systems, and components of the reactor. Nuclear power plants and fuel reprocessing plants include structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public. This appendix establishes quality assurance requirements for the design, manufacture, construction, and operation of those structures, systems, and components. The pertinent requirements of this appendix apply to all activities affecting the safetyrelated functions of those structures, systems, and components; these activities include designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, refueling, and modifying.

As used in this appendix, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to the physical characteristics of a material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

I. Organization

The applicant [(1)] shall be responsible for the establishment and execution of the quality assurance program. The applicant may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part thereof, but shall retain responsibility for the quality assurance program. The authority and duties of persons and organizations performing activities affecting the safety-related functions of structures, systems, and components shall be clearly established and delineated in writing. These activities include both the performing functions of attaining quality objectives and the quality assurance functions. The quality assurance functions are those of (1) assuring that an appropriate quality assurance program is established and effectively executed; and (2) verifying, such as by checking, auditing, and inspecting, that activities affecting the safetyrelated functions have been correctly performed. The persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify

implementation of solutions. There persons and organizations performing quality assurance functions shall report to a management level so that the required authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations, are provided. Because of the
many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms, provided that the persons and organizations assigned the quality assurance functions have the required authority and organizational freedom. Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to this appendix are being performed, shall have direct access to the levels of management necessary to perform this function.

II. Quality Assurance Program

The applicant shall establish at the earliest practicable time, consistent with the schedule for accomplishing the activities, a quality assurance program which complies with the requirements of this appendix. This program shall be documented by written policies, procedures, or instructions and shall be carried out throughout plant life in accordance with those policies, procedures, or instructions. The applicant shall identify the structures, systems, and components to be covered by the quality assurance program and the major organizations participating in the program, together with the designated functions of these organizations. The quality assurance program shall provide control over activities affecting the quality of the identified structures, systems, and components, to an extent consistent with their importance to safety. Activities affecting quality shall be accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanness; and assurance that all prerequisites for the given activity have been satisfied. The program shall take into account the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection and test. The program shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained. The applicant shall regularly review the status and adequacy of the quality assurance program. Management of other organizations participating in the quality assurance program shall regularly review the status and adequacy of that part of the quality assurance program which they are executing.

III. Design Control

Measures shall be established to assure that applicable regulatory requirements and the design basis, as defined in § 50.2 and as specified in the license application, for those structures, systems, and components to which this appendix applies are correctly translated into specifications, drawings, procedures, and instructions. These measures shall include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled. Measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems and components.

Measures shall be established for the identification and control of design interfaces and for coordination among participating design organizations. These measures shall include the establishment of procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces.

The design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program. The verifying or checking process shall be performed by individuals or groups other than those who performed the original design, but who may be from the same organization. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualifications testing of a prototype unit under the most adverse design conditions. Design control measures shall be applied to items such as the following: reactor physics, stress, thermal, hydraulic, and accident analyses; compatibility of materials; accessibility for inservice inspection, maintenance, and repair; and delineation of acceptance criteria for inspections and tests.

Design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization.

IV. Procurement Document Control

Measures shall be established to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the applicant or by its contractors or subcontractors. To the extent necessary, procurement documents shall require contractors or subcontractors to provide a quality assurance program consistent with the pertinent provisions of this appendix.

V. Instructions, Procedures, and Drawings

Activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings shall include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

VI. Document Control

Measures shall be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. These measures shall assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed. Changes to documents shall be reviewed and approved by the same organizations that performed the original review and

approval unless the applicant designates another responsible organization.

VII. Control of Purchased Material, Equipment, and Services

Measures shall be established to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures shall include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery. Documentary evidence that material and equipment conform to the procurement requirements shall be available at the nuclear powerplant or fuel reprocessing plant site prior to installation or use of such material and equipment. This documentary evidence shall be retained at the nuclear powerplant or fuel reprocessing plant site and shall be sufficient to identify the specific requirements, such as codes, standards, or specifications, met by the purchased material and equipment. The effectiveness of the control of quality by contractors and subcontractors shall be assessed by the applicant or designee at intervals consistent with the importance, complexity, and quantity of the product or services.

VIII. Identification and Control of Materials, Parts, and Components

Measures shall be established for the identification and control of materials, parts, and components, including partially fabricated assemblies. These measures shall assure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item. These identification and control measures shall be designed to prevent the use of incorrect or defective material, parts, and components.

IX. Control of Special Processes

Measures shall be established to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

X. Inspection

A program for inspection of activities affecting quality shall be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity. Such inspection shall be performed by individuals other than those who performed the activity being inspected. Examinations, measurements, or tests of material or products processed shall be performed for each work operation where necessary to assure quality. If inspection of processed material or products is impossible or disadvantageous, indirect control by monitoring processing methods, equipment, and personnel shall be provided. Both inspection and process monitoring shall be provided when control is inadequate without both. If mandatory inspection hold points, which require witnessing or inspecting by the applicant's designated representative and beyond which work shall not proceed without the consent of its designated representative are required, the specific hold points shall be indicated in appropriate documents.

XI. Test Control

A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. The test program shall include, as appropriate, proof tests prior to installation, preoperational tests, and operational tests during nuclear power plant or fuel reprocessing plant operation, of structures, systems, and components. Test procedures shall include provisions for assuring that all prerequisites for the given test have been met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. Test results shall be documented and evaluated to assure that test requirements have been satisfied.

XII. Control of Measuring and Test Equipment

Measures shall be established to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

XIII. Handling, Storage and Shipping

Measures shall be established to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration. When necessary for particular products, special protective environments, such as inert gas atmosphere, specific moisture content levels, and temperature levels, shall be specified and provided.

XIV. Inspection, Test, and Operating Status

Measures shall be established to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items of the nuclear power plant or fuel reprocessing plant. These measures shall provide for the identification of items which have satisfactorily passed required inspections and tests, where necessary to preclude inadvertent bypassing of such inspections and tests. Measures shall also be established for indicating the operating status of structures, systems, and components of the nuclear power plant or fuel reprocessing plant, such as by tagging valves and switches, to prevent inadvertent operation.

XV. Nonconforming Materials, Parts, or Components

Measures shall be established to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures shall include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items shall be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

XVI. Corrective Action

Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. In the case of significant conditions adverse to quality, the measures shall assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

XVII. Quality Assurance Records

Sufficient records shall be maintained to furnish evidence of activities affecting quality. The records shall include at least the following: Operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records shall also include closely-related data such as qualifications of personnel, procedures, and equipment. Inspection and test records shall, as a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. Records shall be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location, and assigned responsibility.

XVIII. Audits

A comprehensive system of planned and periodic audits shall be carried out to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits shall be performed in accordance with the written procedures or check lists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results shall be documented and reviewed by management having responsibility in the area audited. Followup action, including reaudit of deficient areas, shall be taken where indicated.

[35 FR 10499, June 27, 1970, as amended at 36 FR 18301, Sept. 11, 1971; 40 FR 3210D, Jan. 20, 1975; 72 FR 49505, Aug. 28, 2007]

[1] While the term "applicant" is used in these criteria, the requirements are, of course, applicable after such a person has received a license to construct and operate a nuclear power plant or a fuel reprocessing plant or has received an early site permit, design approval, design certification, or manufacturing license, as applicable. These criteria will also be used for guidance in evaluating the adequacy of quality assurance programs in use by holders of construction permits, operating licenses, early site permits, design approvals, combined licenses, and manufacturing licenses.

Appendix C to Part 50—A Guide for the Financial Data and Related Information Required To Establish Financial Qualifications for Construction Permits and Combined Licenses

[Top of File]

General Information

This appendix is intended to appraise applicants for construction permits and combined licenses for production or utilization facilities of the types described in § 50.21(b) or § 50.22, or testing facilities, of the general kinds of financial data and other related information that will demonstrate the financial qualification of the applicant to carry out the activities for which the permit or license is sought. The kind and depth of information described in this guide is not intended to be a rigid and absolute requirement. In some instances, additional pertinent material may be needed. In any case, the applicant should include information other than that specified, if the information is pertinent to establishing the applicant's financial ability to carry out the activities for which the permit or license is sought.

It is important to observe also that both § 50.33(f) and this appendix distinguish between applicants which are established organizations and those which are newly-formed entities organized primarily for the purpose of engaging in the activity for which the permit is sought. Those in the former category will normally have a history of operating experience and be able to submit financial statements reflecting the financial results of past operations. With respect, however, to the applicant which is a newly formed company established primarily for the purpose of carrying out the licensed activity, with little or no prior operating history, somewhat more detailed data and supporting documentation will generally be necessary. For this reason, the appendix describes separately the scope of information to be included in applications by each of these two classes of applicants.

In determining an applicant's financial qualification, the Commission will require the minimum amount of information necessary for that purpose. No special forms are prescribed for submitting the information. In many cases, the financial information usually contained in current annual financial reports, including summary data of prior years, will be sufficient for the Commission's needs. The Commission reserves the right, however, to require additional financial information at the construction permit stage, particularly in cases in which the proposed power generating facility will be commonly owned by two or more existing companies or in which financing depends upon long-term arrangements for sharing of the power from the facility by two or more electrical generating companies.

Applicants are encouraged to consult with the Commission with respect to any questions they may have relating to the requirements of the Commission's regulations or the information set forth in this appendix.

I. Applicants Which Are Established Organizations

A. Applications for Construction Permits or Combined Licenses

1. Estimate of construction costs. For electric utilities, each applicant's estimate of the total cost of the proposed facility should be broken down as follows and be accompanied by a statement describing the bases from which the estimate is derived:

(a) Total nuclear production plant costs	$.....
(b) Transmission, distribution, and general plant costs	$.....
(c) Nuclear fuel inventory cost for first core[1]	$.....
Total estimated cost	$.....

[1]Section 2.790 of 10 CFR Part 2 and § 9.5 of 10 CFR Part 9 indicate the circumstances under which information submitted by applicants may be withheld from public disclosure.

If the fuel is to be acquired by lease or other arrangement than purchase, the application should so state. The items to be included in these categories should be the same as those defined in the applicable electric plant and nuclear fuel inventory accounts prescribed by the Federal Energy Regulatory Commission or an explanation given as to any departure therefrom.

Since the composition of construction cost estimates for production and utilization facilities other than nuclear power reactors will vary according to the type of facility, no particular format is suggested for submitting such estimates. The estimate should, however, be itemized by categories of cost in sufficient detail to permit an evaluation of its reasonableness.

2. *Source of construction funds*. The application should include a brief statement of the applicant's general financial plan for financing the cost of the facility, identifying the source or sources upon which the applicant relies for the necessary construction funds, e.g., internal sources such as undistributed earnings and depreciation accruals, or external sources such as borrowings.

3. *Applicant's financial statements*. The application should also include the applicant's latest published annual financial report, together with any current interim financial statements that are pertinent. If an annual financial report is not published, the balance sheet and operating statement covering the latest complete accounting year together with all pertinent notes thereto and certification by a public accountant should be furnished.

II. Applicants Which Are Newly Formed Entities

A. Applications for Construction Permits or Combined Licenses

1. *Estimate of construction costs*. The information that will normally be required of applicants which are newly formed entities will not differ in scope from that required of established organizations. Accordingly, applicants should submit estimates as described above for established organizations.

2. *Source of construction funds*. The application should specifically identify the source or sources upon which the applicant relies for the funds necessary to pay the cost of constructing the facility, and the amount to be obtained from each. With respect to each source, the application should describe in detail the applicant's legal and financial relationships with its stockholders, corporate affiliates, or others (such as financial institutions) upon which the applicant is relying for financial assistance. If the sources of funds relied upon include parent companies or other corporate affiliates, information to support the financial capability of each such company or affiliate to meet its commitments to the applicant should be set forth in the application. This information should be of the same kind and scope as would be required if the parent companies or affiliates were in fact the applicant. Ordinarily, it will be necessary that copies of agreements or contracts among the companies be submitted.

As noted earlier in this appendix, an applicant which is a newly formed entity will normally not be in a position to submit the usual types of balance sheets and income statements reflecting the results of prior operations. The applicant should, however, include in its application a statement of its assets, liabilities, and capital structure as of the date of the application.

III. Annual Financial Statement

Each holder of a construction permit for a production or utilization facility of a type described in § 50.21(b) or § 50.22 or a testing facility, and each holder of a combined license issued under part 52 of this chapter, is required by § 50.71(b) to file its annual financial report with the Commission at the time of issuance. This requirement does not apply to licensees or holders of construction permits for medical and research reactors.

IV. Additional Information

The Commission may, from time to time, request the applicant, whether an established organization or newly formed entity, to submit additional or more detailed information respecting its financial arrangements and status of funds if such information is deemed necessary to enable the Commiasion to determine an applicant's financial qualifications for the license.

[49 FR 35753, Sept. 12, 1984, as amended at 50 FR 18853, May 3, 1985; 72 FR 49506, Aug. 28, 2007]

Appendix D to Part 50--[Reserved]

[Top of File]

Appendix E to Part 50--Emergency Planning and Preparedness for Production and Utilization Facilities

[Top of File]

Table of Contents

I. Introduction
II. The Preliminary Safety Analysis Report
III. The Final Safety Analysis Report
IV. Content of Emergency Plans
V. Implementing Procedures
VI. Emergency Response Data System

I. Introduction

Each applicant for a construction permit is required by § 50.34(a) to include in the preliminary safety analysis report a discussion of preliminary plans for coping with emergencies. Each applicant for an operating license is required by § 50.34(b) to include in the final safety analysis report plans for coping with emergencies. Each applicant for a combined license under subpart C of part 52 of this chapter is required by § 52.79 of this chapter to include in the application plans for coping with emergencies. Each applicant for an early site permit under subpart A of part 52 of this chapter may submit plans for coping with emergencies under § 52.17 of this chapter.

This appendix establishes minimum requirements for emergency plans for use in attaining an acceptable state of emergency preparedness. These plans shall be described generally in the preliminary safety analysis report for a construction permit and submitted as part of the final safety analysis report for an operating license. These plans, or major features thereof, may be submitted as part of the site safety analysis report for an early site permit.

The potential radiological hazards to the public associated with the operation of research and test reactors and fuel facilities licensed under 10 CFR Parts 50 and 70 involve considerations different than those associated with nuclear power reactors. Consequently, the size of Emergency Planning Zones[1] (EPZs) for facilities other than power reactors and the degree to which compliance with the requirements of this section and sections II, III, IV, and V as necessary will be determined on a case-by-case basis.[2]

Notwithstanding the above paragraphs, in the case of an operating license authorizing only fuel loading and/or low power operations up to 5% of rated power, no NRC or FEMA review, findings, or determinations concerning the state of offsite emergency preparedness or the adequacy of and the capability to implement State and local offsite emergency plans, as defined in this Appendix, are required prior to the issuance of such a license.

II. The Preliminary Safety Analysis Report

The Preliminary Safety Analysis Report shall contain sufficient information to ensure the compatibility of proposed emergency plans for both onsite areas and the EPZs, with facility design features, site layout, and site location with respect to such considerations as access routes, surrounding population distributions, land use, and local jurisdictional boundaries for the EPZs in the case of nuclear power reactors as well as the means by which the standards of § 50.47(b) will be met.

As a minimum, the following items shall be described:

A. Onsite and offsite organizations for coping with emergencies and the means for notification, in the event of an emergency, of persons assigned to the emergency organizations.

B. Contacts and arrangements made and documented with local, State, and Federal governmental agencies with responsibility for coping with emergencies, including identification of the principal agencies.

C. Protective measures to be taken within the site boundary and within each EPZ to protect health and safety in the event of an accident; procedures by which these measures are to be carried out (e.g., in the case of an evacuation, who authorizes the evacuation, how the public is to be notified and instructed, how the evacuation is to be carried out); and the expected response of offsite agencies in the event of an emergency.

D. Features of the facility to be provided for onsite emergency first aid and decontamination and for emergency transportation of onsite individuals to offsite treatment facilities.

E. Provisions to be made for emergency treatment at offsite facilities of individuals injured as a result of licensed activities.

F. Provisions for a training program for employees of the licensee, including those who are assigned specific authority and responsibility in the event of an emergency, and for other persons who are not employees of the licensee but whose assistance may be needed in the event

of a radiological emergency.

G. A preliminary analysis that projects the time and means to be employed in the notification of State and local governments and the public in the event of an emergency. A nuclear power plant applicant shall perform a preliminary analysis of the time required to evacuate various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations, noting major impediments to the evacuation or taking of protective actions.

H. A preliminary analysis reflecting the need to include facilities, systems, and methods for identifying the degree of seriousness and potential scope of radiological consequences of emergency situations within and outside the site boundary, including capabilities for dose projection using real-time meteorological information and for dispatch of radiological monitoring teams within the EPZs; and a preliminary analysis reflecting the role of the onsite technical support center and of the near-site emergency operations facility in assessing information, recommending protective action, and disseminating information to the public.

III. The Final Safety Analysis Report; Site Safety Analysis Report

The final safety analysis report or the site safety analysis report for an early site permit that includes complete and integrated emergency plans under § 52.17(b)(2)(ii) of this chapter shall contain the plans for coping with emergencies. The plans shall be an expression of the overall concept of operation; they shall describe the essential elements of advance planning that have been considered and the provisions that have been made to cope with emergency situations. The plans shall incorporate information about the emergency response roles of supporting organizations and offsite agencies. That information shall be sufficient to provide assurance of coordination among the supporting groups and with the licensee. The site safety analysis report for an early site permit which proposes major features must address the relevant provisions of 10 CFR 50.47 and 10 CFR part 50, appendix E, within the scope of emergency preparedness matters addressed in the major features.

The plans submitted must include a description of the elements set out in Section IV for the emergency planning zones (EPZs) to an extent sufficient to demonstrate that the plans provide reasonable assurance that adequate protective measures can and will be taken in the event of an emergency.

IV. Content of Emergency Plans

The applicant's emergency plans shall contain, but not necessarily be limited to, information needed to demonstrate compliance with the elements set forth below, i.e., organization for coping with radiation emergencies, assessment action, activation of emergency organization, notification procedures, emergency facilities and equipment, training, maintaining emergency preparedness, and recovery. In addition, the emergency response plans submitted by an applicant for a nuclear power reactor operating license shall contain information needed to demonstrate compliance with the standards described in § 50.47(b), and they will be evaluated against those standards. The nuclear power reactor operating license applicant shall also provide an analysis of the time required to evacuate and for taking other protective actions for various sectors and distances within the plume exposure pathway EPZ for transient and permanent populations.

A. Organization

The organization for coping with radiological emergencies shall be described, including definition of authorities, responsibilities, and duties of individuals assigned to the licensee's emergency organization and the means for notification of such individuals in the event of an emergency. Specifically, the following shall be included:

1. A description of the normal plant operating organization.

2. A description of the onsite emergency response organization with a detailed discussion of:

a. Authorities, responsibilities, and duties of the individual(s) who will take charge during an emergency;

b. Plant staff emergency assignments;

c. Authorities, responsibilities, and duties on an onsite emergency coordinator who shall be in charge of the exchange of information with offsite authorities responsible for coordinating and implementing offsite emergency measures.

3. A description, by position and function to be performed, of the licensee's headquarters personnel who will be sent to the plant site to augment the onsite emergency organization.

4. Identification, by position and function to be performed, of persons within the licensee organization who will be responsible for making offsite dose projections, and a description of how these projections will be made and the results transmitted to State and local authorities, NRC, and other appropriate governmental entities.

5. Identification, by position and function to be performed, of other employees of the licensee with special qualifications for coping with emergency conditions that may arise. Other persons with special qualifications, such as consultants, who are not employees of the licensee and who may be called upon for assistance for emergencies shall also be identified. The special qualifications of these persons shall be described.

6. A description of the local offsite services to be provided in support of the licensee's emergency organization.

7. Identification of, and assistance expected from, appropriate State, local, and Federal agencies with responsibilities for coping with

emergencies.

8. Identification of the State and/or local officials responsible for planning for, ordering, and controlling appropriate protective actions, including evacuations when necessary.

B. Assessment Actions

The means to be used for determining the magnitude of, and for continually assessing the impact of, the release of radioactive materials shall be described, including emergency action levels that are to be used as criteria for determining the need for notification and participation of local and State agencies, the Commission, and other Federal agencies, and the emergency action levels that are to be used for determining when and what type of protective measures should be considered within and outside the site boundary to protect health and safety. The emergency action levels shall be based on in- plant conditions and instrumentation in addition to onsite and offsite monitoring. These initial emergency action levels shall be discussed and agreed on by the applicant or licensee and state and local governmental authorities, and approved by the NRC. Thereafter, emergency action levels shall be reviewed with the State and local governmental authorities on an annual basis. A revision to an emergency action level must be approved by the NRC before implementation if:

(1) The licensee is changing from one emergency action level scheme to another emergency action level scheme (e.g., a change from an emergency action level scheme based on NUREG-0654 to a scheme based upon NUMARC/NESP-007 or NEI-99-01);

(2) The licensee is proposing an alternate method for complying with the regulations; or

(3) The emergency action level revision decreases the effectiveness of the emergency plan.

A licensee shall submit each request for NRC approval of the proposed emergency action level change as specified in § 50.4. If a licensee makes a change to an EAL that does not require NRC approval, the licensee shall submit, as specified in § 50.4, a report of each change made within 30 days after the change is made.

C. Activation of Emergency Organization

The entire spectrum of emergency conditions that involve the alerting or activating of progressively larger segments of the total emergency organization shall be described. The communication steps to be taken to alert or activate emergency personnel under each class of emergency shall be described. Emergency action levels (based not only on onsite and offsite radiation monitoring information but also on readings from a number of sensors that indicate a potential emergency, such as the pressure in containment and the response of the Emergency Core Cooling System) for notification of offsite agencies shall be described. The existence, but not the details, of a message authentication scheme shall be noted for such agencies. The emergency classes defined shall include: (1) notification of unusual events, (2) alert, (3) site area emergency, and (4) general emergency. These classes are further discussed in NUREG-0654; FEMA-REP- 1.

D. Notification Procedures

1. Administrative and physical means for notifying local, State, and Federal officials and agencies and agreements reached with these officials and agencies for the prompt notification of the public and for public evacuation or other protective measures, should they become necessary, shall be described. This description shall include identification of the appropriate officials, by title and agency, of the State and local government agencies within the EPZs.[1]

2. Provisions shall be described for yearly dissemination to the public within the plume exposure pathway EPZ of basic emergency planning information, such as the methods and times required for public notification and the protective actions planned if an accident occurs, general information as to the nature and effects of radiation, and a listing of local broadcast stations that will be used for dissemination of information during an emergency. Signs or other measures shall also be used to disseminate to any transient population within the plume exposure pathway EPZ appropriate information that would be helpful if an accident occurs.

3. A licensee shall have the capability to notify responsible State and local governmental agencies within 15 minutes after declaring an emergency. The licensee shall demonstrate that the State/local officials have the capability to make a public notification decision promptly on being informed by the licensee of an emergency condition. By February 1, 1982, each nuclear power reactor licensee shall demonstrate that administrative and physical means have been established for alerting and providing prompt instructions to the public within the plume exposure pathway EPZ. The four-month period in 10 CFR 50.54(s)(2) for the correction of emergency plan deficiencies shall not apply to the initial installation of this public notification system that is required by February 1, 1982. The four-month period will apply to correction of deficiencies identified during the initial installation and testing of the prompt public notification systems as well as those deficiencies discovered thereafter. The design objective of the prompt public notification system shall be to have the capability to essentially complete the initial notification of the public within the plume exposure pathway EPZ within about 15 minutes. The use of this notification capability will range from immediate notification of the public (within 15 minutes of the time that State and local officials are notified that a situation exists requiring urgent action) to the more likely events where there is substantial time available for the State and local governmental officials to make a judgment whether or not to activate the public notification system. Where there is a decision to activate the notification system, the State and local officials will determine whether to activate the entire notification system simultaneously or in a graduated or staged manner. The responsibility for activating such a public notification system shall remain with the appropriate governmental authorities.

E. Emergency Facilities and Equipment

Adequate provisions shall be made and described for emergency facilities and equipment, including:

1. Equipment at the site for personnel monitoring;

2. Equipment for determining the magnitude of and for continuously assessing the impact of the release of radioactive materials to the environment;

3. Facilities and supplies at the site for decontamination of onsite individuals;

4. Facilities and medical supplies at the site for appropriate emergency first aid treatment;

5. Arrangements for the services of physicians and other medical personnel qualified to handle radiation emergencies on-site;

6. Arrangements for transportation of contaminated injured individuals from the site to specifically identified treatment facilities outside the site boundary;

7. Arrangements for treatment of individuals injured in support of licensed activities on the site at treatment facilities outside the site boundary;

8. A licensee onsite technical support center and a licensee near-site emergency operations facility from which effective direction can be given and effective control can be exercised during an emergency;

9. At least one onsite and one offsite communications system; each system shall have a backup power source.

All communication plans shall have arrangements for emergencies, including titles and alternates for those in charge at both ends of the communication links and the primary and backup means of communication. Where consistent with the function of the governmental agency, these arrangements will include:

a. Provision for communications with contiguous State/local governments within the plume exposure pathway EPZ. Such communications shall be tested monthly.

b. Provision for communications with Federal emergency response organizations. Such communications systems shall be tested annually.

c. Provision for communications among the nuclear power reactor control room, the onsite technical support center, and the near-site emergency operations facility; and among the nuclear facility, the principal State and local emergency operations centers, and the field assessment teams. Such communications systems shall be tested annually.

d. Provisions for communications by the licensee with NRC Headquarters and the appropriate NRC Regional Office Operations Center from the nuclear power reactor control room, the onsite technical support center, and the near-site emergency operations facility. Such communications shall be tested monthly.

F. Training.

1. The program to provide for: (a) The training of employees and exercising, by periodic drills, of radiation emergency plans to ensure that employees of the licensee are familiar with their specific emergency response duties, and (b) The participation in the training and drills by other persons whose assistance may be needed in the event of a radiation emergency shall be described. This shall include a description of specialized initial training and periodic retraining programs to be provided to each of the following categories of emergency personnel:

i. Directors and/or coordinators of the plant emergency organization;

ii. Personnel responsible for accident assessment, including control room shift personnel;

iii Radiological monitoring teams;

iv. Fire control teams (fire brigades);

v. Repair and damage control teams;

vi. First aid and rescue teams;

vii. Medical support personnel;

viii. Licensee's headquarters support personnel;

ix. Security personnel.

In addition, a radiological orientation training program shall be made available to local services personnel; e.g., local emergency services/ Civil Defense, local law enforcement personnel, local news media persons.

2. The plan shall describe provisions for the conduct of emergency preparedness exercises as follows: Exercises shall test the adequacy of timing and content of implementing procedures and methods, test emergency equipment and communications networks, test the public notification system, and ensure that emergency organization personnel are familiar with their duties.[3]

a. A full participation [4] exercise which tests as much of the licensee, State, and local emergency plans as is reasonably achievable without mandatory public participation shall be conducted for each site at which a power reactor is located.

(i) For an operating license issued under this part, this exercise must be conducted within two years before the issuance of the first operating license for full power (one authorizing operation above 5 percent of rated power) of the first reactor and shall include participation by each State and local government within the plume exposure pathway EPZ and each state within the ingestion exposure pathway EPZ. If the full participation exercise is conducted more
than 1 year prior to issuance of an operating licensee for full power, an exercise which tests the licensee's onsite emergency plans must be conducted within one year before issuance of an operating license for full power. This exercise need not have State or local government participation.

(ii) For a combined license issued under part 52 of this chapter, this exercise must be conducted within two years of the scheduled date for initial loading of fuel. If the first full participation exercise is conducted more than one year before the scheduled date for initial loading of fuel, an exercise which tests the licensee's onsite emergency plans must be conducted within one year before the scheduled date for initial loading of fuel. This exercise need not have State or local government participation. If DHS identifies one or more deficiencies in the state of offsite emergency preparedness as the result of the first full participation exercise, or if the Commission finds that the state of emergency preparedness does not provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the provisions of § 50.54(gg) apply.

(iii) For a combined licensee issued under part 52 of this chapter, if the applicant currently has an operating reactor at the site, an exercise, either full or partial participation,[5] shall be conducted for each subsequent reactor constructed on the site. This exercise may be incorporated in the exercise requirements of Sections IV.F.2.b. and c. in this appendix. If DHS identifies one or more deficiencies in the state of offsite emergency preparedness as the result of this exercise for the new reactor, or if the Commission finds that the state of emergency preparedness does not provide reasonable
assurance that adequate protective measures can and will be taken in the event of a radiological emergency, the provisions of§ 50.54(gg) apply.

b. Each licensee at each site shall conduct an exercise of its onsite emergency plan every 2 years. The exercise may be included in the full participation biennial exercise required by paragraph 2.c. of this section. In addition, the licensee shall take actions necessary to ensure that adequate emergency response capabilities are maintained during the interval between biennial exercises by conducting drills, including at least one drill involving a combination of some of the principal functional areas of the licensee's onsite emergency response capabilities. The principal functional areas of emergency response include activities such as management and coordination of emergency response, accident assessment, protective action decisionmaking, and plant system repair and corrective actions. During these drills, activation of all of the licensee's emergency response facilities (Technical Support Center (TSC), Operations Support Center (OSC), and the Emergency Operations Facility (EOF)) would not be necessary, licensees would have the opportunity to consider accident management strategies, supervised instruction would be permitted, operating staff would have the opportunity to resolve problems (success paths) rather than have controllers intervene, and the drills could focus on onsite training objectives.

c. Offsite plans for each site shall be exercised biennially with full participation by each offsite authority having a role under the radiological response plan. Where the offsite authority has a role under a radiological response plan for more than one site, it shall fully participate in one exercise every two years and shall, at least, partially participate in other offsite plan exercises in this period. If two different licensees whose licensed facilities are located either on the
same site or on adjacent, contiguous sites, and that share most of the elements defining co-located licensees,[6] each licensee shall:

(1) Conduct an exercise biennially of its onsite emergency plan; and

(2) Participate quadrennially in an offsite biennial full or partial participation exercise; and

(3) Conduct emergency preparedness activities and interactions in the years between its participation in the offsite full or partial participation exercise with offsite authorities, to test and maintain interface among the affected State and local authorities and the licensee. Co-located licensees shall also participate in emergency preparedness activities and interaction with offsite authorities for the period between exercises.

d. A State should fully participate in the ingestion pathway portion of exercises at least once every six years. In States with more than one site, the State should rotate this participation from site to site.

e. Licensees shall enable any State or local Government located within the plume exposure pathway EPZ to participate in the licensee's drills when requested by such State or local Government.

f. Remedial exercises will be required if the emergency plan is not satisfactorily tested during the biennial exercise, such that NRC, in consultation with FEMA, cannot find reasonable assurance that adequate protective measures can be taken in the event of a radiological emergency. The extent of State and local participation in remedial exercises must be sufficient to show that appropriate corrective measures have been taken regarding the elements of the plan not properly tested in the previous exercises.

g. All training, including exercises, shall provide for formal critiques in order to identify weak or deficient areas that need correction. Any weaknesses or deficiencies that are identified shall be corrected.

h. The participation of State and local governments in an emergency exercise is not required to the extent that the applicant has identified those governments as refusing to participate further in emergency planning activities, pursuant to 10 CFR 50.479(c)(1). In such cases, an exercise shall be held with the applicant or licensee and such governmental entities as elect to participate in the emergency planning process.

G. Maintaining Emergency Preparedness

Provisions to be employed to ensure that the emergency plan, its implementing procedures, and emergency equipment and supplies are maintained up to date shall be described.

H. Recovery

Criteria to be used to determine when, following an accident, reentry of the facility would be appropriate or when operation could be resumed shall be described.

V. Implementing Procedures

No less than 180 days before the scheduled issuance of an operating license for a nuclear power reactor or a license to possess nuclear material, or the scheduled date for initial loading of fuel for a combined license under part 52 of this chapter, the applicant's or licensee's detailed implementing procedures for its emergency plan shall be submitted to
the Commission as specified in § 50.4. Licensees who are authorized to operate a nuclear power facility shall submit any changes to the emergency plan or procedures to the Commission, as specified in § 50.4, within 30 days of such changes.

VI. Emergency Response Data System

1. The Emergency Response Data System (ERDS) is a direct near real-time electronic data link between the licensee's onsite computer system and the NRC Operations Center that provides for the automated transmission of a limited data set of selected parameters. The ERDS supplements the existing voice transmission over the Emergency Notification System (ENS) by providing the NRC Operations Center with timely and accurate updates of a limited set of parameters from the licensee's installed onsite computer system in the event of an emergency. When selected plant data are not available on the licensee's onsite computer system, retrofitting of data points is not required. The licensee shall test the ERDS periodically to verify system availability and operability. The frequency of ERDS testing will be quarterly unless otherwise set by NRC based on demonstrated system performance.

2. Except for Big Rock Point and all nuclear power facilities that are shut down permanently or indefinitely, onsite hardware shall be provided at each unit by the licensee to interface with the NRC receiving system. Software, which will be made available by the NRC, will assemble the data to be transmitted and transmit data from each unit via an output port on the appropriate data system. The hardware and software must have the following characteristics:

a. Data points, if resident in the in-plant computer systems, must be transmitted for four selected types of plant conditions: Reactor core and coolant system conditions; reactor containment conditions; radioactivity release rates; and plant meteorological tower data. A separate data feed is required for each reactor unit. While it is recognized that ERDS is not a safety system, it is conceivable that a licensee's ERDS interface could communicate with a safety system. In this case, appropriate isolation devices would be required at these interfaces.[7] The data points, identified in the following parameters will be transmitted:

(i) For pressurized water reactors (PWRs), the selected plant parameters are: (1) Primary coolant system: pressure, temperatures (hot leg, cold leg, and core exit thermocouples), subcooling margin, pressurizer level, reactor coolant charging/makeup flow, reactor vessel level, reactor coolant flow, and reactor power; (2) Secondary coolant system: Steam generator levels and pressures, main feedwater flows, and auxiliary and emergency feedwater flows; (3) Safety injection: High- and low-pressure safety injection flows, safety injection flows (Westinghouse), and borated water storage tank level; (4) Containment: pressure, temperatures, hydrogen concentration, and sump levels; (5) Radiation monitoring system: Reactor coolant radioactivity, containment radiation level, condenser air removal radiation level, effluent radiation monitors, and process radiation monitor levels; and (6) Meteorological data: wind speed, wind direction, and atmospheric stability.

(ii) For boiling water reactors (BWRs), the selected parameters are: (1) Reactor coolant system: Reactor pressure, reactor vessel level, feedwater flow, and reactor power; (2) Safety injection: Reactor core isolation cooling flow, high-pressure coolant injection/high-pressure core spray flow, core spray flow, low-pressure coolant injection flow, and condensate storage tank level; (3) Containment: drywell pressure, drywell temperatures, drywell sump levels, hydrogen and oxygen concentrations, suppression pool temperature, and suppression pool level; (4) Radiation monitoring system: Reactor coolant radioactivity level, primary containment radiation level, condenser off-gas radiation level, effluent radiation monitor, and process radiation levels; and (5) Meteorological data: Wind speed, wind direction, and atmospheric stability.

b. The system must be capable of transmitting all available ERDS parameters at time intervals of not less than 15 seconds or more than 60 seconds. Exceptions to this requirement will be considered on a case by case basis.

c. All link control and data transmission must be established in a format compatible with the NRC receiving system[8] as configured at the time of licensee implementation.

3. Maintaining Emergency Response Data System:

a. Any hardware and software changes that affect the transmitted data points identified in the ERDS Data Point Library[9] (site specific data

base residing on the ERDS computer) must be submitted to the NRC within 30 days after the changes are completed.

b. Hardware and software changes, with the exception of data point modifications, that could affect the transmission format and computer communication protocol to the ERDS must be provided to the NRC as soon as practicable and at least 30 days prior to the modification.

c. In the event of a failure of the NRC supplied onsite modem, a replacement unit will be furnished by the NRC for licensee installation.

4. Implementing the Emergency Response Data System Program:

a. Each licensee shall develop and submit an ERDS implementation program plan to the NRC by October 28, 1991. To ensure compatibility with the guidance provided for the ERDS, the ERDS implementation program plan,[10] must include, but not be limited to, information on the licensee's computer system configuration (i.e., hardware and software), interface, and procedures.

b. Licensees must comply with appendix E to part 50, section V.

c. Licensees that have submitted the required information under the voluntary ERDS implementation program will not be required to resubmit this information. The licensee shall meet the implementation schedule of appendix E to Part 50, Section VI.4d.

d. Each licensee shall complete implementation of the ERDS by February 13, 1993, or before initial escalation to full power, whichever comes later. Licensees with currently operational ERDS interfaces approved under the voluntary ERDS implementation program[11] will not be required to submit another implementation plan and will be considered to have met the requirements for ERDS under appendix E to part 50, section VI.1 and 2 of this part.

[45 FR 55410, Aug. 19, 1980; 46 FR 28839, May 29, 1981, as amended at 46 FR 63032, Dec. 30, 1981; 47 FR 30236, July 13, 1982; 47 FR 57671, Dec. 28, 1982; 49 FR 27736, July 6, 1984; 51 FR 40310, Nov. 6, 1986; 52 FR 16829, May 6, 1987; 52 FR 42086, Nov. 3, 1987; 56 FR 40185, Aug. 13, 1991; 59 FR 14090, Mar. 25, 1994; 61 FR 30132, June 14, 1996; 70 FR 3599, Jan. 26, 2005; 72 FR 49506, Aug. 28, 2007; 73 FR 42674, Jul. 23, 2008]

[1] EPZs for power reactors are discussed in NUREG–0396; EPA 520/1–78–016, ‘‘Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants,’’ December 1978. The size of the EPZs for a nuclear power plant shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gascooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal. Generally, the plume exposure pathway EPZ for nuclear power plants with an authorized power level greater than 250 MW thermal shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius.

[2] Regulatory Guide 2.6 will be used as guidance for the acceptability of research and test reactor emergency response plans.

[3] Use of site specific simulators or computers is acceptable for any exercise.

[4] Full participation when used in conjunction with emergency preparedness exercises for a particular site means appropriate offsite local and State authorities and licensee personnel physically and actively take part in testing their integrated capability to adequately assess and respond to an accident at a commercial nuclear power plant. Full
participation includes testing major observable portions of the onsite and offsite emergency plans and mobilization of State, local and licensee personnel and other resources in sufficient numbers to verify the capability to respond to the accident scenario.

[5] Partial participation when used in conjunction with emergency preparedness exercises for a particular site means appropriate offsite authorities shall actively take part in the exercise sufficient to test direction and control functions; i.e., (a) protective action decision making related to emergency action levels, and (b) communication capabilities among affected State and local authorities and the licensee.

[6]Co-located licensees are two different licensees whose licensed facilities are located either on the same site or on adjacent, contiguous sites, and that share most of the following emergency planning and siting elements:

a. Plume exposure and ingestion emergency planning zones;
b. Offsite governmental authorities;
c. Offsite emergency response organizations;
d. Public notification system; and/or
e. Emergency facilities.

[7] Co-located licensees are two different licensees whose licensed facilities are located either on the same site or on adjacent, contiguous sites, and that share most of the following emergency planning and siting elements:

a. plume exposure and ingestion emergency planning zones,
b. offsite governmental authorities,
c. offsite emergency response organizations,
d. public notification system, and/or
e. emergency facilities

[8] See 10 CFR 50.55a(h) Protection Systems.

[9] Guidance is provided in NUREG-1394, Revision 1.

[10] See NUREG-1394, Revision 1, appendix C, Data Point Library.

[11] See NUREG-1394, Revision 1, section 3.

[12] See NUREG-1394, Revision 1.

Appendix F to Part 50--Policy Relating to the Siting of Fuel Reprocessing Plants and Related Waste Management Facilities

[Top of File]

1. Public health and safety considerations relating to licensed fuel reprocessing plants do not require that such facilities be located on land owned and controlled by the Federal Government. Such plants, including the facilities for the temporary storage of highlevel radioactive wastes, may be located on privately owned property.

2. A fuel reprocessing plant's inventory of high-level liquid radioactive wastes will be limited to that produced in the prior 5 years. (For the purpose of this statement of policy, "high-level liquid radioactive wastes" means those aqueous wastes resulting from the operation of the first cycle solvent extraction system, or equivalent, and the concentrated wastes from subsequent extraction cycles, or equivalent, in a facility for reprocessing irradiated reactor fuels.) High-level liquid radioactive wastes shall be converted to a dry solid as required to comply with this inventory limitation, and placed in a sealed container prior to transfer to a Federal repository in a shipping cask meeting the requirements of 10 CFR Part 71. The dry solid shall be chemically, thermally, and radiolytically stable to the extent that the equilibrium pressure in the sealed container will not exceed the safe operating pressure for that container during the period from canning through a minimum of 90 days after receipt (transfer of physical custody) at the Federal repository. All of these high-level radioactive wastes shall be transferred to a Federal repository no later than 10 years following separation of fission products from the irradiated fuel. Upon receipt, the Federal repository will assume permanent custody of these radioactive waste materials although industry will pay the Federal Government a charge which together with interest on unexpended balances will be designed to defray all costs of disposal and perpetual surveillance. The Department of Energy will take title to the radioactive waste material upon transfer to a Federal repository. Before retirement of the reprocessing plant from operational status and before termination of licensing pursuant to § 50.82, transfer of all such wastes to a Federal repository shall be completed. Federal repositories, which will be limited in number, will be designated later by the Commission.

3. Disposal of high-level radioactive fission product waste material will not be permitted on any land other than that owned and controlled by the Federal Government.

4. A design objective for fuel reprocessing plants shall be to facilitate decontamination and removal of all significant radioactive wastes at the time the facility is permanently decommissioned. Criteria for the extent of decontamination to be required upon decommissioning and license termination will be developed in consultation with competent groups. Opportunity will be afforded for public comment before such criteria are made effective.

5. Applicants proposing to operate fuel reprocessing plants, in submitting information concerning financial qualifications as required by § 50.33(f), shall include information enabling the Commission to determine whether the applicant is financially qualified, among other things, to provide for the removal and disposal of radioactive wastes, during operation and upon decommissioning of the facility, in accordance with the Commission's regulations, including the requirements set out in this appendix.

6. With respect to fuel reprocessing plants already licensed, the licenses will be appropriately conditioned to carry out the purposes of the policy stated above with respect to high-level radioactive fission product wastes generated after installation of new equipment for interim storage of liquid wastes, or after installation of equipment required for solidification without interim liquid storage. In either case, such equipment shall be installed at the earliest practicable date, taking into account the time required for design, procurement and installation thereof. With respect to such plants, the application of the policy stated in this appendix to existing wastes and to wastes generated prior to the installation of such equipment, will be the subject of a further rulemaking proceeding.

[35 FR 17533, Nov. 14, 1970, as amended at 36 FR 5411, Mar. 23, 1971; 42 FR 20139, Apr. 18, 1977; 45 FR 14201, Mar. 5, 1980]

Appendix G to Part 50--Fracture Toughness Requirements

[Top of File]

I. Introduction and scope.
II. Definitions.
III. Fracture toughness tests.
IV. Fracture toughness requirements.

I. Introduction and Scope

This appendix specifies fracture toughness requirements for ferritic materials of pressure-retaining components of the reactor coolant pressure boundary of light water nuclear power reactors to provide adequate margins of safety during any condition of normal operation, including anticipated operational occurrences and system hydrostatic tests, to which the pressure boundary may be subjected over its service lifetime.

The ASME Code forms the basis for the requirements of this appendix. "ASME Code" means the American Society of Mechanical Engineers Boiler and Pressure Vessel Code. If no section is specified, the reference is to Section III, Division 1, "Rules for Construction of Nuclear Power Plant Components." "Section XI" means Section XI, Division 1, "Rules for Inservice Inspection of Nuclear Power Plant Components." If no edition or addenda are specified, the ASME Code edition and addenda and any limitations and modifications thereof, which are specified in § 50.55a, are applicable.

The sections, editions and addenda of the ASME Boiler and Pressure Vessel Code specified in § 50.55a have been approved for incorporation by reference by the Director of the Federal Register. A notice of any changes made to the material incorporated by reference will be published in the Federal Register. Copies of the ASME Boiler and Pressure Vessel Code may be purchased from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017, and are available for inspection at the NRC Library, 11545 Rockville Pike, Two White Flint North, Rockville, MD 20852-2738.

The requirements of this appendix apply to the following materials:

A. Carbon and low-alloy ferritic steel plate, forgings, castings, and pipe with specified minimum yield strengths not over 50,000 psi (345 MPa), and to those with specified minimum yield strengths greater than 50,000 psi (345 MPa) but not over 90,000 psi (621 MPa) if qualified by using methods equivalent to those described in paragraph G-2110 of Appendix G of Section XI of the latest edition and addenda of the ASME Code incorporated by reference into § 50.55a(b)(2).

B. Welds and weld heat-affected zones in the materials specified in paragraph I.A. of this appendix.

C. Materials for bolting and other types of fasteners with specified minimum yield strengths not over 130,000 psi (896 MPa).

Note: The adequacy of the fracture toughness of other ferritic materials not covered in this section must be demonstrated to the Director, Office of Nuclear Reactor Regulation or the Director, Office of New Reactors, as appropriate, on an individual case basis.

II. Definitions

A. *Ferritic material* means carbon and low-alloy steels, higher alloy steels including all stainless alloys of the 4xx series, and maraging and precipitation hardening steels with a predominantly body-centered cubic crystal structure.

B. *System hydrostatic tests* means all preoperational system leakage and hydrostatic pressure tests and all system leakage and hydrostatic pressure tests performed during the service life of the pressure boundary in compliance with the ASME Code, Section XI.

C. *Specified minimum yield strength* means the minimum yield strength (in the unirradiated condition) of a material specified in the construction code under which the component is built under § 50.55a.

D. RT_{NDT} means the reference temperature of the material, for all conditions.

(i) For the pre-service or unirradiated condition, RT_{NDT} is evaluated according to the procedures in the ASME Code, Paragraph NB-2331.

(ii) For the reactor vessel beltline materials, RT_{NDT} must account for the effects of neutron radiation.

E. ΔRT_{NDT} means the transition temperature shift, or change in RT_{NDT}, due to neutron radiation effects, which is evaluated as the difference in the 30 ft-lb (41 J) index temperatures from the average Charpy curves measured before and after irradiation.

F. *Beltline* or *Beltline region of reactor vessel* means the region of the reactor vessel (shell material including welds, heat affected zones, and plates or forgings) that directly surrounds the effective height of the active core and adjacent regions of the reactor vessel that are predicted to experience sufficient neutron radiation damage to be considered in the selection of the most limiting material with regard to radiation damage.

III. Fracture Toughness Tests

A. To demonstrate compliance with the fracture toughness requirements of section IV of this appendix, ferritic materials must be tested in accordance with the ASME Code and, for the beltline materials, the test requirements of appendix H of this part. For a reactor vessel that was constructed to an ASME code earlier than the Summer 1972
Addenda of the 1971 Edition (under § 50.55a), the fracture toughness data and data analysis must be supplemented in a manner approved by the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, to demonstrate equivalence with the fracture toughness requirements of this appendix.

B. Test methods for supplemental fracture toughness tests described in paragraph IV.A.1.b of this appendix must be submitted to and approved by the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, prior to testing.

C. All fracture toughness test programs conducted in accordance with paragraphs III.A and III.B must comply with ASME Code requirements for calibration of test equipment, qualification of test personnel, and retention of records of these functions and of the test data.

IV. Fracture Toughness Requirements

A. The pressure-retaining components of the reactor coolant pressure boundary that are made of ferritic materials must meet the requirements of the ASME Code, supplemented by the additional requirements set forth below, for fracture toughness during system hydrostatic tests and any condition of normal operation, including anticipated operational occurrences. Reactor vessels may continue to be operated only for that service period within which the requirements of this section are satisfied. For the reactor vessel beltline materials, including welds, plates and forgings, the values of RTNDT and Charpy upper-shelf energy must account for the effects of neutron radiation, including the results of the surveillance program of Appendix H of this part. The effects of neutron radiation must consider the radiation conditions (i.e., the fluence) at the deepest point on the crack front of the flaw assumed in the analysis.

1. Reactor Vessel Charpy Upper-Shelf Energy Requirements

a. Reactor vessel beltline materials must have Charpy upper-shelf energy [1] in the transverse direction for base material and along the weld for weld material according to the ASME Code, of no less than 75 ft-lb (102 J) initially and must maintain Charpy upper-shelf energy throughout the life of the vessel of no less than 50 ft-lb (68 J), unless it is demonstrated in a manner approved by the Director, Office of Nuclear Reactor Regulation or Director, Office of New
Reactors, as appropriate, that lower values of Charpy upper-shelf energy will provide margins of safety against fracture equivalent to those required by Appendix G of Section XI of the ASME Code. This analysis must use the latest edition and addenda of the ASME Code incorporated by reference into § 50.55a(b)(2) at the time the analysis is
submitted.

b. Additional evidence of the fracture toughness of the beltline materials after exposure to neutron irradiation may be obtained from results of supplemental fracture toughness tests for use in the analysis specified in section IV.A.1.a.

c. The analysis for satisfying the requirements of section IV.A.1 of this appendix must be submitted, as specified in
§ 50.4, for review and approval on an individual case basis at least three years prior to the date when the predicted Charpy upper-shelf energy will no longer satisfy the requirements of section IV.A.1 of this appendix, or on a schedule approved by the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate.

2. Pressure-Temperature Limits and Minimum Temperature Requirements

a. Pressure-temperature limits and minimum temperature requirements for the reactor vessel are given in Table 3, and are defined by the operating condition (i.e., hydrostatic pressure and leak tests, or normal operation including anticipated operational occurrences), the vessel pressure, whether or not fuel is in the vessel, and whether the core is critical. In Table 3, the vessel pressure is defined as a percentage of the preservice system hydrostatic test pressure. The appropriate requirements on both the pressure-temperature limits and the minimum permissible temperature must be met for all conditions.

b. The pressure-temperature limits identified as "ASME Appendix G limits" in Table 3 require that the limits must be at least as conservative as limits obtained by following the methods of analysis and the margins of safety of Appendix G of Section XI of the ASME Code.

c. The minimum temperature requirements given in Table 3 pertain to the controlling material, which is either the material in the closure flange or the material in the beltline region with the highest reference temperature. As specified in Table 3, the minimum temperature requirements and the controlling material depend on the operating condition (i.e., hydrostatic pressure and leak tests, or normal operation including anticipated operational occurrences), the vessel pressure, whether fuel is in the vessel, and whether the core is critical. The metal temperature of the controlling material, in the region of the controlling material which has the least favorable combination of stress and temperature, must exceed the appropriate minimum temperature requirement for the condition and pressure of the vessel specified in Table 1.

d. Pressure tests and leak tests of the reactor vessel that are required by Section XI of the ASME Code must be completed before the core is critical.

B. If the procedures of Section IV.A. of this appendix do not indicate the existence of an equivalent safety margin, the reactor vessel beltline may be given a thermal annealing treatment to recover the fracture toughness of the material, subject to the requirements of § 50.66. The reactor vessel may continue to be operated only for that service period within which the predicted fracture toughness of the beltline region materials satisfies the requirements of Section IV.A. of this appendix using the values of RTNDT and Charpy upper-shelf energy that include the effects of annealing and subsequent irradiation.

Table 1.-Pressure and Temperature Requirements for the Reactor Pressure Vessel

Operating condition	Vessel pressure[1]	Requirements for pressure-temperature limits	Minimum temperature requirements
1. Hydrostatic pressure and leak tests (core is not critical):			
1.a Fuel in the vessel	≤20%	ASME Appendix G Limits	([2])
1.b Fuel in the vessel	>20%	ASME Appendix G Limits	([2]) +90 ° F([6])

1.c No fuel in the vessel (Preservice Hydrotest Only)	ALL	(Not Applicable)	([3]) +60 ° F
2. Normal operation (incl. heat-up and cool-down), including anticipated operational occurrences:			
2.a Core not critical	≤20%	ASME Appendix G Limits	([2])
2.b Core not critical	>20%	ASME Appendix G Limits	([2]) + 120 ° F.
2.c Core critical	≤20%	ASME Appendix G Limits + 40 ° F.	Larger of [([4])] or [([2]) + 40° F.]
2.d Core critical	>20%	ASME Appendix G Limits + 40 ° F.	Larger of [([4])] or [([2])+160°F]
2.e Core critical for BWR ([5])	≤20%	ASME Appendix G Limits + 40 ° F.	([2])+60°F

[1] Percent of the preservice system hydrostatic test pressure.

[2] The highest reference temperature of the material in the closure flange region that is highly stressed by the bolt preload.

[3] The highest reference temperature of the vessel.

[4] The minimum permissible temperature for the inservice system hydrostatic pressure test.

[5] For boiling water reactors (BWR) with water level within the normal range for power operation.

[6] Lower temperatures are permissible if they can be justified by showing that the margins of safety of the controlling region are equivalent to those required for the beltline when it is controlling.

[60 FR 65474, Dec. 19, 1995; 73 FR 5723, Jan. 31, 2008]

[1] Defined in ASTME 185-79 and-82 which are incorporated by reference in Appendix H to Part 50.

Appendix H to Part 50—Reactor Vessel Material Surveillance Program Requirements

[Top of File]

I. Introduction
II. Definitions
III. Surveillance Program Criteria
IV. Report of Test Results

I. Introduction

The purpose of the material surveillance program required by this appendix is to monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region of light water nuclear power reactors which result from exposure of these materials to neutron irradiation and the thermal environment. Under the program, fracture toughness test data are obtained from material specimens exposed in surveillance capsules, which are withdrawn periodically from the reactor vessel. These data will be used as described in Section IV of Appendix G to Part 50.

ASTM E 185-73, "Standard Recommended Practice for Surveillance Tests for Nuclear Reactor Vessels"; ASTM E 185-79, "Standard Practice for Conducting Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels"; and ASTM E 185-82, "Standard Practice for Conducting Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels"; which are referenced in the following paragraphs, have been approved for incorporation by reference by the Director of the Federal Register. Copies of ASTM E 185-73,-79, and-82, may be purchased from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103 and are available for inspection at the NRC Library, 11545 Rockville Pike, Two White Flint North, Rockville, MD 20852-2738.

II. Definitions

All terms used in this Appendix have the same meaning as in Appendix G.

III. Surveillance Program Criteria

A. No material surveillance program is required for reactor vessels for which it can be conservatively demonstrated by analytical methods applied to experimental data and tests performed on comparable vessels, making appropriate allowances for all uncertainties in the measurements, that the peak neutron fluence at the end of the design life of the vessel will not exceed 10^{17} n/cm^2 (E 1 MeV).

B. Reactor vessels that do not meet the conditions of paragraph III.A of this appendix must have their beltline materials monitored by a surveillance program complying with ASTM E 185, as modified by this appendix.

1. The design of the surveillance program and the withdrawal schedule must meet the requirements of the edition of ASTM E 185 that is

current on the issue date of the ASME Code to which the reactor vessel was purchased. Later editions of ASTM E 185 may be used, but including only those editions through 1982. For each capsule withdrawal, the test procedures and reporting requirements must meet the requirements of ASTM E 185-82 to the extent practicable for the configuration of the specimens in the capsule.

2. Surveillance specimen capsules must be located near the inside vessel wall in the beltline region so that the specimen irradiation history duplicates, to the extent practicable within the physical constraints of the system, the neutron spectrum, temperature history, and maximum neutron fluence experienced by the reactor vessel inner surface. If the capsule holders are attached to the vessel wall or to the vessel cladding, construction and inservice inspection of the attachments and attachment welds must be done according to the requirements for permanent structural attachments to reactor vessels given in Sections III and XI of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code). The design and location of the capsule holders must permit insertion of replacement capsules. Accelerated irradiation capsules may be used in addition to the required number of surveillance capsules.

3. A proposed withdrawal schedule must be submitted with a technical justification as specified in § 50.4. The proposed schedule must be approved prior to implementation.

C. Requirements for an Integrated Surveillance Program.

1. In an integrated surveillance program, the representative materials chosen for surveillance for a reactor are irradiated in one or more other reactors that have similar design and operating features. Integrated surveillance programs must be approved by the Director, Office of Nuclear Reactor Regulation or the Director, Office of New Reactors, as appropriate, on a case-by-case basis. Criteria for approval include the following:

a. The reactor in which the materials will be irradiated and the reactor for which the materials are being irradiated must have sufficiently similar design and operating features to permit accurate comparisons of the predicted amount of radiation damage.

b. Each reactor must have an adequate dosimetry program.

c. There must be adequate arrangement for data sharing between plants.

d. There must be a contingency plan to assure that the surveillance program for each reactor will not be jeopardized by operation at reduced power level or by an extended outage of another reactor from which data are expected.

e. There must be substantial advantages to be gained, such as reduced power outages or reduced personnel exposure to radiation, as a direct result of not requiring surveillance capsules in all reactors in the set.

2. No reduction in the requirements for number of materials to be irradiated, specimen types, or number of specimens per reactor is permitted.

3. After (the effective date of this section), no reduction in the amount of testing is permitted unless previously authorized by the Director, Office of Nuclear Reactor Regulation or the Director, Office of New Reactors, as appropriate.

IV. Report of Test Results

A. Each capsule withdrawal and the test results must be the subject of a summary technical report to be submitted, as specified in § 50.4, within one year of the date of capsule withdrawal, unless an extension is granted by the Director, Office of Nuclear Reactor Regulation.

B. The report must include the data required by ASTM E 185, as specified in paragraph III.B.1 of this appendix, and the results of all fracture toughness tests conducted on the beltline materials in the irradiated and unirradiated conditions.

C. If a change in the Technical Specifications is required, either in the pressure-temperature limits or in the operating procedures required to meet the limits, the expected date for submittal of the revised Technical Specifications must be provided with the report.

[60 FR 65476, Dec. 19, 1995; 68 FR 75390, Dec. 31, 2003; 73 FR 5723, Jan. 31, 2008]

Appendix I to Part 50--Numerical Guides for Design Objectives and Limiting Conditions for Operation to Meet the Criterion "As Low as is Reasonably Achievable" for Radioactive Material in Light-Water-Cooled Nuclear Power Reactor Effluents

[Top of File]

SECTION I. *Introduction*. Section 50.34a provides that an application for a construction permit shall include a description of the preliminary design of equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal conditions, including expected occurrences. In the case of an application filed on or after January 2, 1971, the application must also identify the design objectives, and the means
to be employed, for keeping levels of radioactive material in effluents to unrestricted areas as low as practicable. Sections 52.47, 52.79, 52.137, and 52.157 of this chapter provide that applications for design certification, combined license, design approval, or manufacturing license, respectively, shall include a description of the equipment and procedures for the control of gaseous and liquid effluents and for the maintenance and use of equipment installed in radioactive waste systems.

Sec. II. *Guides on design objectives for light-water-cooled nuclear power reactors licensed under 10 CFR Part 50 or part 52 of this chapter*. The guides on design objectives set forth in this section may be used by an applicant for a construction permit as guidance in meeting the requirements of § 50.34a(a), or by an applicant for a combined license under part 52 of this chapter as guidance in meeting the requirements of § 50.34a(d), or by an applicant for a design approval, a design certification, or a manufacturing license as guidance in meeting the requirements of § 50.34a(e). The applicant shall provide reasonable assurance that the following design objectives will be met.

A. The calculated annual total quantity of all radioactive material above background[1] to be released from each light-water-cooled nuclear power reactor to unrestricted areas will not result in an estimated annual dose or dose commitment from liquid effluents for any individual in an unrestricted area from all pathways of exposure in excess of 3 millirems to the total body or 10 millirems to any organ.

B.1. The calculated annual total quantity of all radioactive material above background to be released from each light-water-cooled nuclear power reactor to the atmosphere will not result in an estimated annual air dose from gaseous effluents at any location near ground level which could be occupied by individuals in unrestricted areas in excess of 10 millirads for gamma radiation or 20 millirads for beta radiation.

2. Notwithstanding the guidance of paragraph B.1:

(a) The Commission may specify, as guidance on design objectives, a lower quantity of radioactive material above background to be released to the atmosphere if it appears that the use of the design objectives in paragraph B.1 is likely to result in an estimated annual external dose from gaseous effluents to any individual in an unrestricted area in excess of 5 millirems to the total body; and

(b) Design objectives based upon a higher quantity of radioactive material above background to be released to the atmosphere than the quantity specified in paragraph B.1 will be deemed to meet the requirements for keeping levels of radioactive material in gaseous effluents as low as is reasonably achievable if the applicant provides reasonable assurance that the proposed higher quantity will not result in an estimated annual external dose from gaseous effluents to any individual in unrestricted areas in excess of 5 millirems to the total body or 15 millirems to the skin.

C. The calculated annual total quantity of all radioactive iodine and radioactive material in particulate form above background to be released from each light-water-cooled nuclear power reactor in effluents to the atmosphere will not result in an estimated annual dose or dose commitment from such radioactive iodine and radioactive material in particulate form for any individual in an unrestricted area from all pathways of exposure in excess of 15 millirems to any organ.

D. In addition to the provisions of paragraphs A, B, and C above, the applicant shall include in the radwaste system all items of reasonably demonstrated technology that, when added to the system sequentially and in order of diminishing cost-benefit return, can for a favorable cost-benefit ratio effect reductions in dose to the population reasonably expected to be within 50 miles of the reactor. As an interim measure and until establishment and adoption of better values (or other appropriate criteria), the values $1000 per total body man-rem and $1000 per man-thyroid-rem (or such lesser values as may be demonstrated to be suitable in a particular case) shall be used in this cost-benefit analysis. The requirements of this paragraph D need not be complied with by persons who have filed applications for construction permits which were docketed on or after January 2, 1971, and prior to June 4, 1976, if the radwaste systems and equipment described in the preliminary or final safety analysis report and amendments thereto satisfy the Guides on Design Objectives for Light-Water-Cooled Nuclear Power Reactors proposed in the Concluding Statement of Position of the Regulatory Staff in Docket-RM-50-2 dated February 20, 1974, pp. 25-30, reproduced in the Annex to this Appendix I.

Sec. III. *Implementation*. A.1. Conformity with the guides on design objectives of Section II shall be demonstrated by calculational procedures based upon models and data such that the actual exposure of an individual through appropriate pathways is unlikely to be substantially underestimated, all uncertainties being considered together. Account shall be taken of the cumulative effect of all sources and pathways within the plant contributing to the particular type of effluent being considered. For determination of design objectives in accordance with the guides of Section II, the estimations of exposure shall be made with respect to such potential land and water usage and food pathways as could actually exist during the term of plant operation: *Provided*, That, if the requirements of paragraph B of Section III are fulfilled, the applicant shall be deemed to have complied with the requirements of paragraph C of Section II with respect to radioactive iodine if estimations of exposure are made on the basis of such food pathways and individual receptors as actually exist at the time the plant is licensed.

2. The characteristics attributed to a hypothetical receptor for the purpose of estimating internal dose commitment shall take into account reasonable deviations of individual habits from the average. The applicant may take account of any real phenomenon or factors actually affecting the estimate of radiation exposure, including the characteristics of the plant, modes of discharge of radioactive materials, physical processes tending to attenuate the quantity of radioactive material to which an individual would be exposed, and the effects of averaging exposures over times during which determining factors may fluctuate.

B. If the applicant determines design objectives with respect to radioactive iodine on the basis of existing conditions and if potential changes in land and water usage and food pathways could result in exposures in excess of the guideline values of paragraph C of Section II, the applicant shall provide reasonable assurance that a monitoring and surveillance program will be performed to determine:

1. The quantities of radioactive iodine actually released to the atmosphere and deposited relative to those estimated in the determination of design objectives;

2. Whether changes in land and water usage and food pathways which would result in individual exposures greater than originally estimated have occurred; and

3. The content of radioactive iodine and foods involved in the changes, if and when they occur.

SEC. IV. *Guides on technical specifications for limiting conditions for operation for light-water-cooled nuclear power reactors licensed under*

10 CFR part 50 or part 52 of this chapter. The guides on limiting conditions for operation for light-water-cooled nuclear power reactors set forth below may be used by an applicant for an operating license under this part or a design certification or combined license under part 52 of this chapter, or a licensee who has submitted a certification of permanent cessation of operations under § 50.82(a)(1) or § 52.110 of this chapter as guidance in developing technical specifications under§ 50.36a(a) to keep levels of radioactive materials in effluents to unrestricted areas as low as is reasonably achievable.

Section 50.36a(b) provides that licensees shall be guided by certain considerations in establishing and implementing operating procedures specified in technical specifications that take into account the need for operating flexibility and at the same time assure that the licensee will exert his best effort to keep levels of radioactive material in effluents as low as is reasonably achievable. The guidance set forth below provides additional and more specific guidance to licensees in this respect.

Through the use of the guides set forth in this section it is expected that the annual release of radioactive material in effluents from light-water-cooled nuclear power reactors can generally be maintained within the levels set forth as numerical guides for design objectives in Section II.

At the same time, the licensee is permitted the flexibility of operations, compatible with considerations of health and safety, to assure that the public is provided a dependable source of power even under unusual conditions which may temporarily result in releases higher than numerical guides for design objectives but still within levels that assure that the average population exposure is equivalent to small fractions of doses from natural background radiation. It is expected that in using this operational flexibility under unusual conditions, the licensee will exert his best efforts to keep levels of radioactive material in effluents within the numerical guides for design objectives.

A. If the quantity of radioactive material actually released in effluents to unrestricted areas from a light-water-cooled nuclear power reactor during any calendar quarter is such that the resulting radiation exposure, calculated on the same basis as the respective design objective exposure, would exceed one-half the design objective annual exposure derived pursuant to Sections II and III, the licensee shall:[2]

1. Make an investigation to identify the causes for such release rates;

2. Define and initiate a program of corrective action; and

3. Report these actions as specified in § 50.4, within 30 days from the end of the quarter during which the release occurred.

B. The licensee shall establish an appropriate surveillance and monitoring program to:

1. Provide data on quantities of radioactive material released in liquid and gaseous effluents to assure that the provisions of paragraph A of this section are met;

2. Provide data on measurable levels of radiation and radioactive materials in the environment to evaluate the relationship between quantities of radioactive material released in effluents and resultant radiation doses to individuals from principal pathways of exposure; and

3. Identify changes in the use of unrestricted areas (e.g., for agricultural purposes) to permit modifications in monitoring programs for evaluating doses to individuals from principal pathways of exposure.

C. If the data developed in the surveillance and monitoring program described in paragraph B of Section III or from other monitoring programs show that the relationship between the quantities of radioactive material released in liquid and gaseous effluents and the dose to individuals in unrestricted areas is significantly different from that assumed in the calculations used to determine design objectives pursuant to Sections II and III, the Commission may modify the quantities in the technical specifications defining the limiting conditions in a license to operate a light-water-cooled nuclear power reactor or a license whose holder has submitted a certification of permanent cessation of operations under § 50.82(a)(1).

Sec. V. *Effective dates*. A. The guides for limiting conditions for operation set forth in this appendix shall be applicable in any case in which an application was filed on or after January 2, 1971, for a construction permit for a light-water-cooled nuclear power reactor under this part, or a design certification, a combined license, or a manufacturing license for a light-watercooled nuclear power reactor under part 52 of this chapter.

B. For each light-water-cooled nuclear power reactor constructed pursuant to a permit for which application was filed prior to January 2, 1971, the holder of the permit or a license, authorizing operation of the reactor shall, within a period of twelve months from June 4, 1975, file with the Commission:

1. Such information as is necessary to evaluate the means employed for keeping levels of radioactivity in effluents to unrestricted areas as low as is reasonably achievable, including all such information as is required by § 50.34a (b) and (c) not already contained in his application; and

2. Plans and proposed technical specifications developed for the purpose of keeping releases of radioactive materials to unrestricted areas during normal reactor operations, including expected operational occurrences, as low as is reasonably achievable.

Concluding Statement of Position of the Regulatory Staff (Docket-RM-50-2)

Guides on Design Objectives for Light-Water-Cooled Nuclear Power Reactors

A. For radioactive material above background[1] in liquid effluents to be released to unrestricted areas:

1. The calculated annual total quantity of all radioactive material from all light-water-cooled nuclear power reactors at a site should not result in an annual dose or dose commitment to the total body or to any organ of an individual in an unrestricted area from all pathways of exposure in excess of 5 millirems; and

2. The calculated annual total quantity of radioactive material, except tritium and dissolved gases, should not exceed 5 curies for each light-water-cooled reactor at a site.

3. Notwithstanding the guidance in paragraph A.2, for a particular site, if an applicant for a permit to construct a light-water-cooled nuclear power reactor has proposed baseline in-plant control measures[2] to reduce the possible sources of radioactive material in liquid effluent releases and the calculated quantity exceeds the quantity set forth in paragraph A.2, the requirements for design objectives for radioactive material in liquid effluents may be deemed to have been met provided:

a. The applicant submits, as specified in § 50.4, an evaluation of the potential for effects from long-term buildup on the environment in the vicinity of the site of radioactive material, with a radioactive half-life greater than one year, to be released; and

b. The provisions of paragraph A.1 are met.

B. For radioactive material above background in gaseous effluents the annual total quantity of radioactive material to be released to the atmosphere by all light-water-cooled nuclear power reactors at a site:

1. The calculated annual air dose due to gamma radiation at any location near ground level which could be occupied by individuals at or beyond the boundary of the site should not exceed 10 millirads; and

2. The calculated annual air dose due to beta radiation at any location near ground level which could be occupied by individuals at or beyond the boundary of the site should not exceed 20 millirads.

3. Notwithstanding the guidance in paragraphs B.1 and B.2, for a particular site:

a. The Commission may specify, as guidance on design objectives, a lower quantity of radioactive material above background in gaseous effluents to be released to the atmosphere if it appears that the use of the design objectives described in paragraphs B.1 and B.2 is likely to result in an annual dose to an individual in an unrestricted area in excess of 5 millirems to the total body or 15 millirems to the skin; or

b. Design objectives based on a higher quantity of radioactive material above background in gaseous effluents to be released to the atmosphere than the quantity specified in paragraphs B.1 and B.2 may be deemed to meet the requirements for keeping levels of radioactive material in gaseous effluents as low as practicable if the applicant provides reasonable assurance that the proposed higher quantity will not result in annual doses to an individual in an unrestricted area in excess of 5 millirems to the total body or 15 millirems to the skin.

C. For radioactive iodine and radioactive material in particulate form above background released to the atmosphere:

1. The calculated annual total quantity of all radioactive iodine and radioactive material in particulate form from all light-water-cooled nuclear power reactors at a site should not result in an annual dose or dose commitment to any organ of an individual in an unrestricted area from all pathways of exposure in excess of 15 millirems. In determining the dose or dose commitment the portion thereof due to intake of radioactive material via the food pathways may be evaluated at the locations where the food pathways actually exist; and

2. The calculated annual total quantity of iodine-131 in gaseous effluents should not exceed 1 curie for each light-water-cooled nuclear power reactor at a site.

3. Notwithstanding the guidance in paragraphs C.1 and C.2 for a particular site, if an applicant for a permit to construct a light-water-cooled nuclear power reactor has proposed baseline in-plant control measures[3] to reduce the possible sources of radioactive iodine releases, and the calculated annual quantities taking into account such control measures exceed the design objective quantities set forth in paragraphs C.1 and C.2, the requirements for design objectives for radioactive iodine and radioactive material in particulate form in gaseous effluents may be deemed to have been met provided the calculated annual total quantity of all radioactive iodine and radioactive material in particulate form that may be released in gaseous effluents does not exceed four times the quantity calculated pursuant to paragraph C.1.

[40 FR 19442, May 5, 1975, as amended at 40 FR 40818, Sept. 4, 1975; 40 FR 58847, Dec. 19, 1975; 41 FR 16447, Apr. 19, 1976; 42 FR 20139, Apr. 18, 1977; 51 FR 40311, Nov. 6, 1986; 61 FR 39303, July 29, 1996; 72 FR 49507, Aug. 28, 2007]

[1] Here and elsewhere in this appendix background means radioactive materials in the environment and in the effluents from light-water-cooled power reactors not generated in, or attributable to, the reactors of which specific account is required in determining design objectives.

[2] Section 50.36a(a)(2) requires the licensee to submit certain reports to the Commission with regard to the quantities of the principal radionuclides released to unrestricted areas. It also provides that, on the basis of such reports and any additional information the Commission may obtain from the licensee and others, the Commission may from time to time require the license to take such action as the Commission deems appropriate.

[1] "Background," means the quantity of radioactive material in the effluent from light-water-cooled nuclear power reactors at a site that did not originate in the reactors.

[2] Such measures may include treatment of clear liquid waste streams (normally tritiated, nonaerated, low conductivity equipment drains and pump seal leakoff), dirty liquid waste streams (normally nontritiated, aerated, high conductivity building sumps, floor and sample station drains), steam generator blowdown streams, chemical waste streams, low purity and high purity liquid streams (resin regenerate and laboratory wastes), as appropriate for the type of reactor.

[3] Such in-plant control measures may include treatment of steam generator blowdown tank exhaust, clean steam supplies for turbine gland seals, condenser vacuum systems, containment purging exhaust and ventilation exhaust systems and special design features to reduce contaminated steam and liquid leakage from valves and other sources such as sumps and tanks, as appropriate for the type of reactor.

Appendix J to Part 50--Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors

[Top of File]

This appendix includes two options, A and B, either of which can be chosen for meeting the requirements of this appendix.

Option A--Prescriptive Requirements

Table of Contents

I. Introduction.
II. Explanation of terms.
III. Leakage test requirements.
A. Type A test.
B. Type B test.
C. Type C test.
D. Periodic retest schedule.
IV. Special test requirements.
A. Containment modifications.
B. Multiple leakage-barrier containments.
V. Inspection and reporting of tests.
A. Containment inspection.
B. Report of test results.

I. Introduction

One of the conditions of all operating licenses under this part and combined licenses under part 52 of this chapter for water-cooled power reactors as specified in § 50.54(o) is that primary reactor containments shall meet the containment leakage test requirements set forth in this appendix. These test requirements provide for preoperational and periodic verification by tests of the leak-tight integrity of the primary reactor containment, and systems and components which penetrate containment of water-cooled power reactors, and establish the acceptance criteria for these tests. The purposes of the tests are to assure that (a) leakage through the primary reactor containment and systems and components penetrating primary containment shall not exceed allowable leakage rate values as specified in the technical specifications or associated bases; and (b) periodic surveillance of reactor containment penetrations and isolation valves is performed so that proper maintenance and repairs are made during the service life of the containment, and systems and components penetrating primary containment. These test requirements may also be used for guidance in establishing appropriate containment leakage test requirements in technical specifications or associated bases for other types of nuclear power reactors.

II. Explanation of Terms

A. "Primary reactor containment" means the structure or vessel that encloses the components of the reactor coolant pressure boundary, as defined in § 50.2(v), and serves as an essentially leak-tight barrier against the uncontrolled release of radioactivity to the environment.

B. "Containment isolation valve" means any valve which is relied upon to perform a containment isolation function.

C. "Reactor containment leakage test program" includes the performance of Type A, Type B, and Type C tests, described in II.F, II.G, and II.H, respectively.

D. "Leakage rate" for test purposes is that leakage which occurs in a unit of time, stated as a percentage of weight of the original content of containment air at the leakage rate test pressure that escapes to the outside atmosphere during a 24-hour test period.

E. "Overall integrated leakage rate" means that leakage rate which obtains from a summation of leakage through all potential leakage paths including containment welds, valves, fittings, and components which penetrate containment.

F. "Type A Tests" means tests intended to measure the primary reactor containment overall integrated leakage rate (1) after the containment has been completed and is ready for operation, and (2) at periodic intervals thereafter.

G. "Type B Tests" means tests intended to detect local leaks and to measure leakage across each pressure-containing or leakage-limiting boundary for the following primary reactor containment penetrations:

1. Containment penetrations whose design incorporates resilient seals, gaskets, or sealant compounds, piping penetrations fitted with expansion bellows, and electrical penetrations fitted with flexible metal seal assemblies.

2. Air lock door seals, including door operating mechanism penetrations which are part of the containment pressure boundary.

3. Doors with resilient seals or gaskets except for seal-welded doors.

4. Components other than those listed in II.G.1, II.G.2, or II.G.3 which must meet the acceptance criteria in III.B.3.

H. "Type C Tests" means tests intended to measure containment isolation valve leakage rates. The containment isolation valves included are those that:

1. Provide a direct connection between the inside and outside atmospheres of the primary reactor containment under normal operation, such as purge and ventilation, vacuum relief, and instrument valves;

2. Are required to close automatically upon receipt of a containment isolation signal in response to controls intended to effect containment isolation;

3. Are required to operate intermittently under postaccident conditions; and

4. Are in main steam and feedwater piping and other systems which penetrate containment of direct-cycle boiling water power reactors.

I. Pa (p.s.i.g.) means the calculated peak containment internal pressure related to the design basis accident and specified either in the technical specification or associated bases.

J. Pt (p.s.i.g.) means the containment vessel reduced test pressure selected to measure the integrated leakage rate during periodic Type A tests.

K. La (percent/24 hours) means the maximum allowable leakage rate at pressure Pa as specified for preoperational tests in the technical specifications or associated bases, and as specified for periodic tests in the operating license or combined license, including the technical specifications in any referenced design certification or manufactured reactor used at the facility.

L. Ld (percent/24 hours) means the design leakage rate at pressure, Pa, as specified in the technical specifications or associated bases.

M. Lt (percent/24 hours) means the maximum allowable leakage rate at pressure Pt derived from the preoperational test data as specified in III.A.4.(a)(iii).

N. Lam, Ltm (percent/24 hours) means the total measured containment leakage rates at pressure Pa and Pt, respectively, obtained from testing the containment with components and systems in the state as close as practical to that which would exist under design basis accident conditions (e.g., vented, drained, flooded or pressurized).

O. "Acceptance criteria" means the standard against which test results are to be compared for establishing the functional acceptability of the containment as a leakage limiting boundary.

III. Leakage Testing Requirements

A program consisting of a schedule for conducting Type A, B, and C tests shall be developed for leak testing the primary reactor containment and related systems and components penetrating primary containment pressure boundary.

Upon completion of construction of the primary reactor containment, including installation of all portions of mechanical, fluid, electrical, and instrumentation systems penetrating the primary reactor containment pressure boundary, and prior to any reactor operating period, preoperational and periodic leakage rate tests, as applicable, shall be conducted in accordance with the following:

A. *Type A test*--1. *Pretest requirements.* (a) Containment inspection in accordance with V. A. shall be performed as a prerequisite to the performance of Type A tests. During the period between the initiation of the containment inspection and the performance of the Type A test, no repairs or adjustments shall be made so that the containment can be tested in as close to the "as is" condition as practical. During the period between the completion of one Type A test and the initiation of the containment inspection for the subsequent Type A test, repairs or adjustments shall be made to components whose leakage exceeds that specified in the technical specification as soon as practical after identification. If during a Type A test, including the supplemental test specified in III.A.3.(b), potentially excessive leakage paths are identified which will interfere with satisfactory completion of the test, or which result in the Type A test not meeting the acceptance criteria III.A.4.(b) or III.A.5.(b), the Type A test shall be terminated and the leakage through such paths shall be measured using local leakage testing methods. Repairs and/or adjustments to equipment shall be made and Type A test performed. The corrective action taken and the change in leakage rate determined from the tests and overall integrated leakage determined from local leak and Type A tests shall be included in the summary report required by V.B.

(b) Closure of containment isolation valves for the Type A test shall be accomplished by normal operation and without any preliminary exercising or adjustments (e.g., no tightening of valve after closure by valve motor). Repairs of maloperating or leaking valves shall be made as necessary. Information on any valve closure malfunction or valve leakage that require corrective action before the test, shall be included in the summary report required by V.B.

(c) The containment test conditions shall stabilize for a period of about 4 hours prior to the start of a leakage rate test.

(d) Those portions of the fluid systems that are part of the reactor coolant pressure boundary and are open directly to the containment atmosphere under post-accident conditions and become an extension of the boundary of the containment shall be opened or vented to the containment atmosphere prior to and during the test. Portions of closed systems inside containment that penetrate containment and rupture as a result of a loss of coolant accident shall be vented to the containment atmosphere. All vented systems shall be drained of water or other fluids to the extent necessary to assure exposure of the system containment isolation valves to containment air test pressure and to assure they will be subjected to the post accident differential pressure. Systems that are required to maintain the plant in a safe condition during the test shall be operable in their normal mode, and need not be vented. Systems that are normally filled with water and operating under post-accident conditions, such as the containment heat removal system, need not be vented. However, the containment isolation valves in the systems defined in III.A.1.(d) shall be tested in accordance with III.C. The measured leakage rate from these tests shall be included in the summary report required by V.B.

2. *Conduct of tests*. Preoperational leakage rate tests at either reduced or at peak pressure, shall be conducted at the intervals specified in III.D.

3. *Test Methods*. (a) All Type A tests shall be conducted in accordance with the provisions of the American National Standards N45.4-1972, "Leakage Rate Testing of Containment Structures for Nuclear Reactors," March 16, 1972. In addition to the Total time and Point-to-Point methods described in that standard, the Mass Point Method, when used with a test duration of at least 24 hours, is an acceptable method to use to calculate leakage rates. A typical description of the Mass Point method can be found in the American National Standard ANSI/ANS 56.8-1987, "Containment System Leakage Testing Requirements," January 20, 1987. Incorporation of ANSI N45.4-1972 by reference was approved by the Director of the Federal Register. Copies of this standard, as well as ANSI/ANS-56.8-1987, "Containment System Leakage Testing Requirements" (dated January 20, 1987) may be obtained from the American Nuclear Society, 555 North Kensington Avenue, La Grange Park, IL 60525. A copy of each of these standards is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738.

(b) The accuracy of any Type A test shall be verified by a supplemental test. An acceptable method is described in Appendix C of ANSI N45.4-1972. The supplemental test method selected shall be conducted for sufficient duration to establish accurately the change in leakage rate between the Type A and supplemental test. Results from this supplemental test are acceptable provided the difference between the supplemental test data and the Type A test data is within 0.25 La (or 0.25 Lt). If results are not within 0.25 La (or 0.25 Lt), the reason shall be determined, corrective action taken, and a successful supplemental test performed.

(c) Test leakage rates shall be calculated using absolute values corrected for instrument error.

4. *Preoperational leakage rate tests*. (a) *Test pressure*--(1) *Reduced pressure tests*. (i) An initial test shall be performed at a pressure Pt, not less than 0.50 Pa to measure a leakage rate Ltm.

(ii) A second test shall be performed at pressure Pa to measure a leakage rate Lam.

(iii) The leakage characteristics yielded by measurements Ltm and Lam shall establish the maximum allowable test leakage rate Lt of not more than La (Ltm/Lam). In the event Ltm/Lam is greater than 0.7, Lt shall be specified as equal to La (Pt/Pa).[1]

(2) *Peak pressure tests*. A test shall be performed at pressure Pa to measure the leakage rate Lam.

(b) *Acceptance criteria*--(1) *Reduced pressure tests*. The leakage rate Ltm shall be less than 0.75 Lt.

(2) *Peak pressure tests*. The leakage rate Lam shall be less than 0.75 La and not greater than Ld.

5. *Periodic leakage rate tests*--(a) *Test pressure*. (1) Reduced pressure tests shall be conducted at Pt;

(2) Peak pressure tests shall be conducted at Pa.

(b) *Acceptance criteria*--(1) *Reduced pressure tests*. The leakage rate Ltm shall be less than 0.75 Lt. If local leakage measurements are taken to effect repairs in order to meet the acceptance criteria, these measurements shall be taken at a test pressure Pt.

(2) *Peak pressure tests*. The leakage rate Lam shall be less than 0.75 La. If local leakage measurements are taken to effect repairs in order to meet the acceptance criteria, these measurements shall be taken at a test pressure Pa.

6. *Additional requirements*. (a) If any periodic Type A test fails to meet the applicable acceptance criteria in III.A.5.(b), the test schedule applicable to subsequent Type A tests will be reviewed and approved by the Commission.

(b) If two consecutive periodic Type A tests fail to meet the applicable acceptance criteria in III.A.5(b), notwithstanding the periodic retest schedule of III.D., a Type A test shall be performed at each plant shutdown for refueling or approximately every 18 months, whichever occurs first, until two consecutive Type A tests meet the acceptance criteria in III.A.5(b), after which time the retest schedule specified in III.D. may be resumed.

B. *Type B tests*--1. *Test methods*. Acceptable means of performing preoperation and periodic Type B tests include:

(a) Examination by halide leak-detection method (or by other equivalent test methods such as mass spectrometer) of a test chamber, pressurized with air, nitrogen, or pneumatic fluid specified in the technical specifications or associated bases and constructed as part of individual containment penetrations.

(b) Measurement of the rate of pressure loss of the test chamber of the containment penetration pressurized with air, nitrogen, or pneumatic fluid specified in the technical specifications or associated bases.

(c) Leakage surveillance by means of a permanently installed system with provisions for continuous or intermittent pressurization of individual or groups of containment penetrations and measurement of rate of pressure loss of air, nitrogen, or pneumatic fluid specified in the technical specification or associated bases through the leak paths.

2. *Test pressure*. All preoperational and periodic Type B tests shall be performed by local pneumatic pressurization of the containment penetrations, either individually or in groups, at a pressure not less than Pa.

3. *Acceptance criteria*. (See also Type C tests.) (a) The combined leakage rate of all penetrations and valves subject to Type B and C tests shall be less than 0.60 La, with the exception of the valves specified in III.C.3.

(b) Leakage measurements obtained through component leakage surveillance systems (e.g., continuous pressurization of individual containment components) that maintains a pressure not less than Pa at individual test chambers of containment penetrations during normal reactor operation, are acceptable in lieu of Type B tests.

C. *Type C tests*--1. *Test method*. Type C tests shall be performed by local pressurization. The pressure shall be applied in the same direction as that when the value would be required to perform its safety function, unless it can be determined that the results from the tests for a pressure applied in a different direction will provide equivalent or more conservative results. The test methods in III.B.1 may be substituted where appropriate. Each valve to be tested shall be closed by normal operation and without any preliminary exercising or adjustments (e.g., no tightening of valve after closure by valve motor).

2. *Test pressure*. (a) Valves, unless pressurized with fluid (e.g., water, nitrogen) from a seal system, shall be pressurized with air or nitrogen at a pressure of Pa.

(b) Valves, which are sealed with fluid from a seal system shall be pressurized with that fluid to a pressure not less than 1.10 Pa.

3. *Acceptance criterion*. The combined leakage rate for all penetrations and valves subject to Type B and C tests shall be less than 0.60 La. Leakage from containment isolation valves that are sealed with fluid from a seal system may be excluded when determining the combined leakage rate: Provided, That;

(a) Such valves have been demonstrated to have fluid leakage rates that do not exceed those specified in the technical specifications or associated bases, and

(b) The installed isolation valve seal-water system fluid inventory is sufficient to assure the sealing function for at least 30 days at a pressure of 1.10 Pa.

D. *Periodic retest schedule*--1. *Type A test*. (a) After the preoperational leakage rate tests, a set of three Type A tests shall be performed, at approximately equal intervals during each 10-year service period. The third test of each set shall be conducted when the plant is shutdown for the 10-year plant inservice inspections.[2]

(b) Permissible periods for testing. The performance of Type A tests shall be limited to periods when the plant facility is non-operational and secured in the shutdown condition under the administrative control and in accordance with the safety procedures defined in the license.

2. *Type B tests*. (a) Type B tests, except tests for air locks, shall be performed during reactor shutdown for refueling, or other convenient intervals, but in no case at intervals greater than 2 years. If opened following a Type A or B test, containment penetrations subject to Type B testing shall be Type B tested prior to returning the reactor to an operating mode requiring containment integrity. For primary reactor containment penetrations employing a continuous leakage monitoring system, Type B tests, except for tests of air locks, may, notwithstanding the test schedule specified under III.D.1., be performed every other reactor shutdown for refueling but in no case at intervals greater than 3 years.

(b)(i) Air locks shall be tested prior to initial fuel loading and at 6-month intervals thereafter at an internal pressure not less than P_a.

(ii) Air locks opened during periods when containment integrity is not required by the plant's Technical Specifications shall be tested at the end of such periods at not less than P_a.

(iii) Air locks opened during periods when containment integrity is required by the plant's Technical Specifications shall be tested within 3 days after being opened. For air lock doors opened more frequently than once every 3 days, the air lock shall be tested at least once every 3 days during the period of frequent openings. For air lock doors having testable seals, testing the seals fulfills the 3-day test requirements. In the event that the testing for this 3-day interval cannot be at P_a, the test pressure shall be as stated in the Technical Specifications. Air

lock door seal testing shall not be substituted for the 6-month test of the entire air lock at not less than P_a.

(iv) The acceptance criteria for air lock testing shall be stated in the Technical Specifications.

3. *Type C tests*. Type C tests shall be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years.

IV. Special Testing Requirements

A. *Containment modification*. Any major modification, replacement of a component which is part of the primary reactor containment boundary, or resealing a seal-welded door, performed after the preoperational leakage rate test shall be followed by either a Type A, Type B, or Type C test, as applicable for the area affected by the modification. The measured leakage from this test shall be included in the summary report required by V.B. The acceptance criteria of III.A.5.(b), III.B.3., or III.C.3., as appropriate, shall be met. Minor modifications, replacements, or resealing of seal-welded doors, performed directly prior to the conduct of a scheduled Type A test do not require a separate test.

B. *Multiple leakage barrier or subatmospheric containments*. The primary reactor containment barrier of a multiple barrier or subatmospheric containment shall be subjected to Type A tests to verify that its leakage rate meets the requirements of this appendix. Other structures of multiple barrier or subatmospheric containments (e.g., secondary containments for boiling water reactors and shield buildings for pressurized water reactors that enclose the entire primary reactor containment or portions thereof) shall be subject to individual tests in accordance with the procedures specified in the technical specifications, or associated bases.

V. Inspection and Reporting of Tests

A. *Containment inspection*. A general inspection of the accessible interior and exterior surfaces of the containment structures and components shall be performed prior to any Type A test to uncover any evidence of structural deterioration which may affect either the containment structural integrity or leak-tightness. If there is evidence of structural deterioration, Type A tests shall not be performed until corrective action is taken in accordance with repair procedures, non destructive examinations, and tests as specified in the applicable code specified in § 50.55a at the commencement of repair work. Such structural deterioration and corrective actions taken shall be included in the summary report required by V.B.

B. *Recordkeeping of test results*. 1. The preoperational and periodic tests must be documented in a readily available summary report that will be made available for inspection, upon request, at the nuclear power plant. The summary report shall include a schematic arrangement of the leakage rate measurement system, the instrumentation used, the supplemental test method, and the test program selected as applicable to the preoperational test, and all the subsequent periodic tests. The report shall contain an analysis and interpretation of the leakage rate test data for the Type A test results to the extent necessary to demonstrate the acceptability of the containment's leakage rate in meeting acceptance criteria.

2. For each periodic test, leakage test results from Type A, B, and C tests shall be included in the summary report. The summary report shall contain an analysis and interpretation of the Type A test results and a summary analysis of periodic Type B and Type C tests that were performed since the last type A test. Leakage test results from type A, B, and C tests that failed to meet the acceptance criteria of III.A.5 (b), III.B.3, and III.C.3, respectively, shall be included in a separate accompanying summary report that includes an analysis and interpretation of the test data, the least squares fit analysis of the test data, the instrumentation error analysis, and the structural conditions of the containment or components, if any, which contributed to the failure in meeting the acceptance criteria. Results and analyses of the supplemental verification test employed to demonstrate the validity of the leakage rate test measurements shall also be included.

Option B--Performance-Based Requirements

Table of Contents

I. Introduction.
II. Definitions.
III. Performance-based leakage-test requirements.
A. Type A test.
B. Type B and C tests.
IV. Recordkeeping.
V. Application.

I. Introduction

One of the conditions required of all operating licenses and combined licenses for light–water–cooled power reactors as specified in § 50.54 (o) is that primary reactor containments meet the leakage-rate test requirements in either Option A or B of this appendix. These test requirements ensure that (a) leakage through these containments or systems and components penetrating these containments does not exceed allowable leakage rates specified in the technical specifications; and (b) integrity of the containment structure is maintained during its service life. Option B of this appendix identifies the performance-based requirements and criteria for preoperational and subsequent periodic leakage-rate testing.[3]

II. Definitions

Performance criteria means the performance standards against which test results are to be compared for establishing the acceptability of

the containment system as a leakage-limiting boundary.

Containment system means the principal barrier, after the reactor coolant pressure boundary, to prevent the release of quantities of radioactive material that would have a significant radiological effect on the health of the public.

Overall integrated leakage rate means the total leakage rate through all tested leakage paths, including containment welds, valves, fittings, and components that penetrate the containment system.

La (*percent/24 hours*) means the maximum allowable leakage rate at pressure Pa as specified in the Technical Specifications.

Pa (*p.s.i.g*) means the calculated peak containment internal pressure related to the design basis loss-of-coolant accident as specified in the Technical Specifications.

III. Performance-Based Leakage-Test Requirements

A. Type A Test

Type A tests to measure the containment system overall integrated leakage rate must be conducted under conditions representing design basis loss-of-coolant accident containment peak pressure. A Type A test must be conducted (1) after the containment system has been completed and is ready for operation and (2) at a periodic interval based on the historical performance of the overall containment system as a barrier to fission product releases to reduce the risk from reactor accidents. A general visual inspection of the accessible interior and exterior surfaces of the containment system for structural deterioration which may affect the containment leak-tight integrity must be conducted prior to each test, and at a periodic interval between tests based on the performance of the containment system. The leakage rate must not exceed the allowable leakage rate (La) with margin, as specified in the Technical Specifications. The test results must be compared with previous results to examine the performance history of the overall containment system to limit leakage.

B. Type B and C Tests

Type B pneumatic tests to detect and measure local leakage rates across pressure retaining, leakage-limiting boundaries, and Type C pneumatic tests to measure containment isolation valve leakage rates, must be conducted (1) prior to initial criticality, and (2) periodically thereafter at intervals based on the safety significance and historical performance of each boundary and isolation valve to ensure the integrity of the overall containment system as a barrier to fission product release to reduce the risk from reactor accidents. The performance-based testing program must contain a performance criterion for Type B and C tests, consideration of leakage-rate limits and factors that are indicative of or affect performance, when establishing test intervals, evaluations of performance of containment system components, and comparison to previous test results to examine the performance history of the overall containment system to limit leakage. The tests must demonstrate that the sum of the leakage rates at accident pressure of Type B tests, and pathway leakage rates from Type C tests, is less than the performance criterion (La) with margin, as specified in the Technical Specification.

IV. Recordkeeping

The results of the preoperational and periodic Type A, B, and C tests must be documented to show that performance criteria for leakage have been met. The comparison to previous results of the performance of the overall containment system and of individual components within it must be documented to show that the test intervals established for the containment system and components within it are adequate. These records must be available for inspection at plant sites.

If the test results exceed the performance criteria (La) as defined in the plant Technical Specifications, those exceedances must be assessed for Emergency Notification System reporting under §§ 50.72 (b)(1)(ii) and § 50.72 (b)(2)(i), and for a Licensee Event Report under § 50.73 (a)(2)(ii).

V. Application

A. Applicability

The requirements in either or both Option B, III.A for Type A tests, and Option B, III.B for Type B and C tests, may be adopted on a voluntary basis by an operating nuclear power reactor licensee as specified in § 50.54 in substitution of the requirements for those tests contained in Option A of this appendix. If the requirements for tests in Option B, III.A or Option B, III.B are implemented, the recordkeeping requirements in Option B, IV for these tests must be substituted for the reporting requirements of these tests contained in Option A of this appendix.

B. Implementation

1. Specific exemptions to Option A of this appendix that have been formally approved by the AEC or NRC, according to 10 CFR 50.12, are still applicable to Option B of this appendix if necessary, unless specifically revoked by the NRC.

2. A licensee or applicant for an operating license under this part or a combined license under part 52 of this chapter may adopt Option B, or parts thereof, as specified in Section V.A of this appendix, by submitting its implementation plan and request for revision to technical specifications (see paragraph B.3 of this section) to the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate.

3. The regulatory guide or other implementation document used by a licensee or applicant for an operating license under this part or a

combined license under part 52 of this chapter to develop a performance-based leakage-testing program must be included, by general reference, in the plant technical specifications. The submittal for technical specification revisions must contain justification, including supporting analyses, if the licensee chooses to deviate from methods approved by the Commission and endorsed in a regulatory guide.

4. The detailed licensee programs for conducting testing under Option B must be available at the plant site for NRC inspection.

[38 FR 4386, Feb. 14, 1973; 38 FR 5997, Mar. 6, 1973, as amended at 41 FR 16447, Apr. 19, 1976; 45 FR 62789, Sept. 22, 1980; 51 FR 40311, Nov. 6, 1986; 53 FR 45891, Nov. 15, 1988; 57 FR 61786, Dec. 29, 1992; 59 FR 50689, Oct. 5, 1994; 60 FR 13616, Mar. 14, 1995; 60 FR 49504, Sept. 26, 1995; 72 FR 49508, Aug. 28, 2007; 73 FR 5723, Jan. 31, 2008]

1. Such inservice inspections are required by § 50.55a.

2. Such inservice inspections are required by § 50.55a.

3. Specific guidance concerning a performance-based leakage-test program, acceptable leakage-rate test methods, procedures, and analyses that may be used to implement these requirements and criteria are provided in Regulatory Guide 1.163, "Performance-Based Containment Leak-Test Program."

Appendix K to Part 50--ECCS Evaluation Models

[Top of File]

I. Required and Acceptable Features of the Evaluation Models

A. *Sources of heat during the LOCA.* For the heat sources listed in paragraphs I.A.1 to 4 of this appendix it must be assumed that the reactor has been operating continuously at a power level at least 1.02 times the licensed power level (to allow for instrumentation error), with the maximum peaking factor allowed by the technical specifications. An assumed power level lower than the level specified in this paragraph (but not less than the licensed power level) may be used provided the proposed alternative value has been demonstrated to account for uncertainties due to power level instrumentation error. A range of power distribution shapes and peaking factors representing power distributions that may occur over the core lifetime must be studied. The selected combination of power distribution shape and peaking factor should be the one that results in the most severe calculated consequences for the spectrum of postulated breaks and single failures that are analyzed.

1. *The Initial Stored Energy in the Fuel*. The steady-state temperature distribution and stored energy in the fuel before the hypothetical accident shall be calculated for the burn-up that yields the highest calculated cladding temperature (or, optionally, the highest calculated stored energy.) To accomplish this, the thermal conductivity of the UO2 shall be evaluated as a function of burn-up and temperature, taking into consideration differences in initial density, and the thermal conductance of the gap between the UO2 and the cladding shall be evaluated as a function of the burn-up, taking into consideration fuel densification and expansion, the composition and pressure of the gases within the fuel rod, the initial cold gap dimension with its tolerances, and cladding creep.

2. *Fission Heat*. Fission heat shall be calculated using reactivity and reactor kinetics. Shutdown reactivities resulting from temperatures and voids shall be given their minimum plausible values, including allowance for uncertainties, for the range of power distribution shapes and peaking factors indicated to be studied above. Rod trip and insertion may be assumed if they are calculated to occur.

3. *Decay of Actinides*. The heat from the radioactive decay of actinides, including neptunium and plutonium generated during operation, as well as isotopes of uranium, shall be calculated in accordance with fuel cycle calculations and known radioactive properties. The actinide decay heat chosen shall be that appropriate for the time in the fuel cycle that yields the highest calculated fuel temperature during the LOCA.

4. *Fission Product Decay*. The heat generation rates from radioactive decay of fission products shall be assumed to be equal to 1.2 times the values for infinite operating time in the ANS Standard (Proposed American Nuclear Society Standards--"Decay Energy Release Rates Following Shutdown of Uranium-Fueled Thermal Reactors." Approved by Subcommittee ANS-5, ANS Standards Committee, October 1971). This standard has been approved for incorporation by reference by the Director of the Federal Register. A copy of the standard is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738. The fraction of the locally generated gamma energy that is deposited in the fuel (including the cladding) may be different from 1.0; the value used shall be justified by a suitable calculation.

5. *Metal--Water Reaction Rate*. The rate of energy release, hydrogen generation, and cladding oxidation from the metal/water reaction shall be calculated using the Baker-Just equation (Baker, L., Just, L.C., "Studies of Metal Water Reactions at High Temperatures, III. Experimental and Theoretical Studies of the Zirconium-Water Reaction," ANL-6548, page 7, May 1962). This publication has been approved for incorporation by reference by the Director of the Federal Register. A copy of the publication is available for inspection at the NRC Library, 11545 Rockville Pike, Two White Flint North, Rockville, Maryland 20852-2738. The reaction shall be assumed not to be steam limited. For rods whose cladding is calculated to rupture during the LOCA, the inside of the cladding shall be assumed to react after the rupture. The calculation of the reaction rate on the inside of the cladding shall also follow the Baker-Just equation, starting at the time when the cladding is calculated to rupture, and extending around the cladding inner circumference and axially no less that 1.5 inches each way from the location of the rupture, with the reaction assumed not to be steam limited.

6. *Reactor Internals Heat Transfer*. Heat transfer from piping, vessel walls, and non-fuel internal hardware shall be taken into account.

7. *Pressurized Water Reactor Primary-to-Secondary Heat Transfer*. Heat transferred between primary and secondary systems through heat exchangers (steam generators) shall be taken into account. (Not applicable to Boiling Water Reactors.)

B. Swelling and Rupture of the Cladding and Fuel Rod Thermal Parameters

Each evaluation model shall include a provision for predicting cladding swelling and rupture from consideration of the axial temperature distribution of the cladding and from the difference in pressure between the inside and outside of the cladding, both as functions of time. To be acceptable the swelling and rupture calculations shall be based on applicable data in such a way that the degree of swelling and incidence of rupture are not underestimated. The degree of swelling and rupture shall be taken into account in calculations of gap conductance, cladding oxidation and embrittlement, and hydrogen generation.

The calculations of fuel and cladding temperatures as a function of time shall use values for gap conductance and other thermal parameters as functions of temperature and other applicable time-dependent variables. The gap conductance shall be varied in accordance with changes in gap dimensions and any other applicable variables.

C. Blowdown Phenomena

1. *Break Characteristics and Flow*. a. In analyses of hypothetical loss-of-coolant accidents, a spectrum of possible pipe breaks shall be considered. This spectrum shall include instantaneous double-ended breaks ranging in cross-sectional area up to and including that of the largest pipe in the primary coolant system. The analysis shall also include the effects of longitudinal splits in the largest pipes, with the split area equal to the cross-sectional area of the pipe.

b. *Discharge Model*. For all times after the discharging fluid has been calculated to be two-phase in composition, the discharge rate shall be calculated by use of the Moody model (F.J. Moody, "Maximum Flow Rate of a Single Component, Two-Phase Mixture," Journal of Heat Transfer, Trans American Society of Mechanical Engineers, 87, No. 1, February, 1965). This publication has been approved for incorporation by reference by the Director of the Federal Register. A copy of this publication is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738. The calculation shall be conducted with at least three values of a discharge coefficient applied to the postulated break area, these values spanning the range from 0.6 to 1.0. If the results indicate that the maximum clad temperature for the hypothetical accident is to be found at an even lower value of the discharge coefficient, the range of discharge coefficients shall be extended until the maximum clad temperatures calculated by this variation has been achieved.

c. *End of Blowdown*. (Applies Only to Pressurized Water Reactors.) For postulated cold leg breaks, all emergency cooling water injected into the inlet lines or the reactor vessel during the bypass period shall in the calculations be subtracted from the reactor vessel calculated inventory. This may be executed in the calculation during the bypass period, or as an alternative the amount of emergency core cooling water calculated to be injected during the bypass period may be subtracted later in the calculation from the water remaining in the inlet lines, downcomer, and reactor vessel lower plenum after the bypass period. This bypassing shall end in the calculation at a time designated as the "end of bypass," after which the expulsion or entrainment mechanisms responsible for the bypassing are calculated not to be effective. The end-of-bypass definition used in the calculation shall be justified by a suitable combination of analysis and experimental data. Acceptable methods for defining "end of bypass" include, but are not limited to, the following: (1) Prediction of the blowdown calculation of downward flow in the downcomer for the remainder of the blowdown period; (2) Prediction of a threshold for droplet entrainment in the upward velocity, using local fluid conditions and a conservative critical Weber number.

d. *Noding Near the Break and the ECCS Injection Points*. The noding in the vicinity of and including the broken or split sections of pipe and the points of ECCS injection shall be chosen to permit a reliable analysis of the thermodynamic history in these regions during blowdown.

2. *Frictional Pressure Drops*. The frictional losses in pipes and other components including the reactor core shall be calculated using models that include realistic variation of friction factor with Reynolds number, and realistic two-phase friction multipliers that have been adequately verified by comparison with experimental data, or models that prove at least equally conservative with respect to maximum clad temperature calculated during the hypothetical accident. The modified Baroczy correlation (Baroczy, C. J., "A Systematic Correlation for Two-Phase Pressure Drop," *Chem. Enging. Prog. Symp. Series*, No. 64, Vol. 62, 1965) or a combination of the Thom correlation (Thom, J.R. S., "Prediction of Pressure Drop During Forced Circulation Boiling of Water," *Int. J. of Heat & Mass Transfer*, 7, 709-724, 1964) for pressures equal to or greater than 250 psia and the Martinelli-Nelson correlation (Martinelli, R. C. Nelson, D.B., "Prediction of Pressure Drop During Forced Circulation Boiling of Water," *Transactions of ASME*, 695-702, 1948) for pressures lower than 250 psia is acceptable as a basis for calculating realistic two-phase friction multipliers.

3. *Momentum Equation*. The following effects shall be taken into account in the conservation of momentum equation: (1) temporal change of momentum, (2) momentum convection, (3) area change momentum flux, (4) momentum change due to compressibility, (5) pressure loss resulting from wall friction, (6) pressure loss resulting from area change, and (7) gravitational acceleration. Any omission of one or more of these terms under stated circumstances shall be justified by comparative analyses or by experimental data.

4. *Critical Heat Flux*. a. Correlations developed from appropriate steady-state and transient-state experimental data are acceptable for use in predicting the critical heat flux (CHF) during LOCA transients. The computer programs in which these correlations are used shall contain suitable checks to assure that the physical parameters are within the range of parameters specified for use of the correlations by their respective authors.

b. Steady-state CHF correlations acceptable for use in LOCA transients include, but are not limited to, the following:

(1) *W 3*. L. S. Tong, "Prediction of Departure from Nucleate Boiling for an Axially Non-uniform Heat Flux Distribution," *Journal of Nuclear Energy*, Vol. 21, 241-248, 1967.

(2) *B&W-2*. J. S. Gellerstedt, R. A. Lee, W. J. Oberjohn, R. H. Wilson, L. J. Stanek, "Correlation of Critical Heat Flux in a Bundle Cooled by Pressurized Water," *Two-Phase Flow and Heat Transfer in Rod Bundles*, ASME, New York, 1969.

(3) *Hench-Levy*. J. M. Healzer, J. E. Hench, E. Janssen, S. Levy, "Design Basis for Critical Heat Flux Condition in Boiling Water Reactors,"

APED-5186, GE Company Private report, July 1966.

(4) *Macbeth*. R. V. Macbeth, "An Appraisal of Forced Convection Burnout Data," *Proceedings of the Institute of Mechanical Engineers*, 1965-1966.

(5) *Barnett*. P. G. Barnett, "A Correlation of Burnout Data for Uniformly Heated Annuli and Its Uses for Predicting Burnout in Uniformly Heated Rod Bundles," AEEW-R 463, 1966.

(6) *Hughes*. E. D. Hughes, "A Correlation of Rod Bundle Critical Heat Flux for Water in the Pressure Range 150 to 725 psia," IN-1412, Idaho Nuclear Corporation, July 1970.

c. Correlations of appropriate transient CHF data may be accepted for use in LOCA transient analyses if comparisons between the data and the correlations are provided to demonstrate that the correlations predict values of CHF which allow for uncertainty in the experimental data throughout the range of parameters for which the correlations are to be used. Where appropriate, the comparisons shall use statistical uncertainty analysis of the data to demonstrate the conservatism of the transient correlation.

d. Transient CHF correlations acceptable for use in LOCA transients include, but are not limited to, the following:

(1) *GE transient CHF*. B. C. Slifer, J. E. Hench, "Loss-of-Coolant Accident and Emergency Core Cooling Models for General Electric Boiling Water Reactors," NEDO-10329, General Electric Company, Equation C-32, April 1971.

e. After CHF is first predicted at an axial fuel rod location during blowdown, the calculation shall not use nucleate boiling heat transfer correlations at that location subsequently during the blowdown even if the calculated local fluid and surface conditions would apparently justify the reestablishment of nucleate boiling. Heat transfer assumptions characteristic of return to nucleate boiling (rewetting) shall be permitted when justified by the calculated local fluid and surface conditions during the reflood portion of a LOCA.

5. *Post-CHF Heat Transfer Correlations*. a. Correlations of heat transfer from the fuel cladding to the surrounding fluid in the post-CHF regimes of transition and film boiling shall be compared to applicable steady-state and transient-state data using statistical correlation and uncertainty analyses. Such comparison shall demonstrate that the correlations predict values of heat transfer co-efficient equal to or less than the mean value of the applicable experimental heat transfer data throughout the range of parameters for which the correlations are to be used. The comparisons shall quantify the relation of the correlations to the statistical uncertainty of the applicable data.

b. The Groeneveld flow film boiling correlation (equation 5.7 of D.C. Groeneveld, "An Investigation of Heat Transfer in the Liquid Deficient Regime," AECL-3281, revised December 1969) and the Westinghouse correlation of steady-state transition boiling ("Proprietary Redirect/ Rebuttal Testimony of Westinghouse Electric Corporation," USNRC Docket RM-50-1, page 25-1, October 26, 1972) are acceptable for use in the post-CHF boiling regimes. In addition, the transition boiling correlation of McDonough, Milich, and King (J.B. McDonough, W. Milich, E.C. King, "An Experimental Study of Partial Film Boiling Region with Water at Elevated Pressures in a Round Vertical Tube," Chemical Engineering Progress Symposium Series, Vol. 57, No. 32, pages 197-208, (1961) is suitable for use between nucleate and film boiling. Use of all these correlations is restricted as follows:

(1) The Groeneveld correlation shall not be used in the region near its low-pressure singularity,

(2) The first term (nucleate) of the Westinghouse correlation and the entire McDonough, Milich, and King correlation shall not be used during the blowdown after the temperature difference between the clad and the saturated fluid first exceeds 300°F,

(3) Transition boiling heat transfer shall not be reapplied for the remainder of the LOCA blowdown, even if the clad superheat returns below 300°F, except for the reflood portion of the LOCA when justified by the calculated local fluid and surface conditions.

c. Evaluation models approved after October 17, 1988, which make use of the Dougall-Rohsenow flow film boiling correlation (R.S. Dougall and W.M. Rohsenow, "Film Boiling on the Inside of Vertical Tubes with Upward Flow of Fluid at Low Qualities," MIT Report Number 9079 26, Cambridge, Massachusetts, September 1963) may not use this correlation under conditions where nonconservative predictions of heat transfer result. Evaluation models that make use of the Dougall-Rohsenow correlation and were approved prior to October 17, 1988, continue to be acceptable until a change is made to, or an error is corrected in, the evaluation model that results in a significant reduction in the overall conservatism in the evaluation model. At that time continued use of the Dougall-Rohsenow correlation under conditions where nonconservative predictions of heat transfer result will no longer be acceptable. For this purpose, a significant reduction in the overall conservatism in the evaluation model would be a reduction in the calculated peak fuel cladding temperature of at least 50°F from that which would have been calculated on October 17, 1988, due either to individual changes or error corrections or the net effect of an accumulation of changes or error corrections.

6. *Pump Modeling*. The characteristics of rotating primary system pumps (axial flow, turbine, or centrifugal) shall be derived from a dynamic model that includes momentum transfer between the fluid and the rotating member, with variable pump speed as a function of time. The pump model resistance used for analysis should be justified. The pump model for the two-phase region shall be verified by applicable two-phase pump performance data. For BWR's after saturation is calculated at the pump suction, the pump head may be assumed to vary linearly with quality, going to zero for one percent quality at the pump suction, so long as the analysis shows that core flow stops before the quality at pump suction reaches one percent.

7. *Core Flow Distribution During Blowdown*. (Applies only to pressurized water reactors.)

a. The flow rate through the hot region of the core during blowdown shall be calculated as a function of time. For the purpose of these calculations the hot region chosen shall not be greater than the size of one fuel assembly. Calculations of average flow and flow in the hot region shall take into account cross flow between regions and any flow blockage calculated to occur during blowdown as a result of cladding

swelling or rupture. The calculated flow shall be smoothed to eliminate any calculated rapid oscillations (period less than 0.1 seconds).

b. A method shall be specified for determining the enthalpy to be used as input data to the hot channel heatup analysis from quantities calculated in the blowdown analysis, consistent with the flow distribution calculations.

D. *Post-Blowdown Phenomena; Heat Removal by the ECCS*

1. *Single Failure Criterion*. An analysis of possible failure modes of ECCS equipment and of their effects on ECCS performance must be made. In carrying out the accident evaluation the combination of ECCS subsystems assumed to be operative shall be those available after the most damaging single failure of ECCS equipment has taken place.

2. *Containment Pressure*. The containment pressure used for evaluating cooling effectiveness during reflood and spray cooling shall not exceed a pressure calculated conservatively for this purpose. The calculation shall include the effects of operation of all installed pressure-reducing systems and processes.

3. *Calculation of Reflood Rate for Pressurized Water Reactors*. The refilling of the reactor vessel and the time and rate of reflooding of the core shall be calculated by an acceptable model that takes into consideration the thermal and hydraulic characteristics of the core and of the reactor system. The primary system coolant pumps shall be assumed to have locked impellers if this assumption leads to the maximum calculated cladding temperature; otherwise the pump rotor shall be assumed to be running free. The ratio of the total fluid flow at the core exit plane to the total liquid flow at the core inlet plane (carryover fraction) shall be used to determine the core exit flow and shall be determined in accordance with applicable experimental data (for example, "PWR FLECHT (Full Length Emergency Cooling Heat Transfer) Final Report," Westinghouse Report WCAP-7665, April 1971; "PWR Full Length Emergency Cooling Heat Transfer (FLECHT) Group I Test Report," Westinghouse Report WCAP-7435, January 1970; "PWR FLECHT (Full Length Emergency Cooling Heat Transfer) Group II Test Report," Westinghouse Report WCAP-7544, September 1970; "PWR FLECHT Final Report Supplement," Westinghouse Report WCAP-7931, October 1972).

The effects on reflooding rate of the compressed gas in the accumulator which is discharged following accumulator water discharge shall also be taken into account.

4. *Steam Interaction with Emergency Core Cooling Water in Pressurized Water Reactors*. The thermal-hydraulic interaction between steam and all emergency core cooling water shall be taken into account in calculating the core reflooding rate. During refill and reflood, the calculated steam flow in unbroken reactor coolant pipes shall be taken to be zero during the time that accumulators are discharging water into those pipes unless experimental evidence is available regarding the realistic thermal-hydraulic interaction between the steam and the liquid. In this case, the experimental data may be used to support an alternate assumption.

5. *Refill and Reflood Heat Transfer for Pressurized Water Reactors*. a. For reflood rates of one inch per second or higher, reflood heat transfer coefficients shall be based on applicable experimental data for unblocked cores including FLECHT results ("PWR FLECHT (Full Length Emergency Cooling Heat Transfer) Final Report," Westinghouse Report WCAP-7665, April 1971). The use of a correlation derived from FLECHT data shall be demonstrated to be conservative for the transient to which it is applied; presently available FLECHT heat transfer correlations ("PWR Full Length Emergency Cooling Heat Transfer (FLECHT) Group I Test Report," Westinghouse Report WCAP-7544, September 1970; "PWR FLECHT Final Report Supplement," Westinghouse Report WCAP-7931, October 1972) are not acceptable. Westinghouse Report WCAP-7665 has been approved for incorporation by reference by the Director of the Federal Register. A copy of this report is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738. New correlations or modifications to the FLECHT heat transfer correlations are acceptable only after they are demonstrated to be conservative, by comparison with FLECHT data, for a range of parameters consistent with the transient to which they are applied.

b. During refill and during reflood when reflood rates are less than one inch per second, heat transfer calculations shall be based on the assumption that cooling is only by steam, and shall take into account any flow blockage calculated to occur as a result of cladding swelling or rupture as such blockage might affect both local steam flow and heat transfer.

6. *Convective Heat Transfer Coefficients for Boiling Water Reactor Fuel Rods Under Spray Cooling*. Following the blowdown period, convective heat transfer shall be calculated using coefficients based on appropriate experimental data. For reactors with jet pumps and having fuel rods in a 7 x 7 fuel assembly array, the following convective coefficients are acceptable:

a. During the period following lower plenum flashing but prior to the core spray reaching rated flow, a convective heat transfer coefficient of zero shall be applied to all fuel rods.

b. During the period after core spray reaches rated flow but prior to reflooding, convective heat transfer coefficients of 3.0, 3.5, 1.5, and 1.5 $Btu\text{-}hr^{-1}\text{-}ft^{-2}{}^{o}F^{-1}$ shall be applied to the fuel rods in the outer corners, outer row, next to outer row, and to those remaining in the interior, respectively, of the assembly.

c. After the two-phase reflooding fluid reaches the level under consideration, a convective heat transfer coefficient of 25 $Btu\text{-}hr^{-1}\text{-}ft^{-2}{}^{o}F^{-1}$ shall be applied to all fuel rods.

7. *The Boiling Water Reactor Channel Box Under Spray Cooling*. Following the blowdown period, heat transfer from, and wetting of, the channel box shall be based on appropriate experimental data. For reactors with jet pumps and fuel rods in a 7 x 7 fuel assembly array, the following heat transfer coefficients and wetting time correlation are acceptable.

a. During the period after lower plenum flashing, but prior to core spray reaching rated flow, a convective coefficient of zero shall be applied to the fuel assembly channel box.

b. During the period after core spray reaches rated flow, but prior to wetting of the channel, a convective heat transfer coefficient of 5 Btu-hr^{-1}-ft^{-2}-$^{o}F^{-1}$ shall be applied to both sides of the channel box.

c. Wetting of the channel box shall be assumed to occur 60 seconds after the time determined using the correlation based on the Yamanouchi analysis ("Loss-of-Coolant Accident and Emergency Core Cooling Models for General Electric Boiling Water Reactors," General Electric Company Report NEDO-10329, April 1971). This report was approved for incorporation by reference by the Director of the Federal Register. A copy of the report is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738.

II. Required Documentation

1. a. A description of each evaluation model shall be furnished. The description shall be sufficiently complete to permit technical review of the analytical approach including the equations used, their approximations in difference form, the assumptions made, and the values of all parameters or the procedure for their selection, as for example, in accordance with a specified physical law or empirical correlation.

b. A complete listing of each computer program, in the same form as used in the evaluation model, must be furnished to the Nuclear Regulatory Commission upon request.

2. For each computer program, solution convergence shall be demonstrated by studies of system modeling or noding and calculational time steps.

3. Appropriate sensitivity studies shall be performed for each evaluation model, to evaluate the effect on the calculated results of variations in noding, phenomena assumed in the calculation to predominate, including pump operation or locking, and values of parameters over their applicable ranges. For items to which results are shown to be sensitive, the choices made shall be justified.

4. To the extent practicable, predictions of the evaluation model, or portions thereof, shall be compared with applicable experimental information.

5. General Standards for Acceptability--Elements of evaluation models reviewed will include technical adequacy of the calculational methods, including: For models covered by § 50.46(a)(1)(ii), compliance with required features of section I of this Appendix K; and, for models covered by § 50.46(a)(1)(i), assurance of a high level of probability that the performance criteria of § 50.46(b) would not be exceeded.

Appendix L to Part 50--[Reserved]

[Top of File]

Appendix M to Part 50--[Reserved]

[Top of File]

[38 FR 30253, Nov. 2, 1973, as amended at 49 FR 9404, Mar. 12, 1984; 49 FR 35754, Sept. 12, 1984; 50 FR 18853, May 3, 1985; 51 FR 40311, Nov. 6, 1986; 72 FR 49508, Aug. 28, 2007]

Appendix N to Part 50—Standardization of Nuclear Power Plant Designs: Permits To Construct and Licenses To Operate Nuclear Power Reactors of Identical Design at Multiple Sites

[Top of File]

Section 101 of the Atomic Energy Act of 1954, as amended, and § 50.10 of this part require a Commission license to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import or export any production or utilization facility. The regulations in this part require the issuance of a construction permit by the Commission before commencement of construction of a production or utilization facility, except as provided in § 50.10(e), and the issuance of an operating license before operation of the facility.

The Commission's regulations in Part 2 of this chapter specifically provide for the holding of hearings on particular issues separately from other issues involved in hearings in licensing proceedings (§ 2.761a, Appendix A, section I(c)), and for the consolidation of adjudicatory proceedings and of the presentations of parties in adjudicatory proceedings such as licensing proceedings (§§ 2.715a, 2.716).

This appendix sets out the particular requirements and provisions applicable to situations in which applications are filed by one or more applicants for licenses to construct and operate nuclear power reactors of essentially the same design to be located at different sites.[1]

1. Except as otherwise specified in this appendix or as the context otherwise indicates, the provisions of this part applicable to construction permits and operating licenses, including the requirement in § 50.58 for review of the application by the Advisory Committee on Reactor Safeguards and the holding of public hearings, apply to construction permits and operating licenses subject to this Appendix N.

2. Applications for construction permits submitted pursuant to this appendix must include the information required by §§ 50.33, 50.34(a) and 50.34a(a) and (b) and be submitted as specified in § 50.4. The applicant shall also submit the information required by § 51.50 of this chapter.

For the technical information required by §§ 50.34(a) (1) through (5) and (8) and 50.34a (a) and (b), reference may be made to a single preliminary safety analysis of the design[2] which, for the purposes of § 50.34(a)(1) includes one set of site parameters postulated for the design of the reactors, and an analysis and evaluation of the reactors in terms of such postulated site parameters. Such single preliminary safety analysis shall also include information pertaining to design features of the proposed reactors that affect plans for coping with emergencies in the operation of the reactors, and shall describe the quality assurance program with respect to aspects of design, fabrication, procurement and construction that are common to all of the reactors.

3. Applications for operating licenses submitted pursuant to this Appendix N shall include the information required by §§ 50.33, 50.34(b) and (c), and 50.34a(c). The applicant shall also submit the information required by § 51.53 of this chapter. For the technical information required by §§ 50.34(b)(2) through (5) and 50.34a(c), reference may be made to a single final safety analysis of the design.

[40 FR 2977, Jan. 17, 1975, as amended at 49 FR 9405, Mar. 12, 1984; 51 FR 40311, Nov. 6, 1986; 70 FR 61888, Oct. 27, 2005; 72 FR 49508, Aug. 28, 2007]

[1] If the design for the power reactor(s) proposed in a particular application is not identical to the others, that application may not be processed under this appendix and Subpart D of Part 2 of this chapter.

[2] As used in this appendix, the design of a nuclear power reactor included in a single referenced safety analysis report means the design of those structures, systems and components important to radiological health and safety and the common defense and security.

Appendix O to Part 50--[Reserved]

[Top of File]

[40 FR 2977, Jan. 17, 1975, as amended at 49 FR 9405, Mar. 12, 1984; 50 FR 38112, Sept. 20, 1985; 51 FR 40311, Nov. 6, 1986; 64 FR 48952, Sept. 9, 1999; 72 FR 49508, Aug. 28, 2007]

Appendix P to Part 50--[Reserved]

[Top of File]

Appendix Q to Part 50--Pre-Application Early Review of Site Suitability Issues

[Top of File]

This appendix sets out procedures for the filing, Staff review, and referral to the Advisory Committee on Reactor Safeguards of requests for early review of one or more site suitability issues relating to the construction and operation of certain utilization facilities separately from and prior to the submittal of applications for construction permits for the facilities. The appendix also sets out procedures for the preparation and issuance of Staff Site Reports and for their incorporation by reference in applications for the construction and operation of certain utilization facilities. The utilization facilities are those which are subject to § 51.20(b) of this chapter and are of the type specified in § 50.21(b) (2) or (3) or § 50.22 or are testing facilities. This appendix does not apply to proceedings conducted pursuant to Subpart F of Part 2 of this chapter.

1. Any person may submit information regarding one or more site suitability issues to the Commission's Staff for its review separately from and prior to an application for a construction permit for a facility. Such a submittal shall be accompanied by any fee required by Part 170 of this chapter and shall consist of the portion of the information required of applicants for construction permits by §§ 50.33(a)-(c) and (e), and, insofar as it relates to the issue(s) of site suitability for which early review is sought, by §§ 50.34(a)(1) and 50.30(f), except that information with respect to operation of the facility at the projected initial power level need not be supplied.

2. The submittal for early review of site suitability issue(s) must be made in the same manner and in the same number of copies as provided in §§ 50.4 and 50.30 for license applications. The submittal must include sufficient information concerning a range of postulated facility design and operation parameters to enable the Staff to perform the requested review of site suitability issues. The submittal must contain suggested conclusions on the issues of site suitability submitted for review and must be accompanied by a statement of the bases or the reasons for those conclusions. The submittal must also list, to the extent possible, any long-range objectives for ultimate development of the site, state whether any site selection process was used in preparing the submittal, describe any site selection process used, and explain what consideration, if any, was given to alternative sites.

3. The Staff shall publish a notice of docketing of the submittal in the Federal Register, and shall send a copy of the notice of docketing to the Governor or other appropriate official of the State in which the site is located. This notice shall identify the location of the site, briefly describe the site suitability issue(s) under review, and invite comments from Federal, State, and local agencies and interested persons within 120 days of publication or such other time as may be specified, for consideration by the staff in connection with the initiation or outcome of the review and, if appropriate by the ACRS, in connection with the outcome of their review. The person requesting review shall serve a copy of the submittal on the Governor or other appropriate official of the State in which the site is located, and on the chief executive of the municipality in which the site is located or, if the site is not located in a municipality, on the chief executive of the county. The portion of the submittal containing information required of applicants for construction permits by §§ 50.33(a)-(c) and (e) and 50.34(a)(1) will be referred to the Advisory Committee on Reactor Safeguards (ACRS) for a review and report. There will be no referral to the ACRS unless early review of the site safety issues under § 50.34(a)(1) is requested.

4. Upon completion of review by the NRC staff and, if appropriate by the ACRS, of a submittal under this appendix, the NRC staff shall prepare a Staff Site Report which shall identify the location of the site, state the site suitability issues reviewed, explain the nature and scope of the review, state the conclusions of the staff regarding the issues reviewed and state the reasons for those conclusions. Upon issuance of an NRC Staff Site Report, the NRC staff shall publish a notice of the availability of the report in the Federal Register and shall make the report available at the NRC Web site, *http://www.nrc.gov.* The NRC staff shall also send a copy of the report to the Governor or other appropriate official of the State in which the site is located, and to the chief executive of the municipality in which the site is located or, if the site is not located in a municipality, to the chief executive of the county.

5. Any Staff Site Report prepared and issued in accordance with this appendix may be incorporated by reference, as appropriate, in an application for a construction permit for a utilization facility which is subject to § 51.20(b) of this chapter and is of the type specified in § 50.21(b) (2) or (3) or § 50.22 of this chapter or is a testing facility. The conclusions of the Staff Site Report will be reexamined by the staff where five years or more have elapsed between the issuance of the Staff Site Report and its incorporation by reference in a construction permit application.

6. Issuance of a Staff Site Report shall not constitute a commitment to issue a permit or license, to permit on-site work under § 50.10(e), or in any way affect the authority of the Commission, Atomic Safety and Licensing Appeal Panel, Atomic Safety and Licensing Board, and other presiding officers in any proceeding under Subpart F and/or G of Part 2 of this chapter.

7. The staff will not conduct more than one review of site suitability issues with regard to a particular site prior to the full construction permit review required by Subpart A of Part 51 of this chapter. The staff may decline to prepare and issue a Staff Site Report in response to a submittal under this appendix where it appears that, (a) in cases where no review of the relative merits of the submitted site and alternative sites under Subpart A of Part 51 of this chapter is requested, there is a reasonable likelihood that further Staff review would identify one or more preferable alternative sites and the Staff review of one or more site suitability issues would lead to an irreversible and irretrievable commitment of resources prior to the submittal of the analysis of alternative sites in the Environmental Report that would prejudice the later review and decision on alternative sites under Subpart F and/or G of Part 2 and Subpart A of Part 51 of this chapter; or (b) in cases where, in the judgment of the Staff, early review of any site suitability issue or issues would not be in the public interest, considering (1) the degree of likelihood that any early findings on those issues would retain their validity in later reviews, (2) the objections, if any, of cognizant state or local government agencies to the conduct of an early review on those issues, and (3) the possible effect on the public interest of having an early, if not necessarily conclusive, resolution of those issues.

[42 FR 22887, May 5, 1977, as amended at 49 FR 9405, Mar. 12, 1984; 51 FR 40311, Nov. 6, 1986; 53 FR 43420, Oct. 27, 1988; 64 FR 48952, Sept. 9, 1999]

Appendix R to Part 50--Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979

[Top of File]

I. Introduction and Scope

This appendix applies to licensed nuclear power electric generating stations that were operating prior to January 1, 1979, except to the extent set forth in § 50.48(b) of this part. With respect to certain generic issues for such facilities it sets forth fire protection features required to satisfy Criterion 3 of Appendix A to this part.

Criterion 3 of Appendix A to this part specifies that "Structures, systems, and components important to safety shall be designed and located to minimize, consistent with other safety requirements, the probability and effect of fires and explosions."

When considering the effects of fire, those systems associated with achieving and maintaining safe shutdown conditions assume major importance to safety because damage to them can lead to core damage resulting from loss of coolant through boiloff.

The phrases "important to safety," or "safety-related," will be used throughout this Appendix R as applying to all safety functions. The phrase "safe shutdown" will be used throughout this appendix as applying to both hot and cold shutdown functions.

Because fire may affect safe shutdown systems and because the loss of function of systems used to mitigate the consequences of design basis accidents under postfire conditions does not per se impact public safety, the need to limit fire damage to systems required to achieve and maintain safe shutdown conditions is greater than the need to limit fire damage to those systems required to mitigate the consequences of design basis accidents. Three levels of fire damage limits are established according to the safety functions of the structure, system, or component:

Safety function	Fire damage limits
Hot Shutdown	One train of equipment necessary to achieve hot shutdown from either the control room or emergency control station(s) must be maintained free of fire damage by a single fire, including an exposure fire.[1]
Cold Shutdown	Both trains of equipment necessary to achieve cold shutdown may be damaged by a single fire, including an exposure fire, but damage must be limited so that at least one train can be repaired or made operable within 72 hours using onsite capability.
Design Basis Accidents	Both trains of equipment necessary for mitigation of consequences following design basis accidents may be damaged by a single exposure fire.

[1] Exposure Fire. An exposure fire is a fire in a given area that involves either in situ or transient combustibles and is external to any structures, systems, or components located in or adjacent to that same area. The effects of such fire (e.g., smoke, heat, or ignition) can adversely affect those structures, systems, or components important to safety. Thus, a fire involving one train of safe shutdown equipment

may constitute an exposure fire for the redundant train located in the same area, and a fire involving combustibles other than either redundant train may constitute an exposure fire to both redundant trains located in the same area.

The most stringent fire damage limit shall apply for those systems that fall into more than one category. Redundant systems used to mitigate the consequences of other design basis accidents but not necessary for safe shutdown may be lost to a single exposure fire. However, protection shall be provided so that a fire within only one such system will not damage the redundant system.

II. General Requirements

A. *Fire protection program*. A fire protection program shall be established at each nuclear power plant. The program shall establish the fire protection policy for the protection of structures, systems, and components important to safety at each plant and the procedures, equipment, and personnel required to implement the program at the plant site.

The fire protection program shall be under the direction of an individual who has been delegated authority commensurate with the responsibilities of the position and who has available staff personnel knowledgeable in both fire protection and nuclear safety.

The fire protection program shall extend the concept of defense-in-depth to fire protection in fire areas important to safety, with the following objectives:

To prevent fires from starting;

To detect rapidly, control, and extinguish promptly those fires that do occur;

To provide protection for structures, systems, and components important to safety so that a fire that is not promptly extinguished by the fire suppression activities will not prevent the safe shutdown of the plant.

B. *Fire hazards analysis*. A fire hazards analysis shall be performed by qualified fire protection and reactor systems engineers to (1) consider potential in situ and transient fire hazards; (2) determine the consequences of fire in any location in the plant on the ability to safely shut down the reactor or on the ability to minimize and control the release of radioactivity to the environment; and (3) specify measures for fire prevention, fire detection, fire suppression, and fire containment and alternative shutdown capability as required for each fire area containing structures, systems, and components important to safety in accordance with NRC guidelines and regulations.

C. *Fire prevention features*. Fire protection features shall meet the following general requirements for all fire areas that contain or present a fire hazard to structures, systems, or components important to safety.

1. In situ fire hazards shall be identified and suitable protection provided.

2. Transient fire hazards associated with normal operation, maintenance, repair, or modification activities shall be identified and eliminated where possible. Those transient fire hazards that can not be eliminated shall be controlled and suitable protection provided.

3. Fire detection systems, portable extinguishers, and standpipe and hose stations shall be installed.

4. Fire barriers or automatic suppression systems or both shall be installed as necessary to protect redundant systems or components necessary for safe shutdown.

5. A site fire brigade shall be established, trained, and equipped and shall be on site at all times.

6. Fire detection and suppression systems shall be designed, installed, maintained, and tested by personnel properly qualified by experience and training in fire protection systems.

7. Surveillance procedures shall be established to ensure that fire barriers are in place and that fire suppression systems and components are operable.

D. *Alternative or dedicated shutdown capability*. In areas where the fire protection features cannot ensure safe shutdown capability in the event of a fire in that area, alternative or dedicated safe shutdown capability shall be provided.

III. Specific Requirements

A. *Water supplies for fire suppression systems*. Two separate water supplies shall be provided to furnish necessary water volume and pressure to the fire main loop.

Each supply shall consist of a storage tank, pump, piping, and appropriate isolation and control valves. Two separate redundant suctions in one or more intake structures from a large body of water (river, lake, etc.) will satisfy the requirement for two separated water storage tanks. These supplies shall be separated so that a failure of one supply will not result in a failure of the other supply.

Each supply of the fire water distribution system shall be capable of providing for a period of 2 hours the maximum expected water demands as determined by the fire hazards analysis for safety-related areas or other areas that present a fire exposure hazard to safety-related areas.

When storage tanks are used for combined service-water/fire-water uses the minimum volume for fire uses shall be ensured by means of dedicated tanks or by some physical means such as a vertical standpipe for other water service. Administrative controls, including locks for tank outlet valves, are unacceptable as the only means to ensure minimum water volume.

Other water systems used as one of the two fire water supplies shall be permanently connected to the fire main system and shall be capable of automatic alignment to the fire main system. Pumps, controls, and power supplies in these systems shall satisfy the requirements for the main fire pumps. The use of other water systems for fire protection shall not be incompatible with their functions required for safe plant shutdown. Failure of the other system shall not degrade the fire main system.

B. *Sectional isolation valves*. Sectional isolation valves such as post indicator valves or key operated valves shall be installed in the fire main loop to permit isolation of portions of the fire main loop for maintenance or repair without interrupting the entire water supply.

C. *Hydrant isolation valves*. Valves shall be installed to permit isolation of outside hydrants from the fire main for maintenance or repair without interrupting the water supply to automatic or manual fire suppression systems in any area containing or presenting a fire hazard to safety-related or safe shutdown equipment.

D. *Manual fire suppression*. Standpipe and hose systems shall be installed so that at least one effective hose stream will be able to reach any location that contains or presents an exposure fire hazard to structures, systems, or components important to safety.

Access to permit effective functioning of the fire brigade shall be provided to all areas that contain or present an exposure fire hazard to structures, systems, or components important to safety.

Standpipe and hose stations shall be inside PWR containments and BWR containments that are not inerted. Standpipe and hose stations inside containment may be connected to a high quality water supply of sufficient quantity and pressure other than the fire main loop if plant-specific features prevent extending the fire main supply inside containment. For BWR drywells, standpipe and hose stations shall be placed outside the dry well with adequate lengths of hose to reach any location inside the dry well with an effective hose stream.

E. *Hydrostatic hose tests*. Fire hose shall be hydrostatically tested at a pressure of 150 psi or 50 psi above maximum fire main operating pressure, whichever is greater. Hose stored in outside hose houses shall be tested annually. Interior standpipe hose shall be tested every three years.

F. *Automatic fire detection*. Automatic fire detection systems shall be installed in all areas of the plant that contain or present an exposure fire hazard to safe shutdown or safety-related systems or components. These fire detection systems shall be capable of operating with or without offsite power.

G. *Fire protection of safe shutdown capability*. 1. Fire protection features shall be provided for structures, systems, and components important to safe shutdown. These features shall be capable of limiting fire damage so that:

a. One train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or emergency control station(s) is free of fire damage; and

b. Systems necessary to achieve and maintain cold shutdown from either the control room or emergency control station(s) can be repaired within 72 hours.

2. Except as provided for in paragraph G.3 of this section, where cables or equipment, including associated non-safety circuits that could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground, of redundant trains of systems necessary to achieve and maintain hot shutdown conditions are located within the same fire area outside of primary containment, one of the following means of ensuring that one of the redundant trains is free of fire damage shall be provided:

a. Separation of cables and equipment and associated non-safety circuits of redundant trains by a fire barrier having a 3-hour rating. Structural steel forming a part of or supporting such fire barriers shall be protected to provide fire resistance equivalent to that required of the barrier;

b. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustible or fire hazards. In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area; or

c. Enclosure of cable and equipment and associated non-safety circuits of one redundant train in a fire barrier having a 1-hour rating, In addition, fire detectors and an automatic fire suppression system shall be installed in the fire area;

Inside noninerted containments one of the fire protection means specified above or one of the following fire protection means shall be provided:

d. Separation of cables and equipment and associated non-safety circuits of redundant trains by a horizontal distance of more than 20 feet with no intervening combustibles or fire hazards;

e. Installation of fire detectors and an automatic fire suppression system in the fire area; or

f. Separation of cables and equipment and associated non-safety circuits of redundant trains by a noncombustible radiant energy shield.

3. Alternative of dedicated shutdown capability and its associated circuits,[1] independent of cables, systems or components in the area, room, zone under consideration should be provided:

a. Where the protection of systems whose function is required for hot shutdown does not satisfy the requirement of paragraph G.2 of this section; or

b. Where redundant trains of systems required for hot shutdown located in the same fire area may be subject to damage from fire suppression activities or from the rupture or inadvertent operation of fire suppression systems.

In addition, fire detection and a fixed fire suppression system shall be installed in the area, room, or zone under consideration.

H. *Fire brigade*. A site fire brigade trained and equipped for fire fighting shall be established to ensure adequate manual fire fighting capability for all areas of the plant containing structures, systems, or components important to safety. The fire brigade shall be at least five members on each shift. The brigade leader and at least two brigade members shall have sufficient training in or knowledge of plant safety-related systems to understand the effects of fire and fire suppressants on safe shutdown capability. The qualification of fire brigade members shall include an annual physical examination to determine their ability to perform strenuous fire fighting activities. The shift supervisor shall not be a member of the fire brigade. The brigade leader shall be competent to assess the potential safety consequences of a fire and advise control room personnel. Such competence by the brigade leader may be evidenced by possession of an operator's license or equivalent knowledge of plant safety-related systems.

The minimum equipment provided for the brigade shall consist of personal protective equipment such as turnout coats, boots, gloves, hard hats, emergency communications equipment, portable lights, portable ventilation equipment, and portable extinguishers. Self-contained breathing apparatus using full-face positive-pressure masks approved by NIOSH (National Institute for Occupational Safety and Health--approval formerly given by the U.S. Bureau of Mines) shall be provided for fire brigade, damage control, and control room personnel. At least 10 masks shall be available for fire brigade personnel. Control room personnel may be furnished breathing air by a manifold system piped from a storage reservoir if practical. Service or rated operating life shall be a minimum of one-half hour for the self-contained units.

At least a 1-hour supply of breathing air in extra bottles shall be located on the plant site for each unit of self-contained breathing appratus. In addition, an onsite 6-hour supply of reserve air shall be provided and arranged to permit quick and complete replenishment of exhausted air supply bottles as they are returned. If compressors are used as a source of breathing air, only units approved for breathing air shall be used and the compressors shall be operable assuming a loss of offsite power. Special care must be taken to locate the compressor in areas free of dust and contaminants.

I. *Fire brigade training*. The fire brigade training program shall ensure that the capability to fight potential fires is established and maintained. The program shall consist of an initial classroom instruction program followed by periodic classroom instruction, fire fighting practice, and fire drills:

1. *Instruction*

a. The initial classroom instruction shall include:

(1) Indoctrination of the plant fire fighting plan with specific identification of each individual's responsibilities.

(2) Identification of the type and location of fire hazards and associated types of fires that could occur in the plant.

(3) The toxic and corrosive characteristics of expected products of combustion.

(4) Identification of the location of fire fighting equipment for each fire area and familiarization with the layout of the plant, including access and egress routes to each area.

(5) The proper use of available fire fighting equipment and the correct method of fighting each type of fire. The types of fires covered should include fires in energized electrical equipment, fires in cables and cable trays, hydrogen fires, fires involving flammable and combustible liquids or hazardous process chemicals, fires resulting from construction or modifications (welding), and record file fires.

(6) The proper use of communication, lighting, ventilation, and emergency breathing equipment.

(7) The proper method for fighting fires inside buildings and confined spaces.

(8) The direction and coordination of the fire fighting activities (fire brigade leaders only).

(9) Detailed review of fire fighting strategies and procedures.

(10) Review of the latest plant modifications and corresponding changes in fire fighting plans.

Note: Items (9) and (10) may be deleted from the training of no more than two of the non-operations personnel who may be assigned to the fire brigade.

b. The instruction shall be provided by qualified individuals who are knowledgeable, experienced, and suitably trained in fighting the types

of fires that could occur in the plant and in using the types of equipment available in the nuclear power plant.

c. Instruction shall be provided to all fire brigade members and fire brigade leaders.

d. Regular planned meetings shall be held at least every 3 months for all brigade members to review changes in the fire protection program and other subjects as necessary.

e. Periodic refresher training sessions shall be held to repeat the classroom instruction program for all brigade members over a two-year period. These sessions may be concurrent with the regular planned meetings.

2. *Practice*

Practice sessions shall be held for each shift fire brigade on the proper method of fighting the various types of fires that could occur in a nuclear power plant. These sessions shall provide brigade members with experience in actual fire extinguishment and the use of emergency breathing apparatus under strenuous conditions encountered in fire fighting. These practice sessions shall be provided at least once per year for each fire brigade member.

3. *Drills*

a. Fire brigade drills shall be performed in the plant so that the fire brigade can practice as a team.

b. Drills shall be performed at regular intervals not to exceed 3 months for each shift fire brigade. Each fire brigade member should participate in each drill, but must participate in at least two drills per year.

A sufficient number of these drills, but not less than one for each shift fire brigade per year, shall be unannounced to determine the fire fighting readiness of the plant fire brigade, brigade leader, and fire protection systems and equipment. Persons planning and authorizing an unannounced drill shall ensure that the responding shift fire brigade members are not aware that a drill is being planned until it is begun. Unannounced drills shall not be scheduled closer than four weeks.

At least one drill per year shall be performed on a "back shift" for each shift fire brigade.

c. The drills shall be preplanned to establish the training objectives of the drill and shall be critiqued to determine how well the training objectives have been met. Unannounced drills shall be planned and critiqued by members of the management staff responsible for plant safety and fire protection. Performance deficiencies of a fire brigade or of individual fire brigade members shall be remedied by scheduling additional training for the brigade or members. Unsatisfactory drill performance shall be followed by a repeat drill within 30 days.

d. At 3-year intervals, a randomly selected unannounced drill must be critiqued by qualified individuals independent of the licensee's staff. A copy of the written report from these individuals must be available for NRC review and shall be retained as a record as specified in section III.I.4 of this appendix.

e. Drills shall as a minimum include the following:

(1) Assessment of fire alarm effectiveness, time required to notify and assemble fire brigade, and selection, placement and use of equipment, and fire fighting strategies.

(2) Assessment of each brigade member's knowledge of his or her role in the fire fighting strategy for the area assumed to contain the fire. Assessment of the brigade member's conformance with established plant fire fighting procedures and use of fire fighting equipment, including self-contained emergency breathing apparatus, communication equipment, and ventilation equipment, to the extent practicable.

(3) The simulated use of fire fighting equipment required to cope with the situation and type of fire selected for the drill. The area and type of fire chosen for the drill should differ from those used in the previous drill so that brigade members are trained in fighting fires in various plant areas. The situation selected should simulate the size and arrangement of a fire that could reasonably occur in the area selected, allowing for fire development due to the time required to respond, to obtain equipment, and organize for the fire, assuming loss of automatic suppression capability.

(4) Assessment of brigade leader's direction of the fire fighting effort as to thoroughness, accuracy, and effectiveness.

4. *Records*

Individual records of training provided to each fire brigade member, including drill critiques, shall be maintained for at least 3 years to ensure that each member receives training in all parts of the training program. These records of training shall be available for NRC review. Retraining or broadened training for fire fighting within buildings shall be scheduled for all those brigade members whose performance records show deficiencies.

J. *Emergency lighting*. Emergency lighting units with at least an 8-hour battery power supply shall be provided in all areas needed for operation of safe shutdown equipment and in access and egress routes thereto.

K. *Administrative controls*. Administrative controls shall be established to minimize fire hazards in areas containing structures, systems, and components important to safety. These controls shall establish procedures to:

1. Govern the handling and limitation of the use of ordinary combustible materials, combustible and flammable gases and liquids, high efficiency particulate air and charcoal filters, dry ion exchange resins, or other combustible supplies in safety-related areas.

2. Prohibit the storage of combustibles in safety-related areas or establish designated storage areas with appropriate fire protection.

3. Govern the handling of and limit transient fire loads such as combustible and flammable liquids, wood and plastic products, or other combustible materials in buildings containing safety-related systems or equipment during all phases of operating, and especially during maintenance, modification, or refueling operations.

4. Designate the onsite staff member responsible for the inplant fire protection review of proposed work activities to identify potential transient fire hazards and specify required additional fire protection in the work activity procedure.

5. Govern the use of ignition sources by use of a flame permit system to control welding, flame cutting, brazing, or soldering operations. A separate permit shall be issued for each area where work is to be done. If work continues over more than one shift, the permit shall be valid for not more than 24 hours when the plant is operating or for the duration of a particular job during plant shutdown.

6. Control the removal from the area of all waste, debris, scrap, oil spills, or other combustibles resulting from the work activity immediately following completion of the activity, or at the end of each work shift, whichever comes first.

7. Maintain the periodic housekeeping inspections to ensure continued compliance with these administrative controls.

8. Control the use of specific combustibles in safety-related areas. All wood used in safety-related areas during maintenance, modification, or refueling operations (such as lay-down blocks or scaffolding) shall be treated with a flame retardant. Equipment or supplies (such as new fuel) shipped in untreated combustible packing containers may be unpacked in safety-related areas if required for valid operating reasons. However, all combustible materials shall be removed from the area immediately following the unpacking. Such transient combustible material, unless stored in approved containers, shall not be left unattended during lunch breaks, shift changes, or other similar periods. Loose combustible packing material such as wood or paper excelsior, or polyethylene sheeting shall be placed in metal containers with tight-fitting self-closing metal covers.

9. Control actions to be taken by an individual discovering a fire, for example, notification of control room, attempt to extinguish fire, and actuation of local fire suppression systems.

10. Control actions to be taken by the control room operator to determine the need for brigade assistance upon report of a fire or receipt of alarm on control room annunciator panel, for example, announcing location of fire over PA system, sounding fire alarms, and notifying the shift supervisor and the fire brigade leader of the type, size, and location of the fire.

11. Control actions to be taken by the fire brigade after notification by the control room operator of a fire, for example, assembling in a designated location, receiving directions from the fire brigade leader, and discharging specific fire fighting responsibilities including selection and transportation of fire fighting equipment to fire location, selection of protective equipment, operating instructions for use of fire suppression systems, and use of preplanned strategies for fighting fires in specific areas.

12. Define the strategies for fighting fires in all safety-related areas and areas presenting a hazard to safety-related equipment. These strategies shall designate:

a. Fire hazards in each area covered by the specific prefire plans.

b. Fire extinguishants best suited for controlling the fires associated with the fire hazards in that area and the nearest location of these extinguishants.

c. Most favorable direction from which to attack a fire in each area in view of the ventilation direction, access hallways, stairs, and doors that are most likely to be free of fire, and the best station or elevation for fighting the fire. All access and egress routes that involve locked doors should be specifically identified in the procedure with the appropriate precautions and methods for access specified.

d. Plant systems that should be managed to reduce the damage potential during a local fire and the location of local and remote controls for such management (e.g., any hydraulic or electrical systems in the zone covered by the specific fire fighting procedure that could increase the hazards in the area because of overpressurization or electrical hazards).

e. Vital heat-sensitive system components that need to be kept cool while fighting a local fire. Particularly hazardous combustibles that need cooling should be designated.

f. Organization of fire fighting brigades and the assignment of special duties according to job title so that all fire fighting functions are covered by any complete shift personnel complement. These duties include command control of the brigade, transporting fire suppression and support equipment to the fire scenes, applying the extinguishant to the fire, communication with the control room, and coordination with outside fire departments.

g. Potential radiological and toxic hazards in fire zones.

h. Ventilation system operation that ensures desired plant air distribution when the ventilation flow is modified for fire containment or smoke clearing operations.

i. Operations requiring control room and shift engineer coordination or authorization.

j. Instructions for plant operators and general plant personnel during fire.

L. *Alternative and dedicated shutdown capability*. 1. Alternative or dedicated shutdown capability provided for a specific fire area shall be able to (a) achieve and maintain subcritical reactivity conditions in the reactor; (b) maintain reactor coolant inventory; (c) achieve and maintain hot standby[2] conditions for a PWR (hot shutdown[2] for a BWR); (d) achieve cold shutdown conditions within 72 hours; and (e) maintain cold shutdown conditions thereafter. During the postfire shutdown, the reactor coolant system process variables shall be maintained within those predicted for a loss of normal a.c. power, and the fission product boundary integrity shall not be affected; i.e., there shall be no fuel clad damage, rupture of any primary coolant boundary, of rupture of the containment boundary.

2. The performance goals for the shutdown functions shall be:

a. The reactivity control function shall be capable of achieving and maintaining cold shutdown reactivity conditions.

b. The reactor coolant makeup function shall be capable of maintaining the reactor coolant level above the top of the core for BWRs and be within the level indication in the pressurizer for PWRs.

c. The reactor heat removal function shall be capable of achieving and maintaining decay heat removal.

d. The process monitoring function shall be capable of providing direct readings of the process variables necessary to perform and control the above functions.

e. The supporting functions shall be capable of providing the process cooling, lubrication, etc., necessary to permit the operation of the equipment used for safe shutdown functions.

3. The shutdown capability for specific fire areas may be unique for each such area, or it may be one unique combination of systems for all such areas. In either case, the alternative shutdown capability shall be independent of the specific fire area(s) and shall accommodate postfire conditions where offsite power is available and where offsite power is not available for 72 hours. Procedures shall be in effect to implement this capability.

4. If the capability to achieve and maintain cold shutdown will not be available because of fire damage, the equipment and systems comprising the means to achieve and maintain the hot standby or hot shutdown condition shall be capable of maintaining such conditions until cold shutdown can be achieved. If such equipment and systems will not be capable of being powered by both onsite and offsite electric power systems because of fire damage, an independent onsite power system shall be provided. The number of operating shift personnel, exclusive of fire brigade members, required to operate such equipment and systems shall be on site at all times.

5. Equipment and systems comprising the means to achieve and maintain cold shutdown conditions shall not be damaged by fire; or the fire damage to such equipment and systems shall be limited so that the systems can be made operable and cold shutdown can be achieved within 72 hours. Materials for such repairs shall be readily available on site and procedures shall be in effect to implement such repairs. If such equipment and systems used prior to 72 hours after the fire will not be capable of being powered by both onsite and offsite electric power systems because of fire damage, an independent onsite power system shall be provided. Equipment and systems used after 72 hours may be powered by offsite power only.

6. Shutdown systems installed to ensure postfire shutdown capability need not be designed to meet seismic Category I criteria, single failure criteria, or other design basis accident criteria, except where required for other reasons, e.g., because of interface with or impact on existing safety systems, or because of adverse valve actions due to fire damage.

7. The safe shutdown equipment and systems for each fire area shall be known to be isolated from associated non-safety circuits in the fire area so that hot shorts, open circuits, or shorts to ground in the associated circuits will not prevent operation of the safe shutdown equipment. The separation and barriers between trays and conduits containing associated circuits of one safe shutdown division and trays and conduits containing associated circuits or safe shutdown cables from the redundant division, or the isolation of these associated circuits from the safe shutdown equipment, shall be such that a postulated fire involving associated circuits will not prevent safe shutdown.[3]

M. *Fire barrier cable penetration seal qualification*. Penetration seal designs must be qualified by tests that are comparable to tests used to rate fire barriers. The acceptance criteria for the test must include the following:

1. The cable fire barrier penetration seal has withstood the fire endurance test without passage of flame or ignition of cables on the unexposed side for a period of time equivalent to the fire resistance rating required of the barrier;

2. The temperature levels recorded for the unexposed side are analyzed and demonstrate that the maximum temperature is sufficiently below the cable insulation ignition temperature; and

3. The fire barrier penetration seal remains intact and does not allow projection of water beyond the unexposed surface during the hose stream test.

N. *Fire doors*. Fire doors shall be self-closing or provided with closing mechanisms and shall be inspected semiannually to verify that automatic hold-open, release, and closing mechanisms and latches are operable.

One of the following measures shall be provided to ensure they will protect the opening as required in case of fire:

1. Fire doors shall be kept closed and electrically supervised at a continuously manned location;

2. Fire doors shall be locked closed and inspected weekly to verify that the doors are in the closed position;

3. Fire doors shall be provided with automatic hold-open and release mechanisms and inspected daily to verify that doorways are free of obstructions; or

4. Fire doors shall be kept closed and inspected daily to verify that they are in the closed position.

The fire brigade leader shall have ready access to keys for any locked fire doors.

Areas protected by automatic total flooding gas suppression systems shall have electrically supervised self-closing fire doors or shall satisfy option 1 above.

O. *Oil collection system for reactor coolant pump*. The reactor coolant pump shall be equipped with an oil collection system if the containment is not inerted during normal operation. The oil collection system shall be so designed, engineered, and installed that failure will not lead to fire during normal or design basis accident conditions and that there is reasonable assurance that the system will withstand the Safe Shutdown Earthquake.[4]

Such collection systems shall be capable of collecting lube oil from all potential pressurized and unpressurized leakage sites in the reactor coolant pump lube oil systems. Leakage shall be collected and drained to a vented closed container that can hold the entire lube oil system inventory. A flame arrester is required in the vent if the flash point characteristics of the oil present the hazard of fire flashback. Leakage points to be protected shall include lift pump and piping, overflow lines, lube oil cooler, oil fill and drain lines and plugs, flanged connections on oil lines, and lube oil reservoirs where such features exist on the reactor coolant pumps. The drain line shall be large enough to accommodate the largest potential oil leak.

[45 FR 76611, Nov. 19, 1980; 46 FR 44735, Sept. 8, 1981, as amended at 53 FR 19251, May 27, 1988; 65 FR 38191, June 20, 2000]

[1] Alternative shutdown capability is provided by rerouting, relocating, or modifying existing systems; dedicated shutdown capability is provided by installing new structures and systems for the function of post-fire shutdown.

[2] As defined in the Standard Technical Specifications.

[3] An acceptable method of complying with this alternative would be to meet Regulatory Guide 1.75 position 4 related to associated circuits and IEEE Std 384-1974 (Section 4.5) where trays from redundant safety divisions are so protected that postulated fires affect trays from only one safety division.

[4] See Regulatory Guide 1.29--"Seismic Design Classification" paragraph C.2.

Appendix S to Part 50--Earthquake Engineering Criteria for Nuclear Power Plants

[Top of File]

General Information

This appendix applies to applicants for a construction permit or operating license under part 50, or a design certification, combined license, design approval, or manufacturing license under part 52 of this chapter, on or after January 10, 1997. However, for either an operating license applicant or holder whose construction permit was issued before January 10, 1997, the earthquake engineering criteria in Section VI of appendix A to 10 CFR part 100 continue to apply. Paragraphs IV.a.1.i, IV.a.1.ii, IV.4.b, and IV.4.c of this appendix apply to applicants for an early site permit
under part 52.

I. *Introduction*

(a) Each applicant for a construction permit, operating license, design certification, combined license, design approval, or manufacturing license is required by §§ 50.34(a)(12), 50.34(b)(10), or 10 CFR 52.47, 52.79, 52.137, or 52.157, and
General Design Criterion 2 of appendix A to this part, to design nuclear power plant structures, systems, and components important to safety to withstand the effects of natural phenomena, such as earthquakes, without loss of capability to perform their safety functions. Also, as specified in § 50.54(ff), nuclear power plants that have
implemented the earthquake engineering criteria described herein must shut down if the criteria in paragraph IV(a)(3) of this appendix are exceeded.

(b) These criteria implement General Design Criterion 2 insofar as it requires structures, systems, and components important to safety to withstand the effects of earthquakes.

II. *Scope*

The evaluations described in this appendix are within the scope of investigations permitted by § 50.10(c)(1).

III. *Definitions*

As used in these criteria:

Combined license means a combined construction permit and operating license with conditions for a nuclear power facility issued under subpart C of part 52 of this chapter.

Design Approval means an NRC staff approval, issued under subpart E of part 52 of this chapter, of a final standard design for a nuclear power reactor of the type described in 10 CFR 50.22.

Design Certification means a Commission approval, issued under subpart B of part 52 of this chapter, of a standard design for a nuclear power facility.

Manufacturing license means a license, issued under subpart F of part 52 of this chapter, authorizing the manufacture of nuclear power reactors but not their installation into facilities located at the sites on which the facilities are to be operated.

Operating basis earthquake ground motion (OBE) is the vibratory ground motion for which those features of the nuclear power plant necessary for continued operation without undue risk to the health and safety of the public will remain functional. The operating basis earthquake ground motion is only associated with plant shutdown and inspection unless specifically selected by the applicant as a design input.

Response spectrum is a plot of the maximum responses (acceleration, velocity, or displacement) of idealized single-degree-of-freedom oscillators as a function of the natural frequencies of the oscillators for a given damping value. The response spectrum is calculated for a specified vibratory motion input at the oscillators' supports.

Safe-shutdown earthquake ground motion (SSE) is the vibratory ground motion for which certain structures, systems, and components must be designed to remain functional.

Structures, systems, and components required to withstand the effects of the safe-shutdown earthquake ground motion or surface deformation are those necessary to assure:

(1) The integrity of the reactor coolant pressure boundary;

(2) The capability to shut down the reactor and maintain it in a safe-shutdown condition; or

(3) The capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the guideline exposures of § 50.34(a)(1).

Surface deformation is distortion of geologic strata at or near the ground surface by the processes of folding or faulting as a result of various earth forces. Tectonic surface deformation is associated with earthquake processes.

IV. Application To Engineering Design

The following are pursuant to the seismic and geologic design basis requirements of § 100.23 of this chapter:

(a) Vibratory Ground Motion.

(1) Safe Shutdown Earthquake Ground Motion.

(i) The Safe Shutdown Earthquake Ground Motion must be characterized by free-field ground motion response spectra at the free ground surface. In view of the limited data available on vibratory ground motions of strong earthquakes, it usually will be appropriate that the design response spectra be smoothed spectra. The horizontal component of the Safe Shutdown Earthquake Ground Motion in the free-field at the foundation level of the structures must be an appropriate response spectrum with a peak ground acceleration of at least 0.1g.

(ii) The nuclear power plant must be designed so that, if the Safe Shutdown Earthquake Ground Motion occurs, certain structures, systems, and components will remain functional and within applicable stress, strain, and deformation limits. In addition to seismic loads, applicable concurrent normal operating, functional, and accident-induced loads must be taken into account in the design of these safety-related structures, systems, and components. The design of the nuclear power plant must also take into account the possible effects of the Safe Shutdown Earthquake Ground Motion on the facility foundations by ground disruption, such as fissuring, lateral spreads, differential settlement, liquefaction, and landsliding, as required in § 100.23 of this chapter.

(iii) The required safety functions of structures, systems, and components must be assured during and after the vibratory ground motion associated with the Safe Shutdown Earthquake Ground Motion through design, testing, or qualification methods.

(iv) The evaluation must take into account soil-structure interaction effects and the expected duration of vibratory motion. It is permissible to design for strain limits in excess of yield strain in some of these safety-related structures, systems, and components during the Safe Shutdown Earthquake Ground Motion and under the postulated concurrent loads, provided the necessary safety functions are maintained.

(2) Operating Basis Earthquake Ground Motion.

(i) The Operating Basis Earthquake Ground Motion must be characterized by response spectra. The value of the Operating Basis Earthquake Ground Motion must be set to one of the following choices:

(A) One-third or less of the Safe Shutdown Earthquake Ground Motion design response spectra. The requirements associated with this Operating Basis Earthquake Ground Motion in Paragraph (a)(2)(i)(B)(I) can be satisfied without the applicant performing explicit response or design analyses, or

(B) A value greater than one-third of the Safe Shutdown Earthquake Ground Motion design response spectra. Analysis and design must be performed to demonstrate that the requirements associated with this Operating Basis Earthquake Ground Motion in Paragraph (a)(2)(i)(B)(I) are satisfied. The design must take into account soil-structure interaction effects and the duration of vibratory ground motion.

(I) When subjected to the effects of the Operating Basis Earthquake Ground Motion in combination with normal operating loads, all structures, systems, and components of the nuclear power plant necessary for continued operation without undue risk to the health and safety of the public must remain functional and within applicable stress, strain, and deformation limits.

(3) Required Plant Shutdown. If vibratory ground motion exceeding that of the Operating Basis Earthquake Ground Motion or if significant plant damage occurs, the licensee must shut down the nuclear power plant. If systems, structures, or components necessary for the safe shutdown of the nuclear power plant are not available after the occurrence of the Operating Basis Earthquake Ground Motion, the licensee must consult with the Commission and must propose a plan for the timely, safe shutdown of the nuclear power plant. Prior to resuming operations, the licensee must demonstrate to the Commission that no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public and the licensing basis is maintained.

(4) Required Seismic Instrumentation. Suitable instrumentation must be provided so that the seismic response of nuclear power plant features important to safety can be evaluated promptly after an earthquake.

(b) Surface Deformation. The potential for surface deformation must be taken into account in the design of the nuclear power plant by providing reasonable assurance that in the event of deformation, certain structures, systems, and components will remain functional. In addition to surface deformation induced loads, the design of safety features must take into account seismic loads and applicable concurrent functional and accident-induced loads. The design provisions for surface deformation must be based on its postulated occurrence in any direction and azimuth and under any part of the nuclear power plant, unless evidence indicates this assumption is not appropriate, and must take into account the estimated rate at which the surface deformation may occur.

(c) Seismically Induced Floods and Water Waves and Other Design Conditions. Seismically induced floods and water waves from either locally or distantly generated seismic activity and other design conditions determined pursuant to § 100.23 of this chapter must be taken into account in the design of the nuclear power plant so as to prevent undue risk to the health and safety of the public.

[61 FR 65173, Dec. 11, 1996; 72 FR 49508, Aug. 28, 2007]

PART 51--ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED REGULATORY FUNCTIONS

[Top of File]

General Provisions

[Top of File]

§ 51.1 Scope.

This part contains environmental protection regulations applicable to NRC's domestic licensing and related regulatory functions. These regulations do not apply to export licensing matters within the scope of part 110 of this chapter or to any environmental effects which NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations. Subject to these limitations, the regulations in this part implement:

(a) Section 102(2) of the National Environmental Policy Act of 1969, as amended.

§ 51.2 Subparts.

[Top of File]

(a) The regulations in subpart A of this part implement section 102(2) of the National Environmental Policy Act of 1969, as amended.

§ 51.3 Resolution of conflict.

[Top of File]

In any conflict between a general rule in subpart A of this part and a special rule in another subpart of this part or another part of this chapter applicable to a particular type of proceeding, the special rule governs.

§ 51.4 Definitions.

[Top of File]

As used in this part:

Act means the Atomic Energy Act of 1954 (Pub. L. 83-703, 68 Stat. 919) including any amendments thereto.

Commission means the Nuclear Regulatory Commission or its authorized representatives.

Construction means the activities in paragraph (1) of this definition, and does not mean the activities in paragraph (2) of this definition.

(1) Activities constituting construction are the driving of piles, subsurface preparation, placement of backfill, concrete, or permanent retaining walls within an excavation, installation of foundations, or in-place assembly, erection, fabrication, or testing, which are for:

(i) Safety-related structures, systems, or components (SSCs) of a facility, as defined in 10 CFR 50.2;

(ii) SSCs relied upon to mitigate accidents or transients or used in plant emergency operating procedures;

(iii) SSCs whose failure could prevent safety-related SSCs from fulfilling their safety-related function;

(iv) SSCs whose failure could cause a reactor scram or actuation of a safety-related system;

(v) SSCs necessary to comply with 10 CFR part 73;

(vi) SSCs necessary to comply with 10 CFR 50.48 and criterion 3 of 10 CFR part 50, appendix A; and

(vii) Onsite emergency facilities (*i.e.*, technical support and operations support centers), necessary to comply with 10 CFR 50.47 and 10 CFR part 50, appendix E.

(2) Construction does not include:

(i) Changes for temporary use of the land for public recreational purposes;

(ii) Site exploration, including necessary borings to determine foundation conditions or other preconstruction monitoring to establish background information related to the suitability of the site, the environmental impacts of construction or operation, or the protection of environmental values;

(iii) Preparation of a site for construction of a facility, including clearing of the site, grading, installation of drainage, erosion and other environmental mitigation measures, and construction of temporary roads and borrow areas;

(iv) Erection of fences and other access control measures;

(v) Excavation;

(vi) Erection of support buildings (such as, construction equipment storage sheds, warehouse and shop facilities, utilities, concrete mixing plants, docking and unloading facilities, and office buildings) for use in connection with the construction of the facility;

(vii) Building of service facilities, such as paved roads, parking lots, railroad spurs, exterior utility and lighting systems, potable water systems, sanitary sewerage treatment facilities, transmission lines;

(viii) Procurement or fabrication of components or portions of the proposed facility occurring at other than the final, in-place location at the facility;

(ix) Manufacture of a nuclear power reactor under a manufacturing license under subpart F of part 52 of this chapter to be installed at the proposed site and to be part of the proposed facility; or

(x) With respect to production or utilization facilities, other than testing facilities and nuclear power plants, required to be licensed under Section 104.a or Section 104.c of the Act, the erection of buildings which will be used for activities other than operation of a facility and which may also be used to house a facility (*e.g.*, the construction of a college laboratory building with space for installation of a training reactor).

NRC means the Nuclear Regulatory Commission, the agency established by Title II of the Energy Reorganization Act of 1974, as amended.

NRC staff means any NRC officer or employee or his/her authorized representative, except a Commissioner, a member of a Commissioner's immediate staff, an Atomic Safety and Licensing Board, an Atomic Safety and Licensing Appeal Board, a presiding officer, an administrative judge, an administrative law judge, or any other officer or employee of the Commission who performs adjudicatory functions.

NRC Staff Director means:

Executive Director for Operations;

Director, Office of Nuclear Reactor Regulation;

Director, Office of New Reactors;

Director, Office of Nuclear Material Safety and Safeguards;

Director, Office of Federal and State Materials and Environmental Management Programs;

Director, Office of Nuclear Regulatory Research;

Director, Office of Governmental and Public Affairs; and

The designee of any NRC staff director.

[49 FR 9381, Mar. 12, 1984, as amended at 51 FR 35999, Oct. 8, 1986; 52 FR 31612, Aug. 21, 1987; 72 FR 57443, Oct. 9, 2007; 73 FR 5723, Jan. 31, 2008]

§ 51.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 51.6 Specific exemptions.

[Top of File]

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and are otherwise in the public interest.

Subpart A--National Environmental Policy Act--Regulations Implementing Section 102(2)

[Top of File]

§ 51.10 Purpose and scope of subpart; application of regulations of Council on Environmental Quality.

(a) The National Environmental Policy Act of 1969, as amended (NEPA) directs that, to the fullest extent possible: (1) The policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in NEPA, and (2) all agencies of the Federal Government shall comply with the procedures in section 102(2) of NEPA except where compliance would be inconsistent with other statutory requirements. The regulations in this subpart implement section 102(2) of NEPA in a manner which is consistent with the NRC's domestic licensing and related regulatory authority under the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and the Uranium Mill Tailings Radiation Control Act of 1978, and which reflects the Commission's announced policy to take account of the regulations of the Council on Environmental Quality published November 29, 1978 (43 FR 55978-56007) voluntarily, subject to certain conditions. This subpart does not apply to export licensing matters within the scope of part 110 of this chapter nor does it apply to any environmental effects which NRC's domestic licensing and related regulatory functions may have upon the environment of foreign nations.

(b) The Commission recognizes a continuing obligation to conduct its domestic licensing and related regulatory functions in a manner which is both receptive to environmental concerns and consistent with the Commission's responsibility as an independent regulatory agency for protecting the radiological health and safety of the public. Accordingly, the Commission will:

(1) Examine any future interpretation or change to the Council's NEPA regulations;

(2) Follow the provisions of 40 CFR 1501.5 and 1501.6 relating to lead agencies and cooperating agencies, except that the Commission reserves the right to prepare an independent environmental impact statement whenever the NRC has regulatory jurisdiction over an acitivity even though the NRC has not been designated as lead agency for preparation of the statement; and

(3) Reserve the right to make a final decision on any matter within the NRC's regulatory authority even though another agency has made a predecisional referral of an NRC action to the Council under the procedures of 40 CFR part 1504.

(c) The regulations in this subpart[1] also address the limitations imposed on NRC's authority and responsibility under the National Environmental Policy Act of 1969, as amended, by the Federal Water Pollution Control Act Amendments of 1972, Pub. L. 92-500, 86 Stat. 816 et seq. (33 U.S.C. 1251 et seq.) In accordance with section 511(c)(2) of the Federal Water Pollution Control Act (86 Stat. 893, 33 U.S. C 1371(c)(2)) the NRC recognizes that responsibility for Federal regulation of nonradiological pollutant discharges[2] into receiving waters rests by statute with the Environmental Protection Agency.

d) Commission actions initiating or relating to administrative or judicial civil or criminal enforcement actions or proceedings are not subject to Section 102(2) of NEPA. These actions include issuance of notices of violation, orders, and denials of requests for action pursuant to subpart B of part 2 of this chapter; matters covered by part 15 and part 160 of this chapter; and issuance of confirmatory action letters, bulletins, generic letters, notices of deviation, and notices of nonconformance.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 43578, Oct. 26, 1989; 61 FR 43408, Aug. 22, 1996]

[1]See also Second Memorandum of Understanding Regarding Implementation of Certain NRC and EPA Responsibilities and Policy Statement on Implementation of Section 511 of the Federal Water Pollution Control Act (FWPCA) attached as Appendix A thereto, which were published in the Federal Register on December 31, 1975 (40 FR 60115) and became effective January 30, 1976.

[2]On June 1, 1976, the U.S. Supreme Court held that "`pollutants' subject to regulation under the FWPCA [Federal Water Pollution Control Act] do not include source, byproduct, and special nuclear materials, . . ." Train v. Colorado PIRG, 426 U.S. 1 at 25.

§ 51.11 Relationship to other subparts. [Reserved]

[Top of File]

§ 51.12 Application of subpart to ongoing environmental work.

[Top of File]

(a) Except as otherwise provided in this section, the regulations in this subpart shall apply to the fullest extent practicable to NRC's ongoing environmental work.

(b) No environmental report or any supplement to an environmental report filed with the NRC and no environmental assessment, environmental impact statement or finding of no significant impact or any supplement to any of the foregoing issued by the NRC before June 7, 1984, need be redone and no notice of intent to prepare an environmental impact statement or notice of availability of these environmental documents need be republished solely by reason of the promulgation on March 12, 1984, of this revision of part 51.

[49 FR 9381, Mar. 12, 1984, as amended at 49 FR 24513, June 14, 1984]

§ 51.13 Emergencies.

[Top of File]

Whenever emergency circumstances make it necessary and whenever, in other situations, the health and safety of the public may be adversely affected if mitigative or remedial actions are delayed, the Commission may take an action with significant environmental impact without observing the provisions of these regulations. In taking an action covered by this section, the Commission will consult with the Council as soon as feasible concerning appropriate alternative NEPA arrangements.

§ 51.14 Definitions.

[Top of File]

(a) As used in this subpart:

Categorical Exclusion means a category of actions which do not individually or cumulatively have a significant effect on the human environment and which the Commission has found to have no such effect in accordance with procedures set out in § 51.22, and for which, therefore, neither an environmental assessment nor an environmental impact statement is required.

Cooperating Agency means any Federal agency other than the NRC which has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action significantly affecting the quality of the human environment. By agreement with the Commission, a State or local agency of similar qualifications or, when the effects are on a reservation, an Indian Tribe, may become a cooperating agency.

Council means the Council on Environmental Quality (CEQ) established by Title II of NEPA.

DOE means the U.S. Department of Energy or its duly authorized representatives.

Environmental Assessment means a concise public document for which the Commission is responsible that serves to:

(1) Briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

(2) Aid the Commission's compliance with NEPA when no environmental impact statement is necessary.

(3) Facilitate preparation of an environmental impact statement when one is necessary.

Environmental document includes an environmental assessment, an environmental impact statement, a finding of no significant impact, an environmental report and any supplements to or comments upon those documents, and a notice of intent.

Environmental Impact Statement means a detailed written statement as required by section 102(2)(C) of NEPA.

Environmental report means a document submitted to the Commission by an applicant for a permit, license, or other form of permission, or an amendment to or renewal of a permit, license or other form of permission, or by a petitioner for rulemaking, in order to aid the Commission in complying with section 102(2) of NEPA.

Finding of No Significant Impact means a concise public document for which the Commission is responsible that briefly states the reasons why an action, not otherwise excluded, will not have a significant effect on the human environment and for which therefore an environmental impact statement will not be prepared.

NEPA means the National Environmental Policy Act of 1969, as amended (Pub. L. 91-190, 83 Stat. 852, 856, as amended by Pub. L. 94-83, 89 Stat. 424, 42 U.S.C. 4321, et seq.).

Notice of Intent means a notice that an environmental impact statement will be prepared and considered.

Uranium enrichment facility means:

(1) Any facility used for separating the isotopes for uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for such equipment or device, capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

(b) The definitions in 40 CFR 1508.3, 1508.7, 1508.8, 1508.14, 1508.15, 1508.16, 1508.17, 1508.18, 1508.20, 1508.23, 1508.25, 1508.26, and 1508.27, will also be used in implementing section 102(2) of NEPA.

[49 FR 9381, Mar. 12, 1984, as amended at 57 FR 18391, Apr. 30, 1992]

51.15 Time schedules.

[Top of File]

Consistent with the purposes of NEPA, the Administrative Procedure Act, the Commission's rules of practice in part 2 of this chapter, 51.100 and 51.101, and with other essential considerations of national policy:

(a) The appropriate NRC staff director may, and upon the request of an applicant for a proposed action or a petitioner for rulemaking shall, establish a time schedule for all or any constituent part of the NRC staff NEPA process. To the maximum extent practicable, the NRC staff will conduct its NEPA review in accordance with any time schedule established under this section.

(b) As specified in 10 CFR part 2, the presiding officer, the Atomic Safety and Licensing Board or the Commissioners acting as a collegial body may establish a time schedule for all or any part of an adjudicatory or rulemaking proceeding to the extent that each has jurisdiction.

[69 FR 2276, Jan. 14, 2004]

§ 51.16 Proprietary information.

[Top of File]

(a) Proprietary information, such as trade secrets or privileged or confidential commercial or financial information, will be treated in accordance with the procedures provided in § 2.390 of this chapter.

(b) Any proprietary information which a person seeks to have withheld from public disclosure shall be submitted in accordance with § 2.390 of this chapter. When submitted, the proprietary information should be clearly identified and accompanied by a request, containing detailed reasons and justifications, that the proprietary information be withheld from public disclosure. A non-proprietary summary describing the general content of the proprietary information should also be provided.

[69 FR 2276, Jan. 14, 2004]

§ 51.17 Information collection requirements; OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0021.

(b) The approved information collection requirements in this part appear in §§ 51.6, 51.16, 51.41, 51.45, 51.49, 51.50, 51.51, 51.52, 51.53, 51.54, 51.55, 51.58, 51.60, 51.61, 51.62, 51.66, 51.68, and 51.69.

[49 FR 24513, June 14, 1984, as amended at 62 FR 52188, Oct. 6, 1997; 67 FR 67100, Nov. 4, 2002; 72 FR 49509, Aug. 28, 2007; 72 FR 57443, Oct. 9, 2007]

Preliminary Procedures

[Top of File]

Classification of Licensing and Regulatory Action

§ 51.20 Criteria for and identification of licensing and regulatory actions requiring environmental impact statements.

(a) Licensing and regulatory actions requiring an environmental impact statement shall meet at least one of the following criteria:

(1) The proposed action is a major Federal action significantly affecting the quality of the human environment.

(2) The proposed action involves a matter which the Commission, in the exercise of its discretion, has determined should be covered by an environmental impact statement.

(b) The following types of actions require an environmental impact statement or a supplement to an environmental impact statement:

(1) Issuance of a limited work authorization or a permit to construct a nuclear power reactor, testing facility, or fuel reprocessing plant under part 50 of this chapter, or issuance of an early site permit under part 52 of this chapter.

(2) Issuance or renewal of a full power or design capacity license to operate a nuclear power reactor, testing facility, or fuel reprocessing plant under part 50 of this chapter, or a combined license under part 52 of this chapter.

(3) Issuance of a permit to construct or a design capacity license to operate or renewal of a design capacity license to operate an isotopic enrichment plant pursuant to part 50 of this chapter.

(4) Conversion of a provisional operating license for a nuclear power reactor, testing facility or fuel reprocessing plant to a full term or design capacity license pursuant to part 50 of this chapter if a final environmental impact statement covering full term or design capacity operation has not been previously prepared.

(5) [Reserved]

(6) [Reserved]

(7) Issuance of a license to possess and use special nuclear material for processing and fuel fabrication, scrap recovery, or conversion of uranium hexafluoride pursuant to part 70 of this chapter.

(8) Issuance of a license to possess and use source material for uranium milling or production of uranium hexafluoride pursuant to part 40 of this chapter.

(9) Issuance of a license pursuant to part 72 of this chapter for the storage of spent fuel in an independent spent fuel storage installation (ISFSI) at a site not occupied by a nuclear power reactor, or for the storage of spent fuel or high-level radioactive waste in a monitored retrievable storage installation (MRS).

(10) Issuance of a license for a uranium enrichment facility.

(11) Issuance of renewal of a license authorizing receipt and disposal of radioactive waste from other persons pursuant to part 61 of this chapter.

(12) Issuance of a license amendment pursuant to part 61 of this chapter authorizing (i) closure of a land disposal site, (ii) transfer of the license to the disposal site owner for the purpose of institutional control, or (iii) termination of the license at the end of the institutional control period.

(13) Issuance of a construction authorization and license pursuant to part 60 or part 63 of this chapter.

(14) Any other action which the Commission determines is a major Commission action significantly affecting the quality of the human environment. As provided in § 51.22(b), the Commission may, in special circumstances, prepare an environmental impact statement on an action covered by a categorical exclusion.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 31681, Aug. 19, 1988; 53 FR 24052, June 27, 1988; 54 FR 15398, Apr. 18, 1989; 54 FR 27870, July 3, 1989; 57 FR 18392, Apr. 30, 1992; 66 FR 55790, Nov. 2, 2001; 72 FR 49509, Aug. 28, 2007]

§ 51.21 Criteria for and identification of licensing and regulatory actions requiring environmental assessments.

[Top of File]

All licensing and regulatory actions subject to this subpart require an environmental assessment except those identified in § 51.20(b) as requiring an environmental impact statement, those identified in § 51.22(c) as categorical exclusions, and those identified in § 51.22(d) as other actions not requiring environmental review. As provided in § 51.22(b), the Commission may, in special circumstances, prepare an environmental assessment on an action covered by a categorical exclusion.

[54 FR 27870, July 3, 1989]

§ 51.22 Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review.

[Top of File]

(a) Licensing and regulatory actions eligible for categorical exclusion shall meet the following criterion: The proposed action belongs to a category of actions which the Commission, by rule or regulation, has declared to be a categorical exclusion, after first finding that the category of actions does not individually or cumulatively have a significant effect on the human environment.

(b) Except in special circumstances, as determined by the Commission upon its own initiative or upon request of any interested person, an environmental assessment or an environmental impact statement is not required for any action within a category of actions included in the list of categorical exclusions set out in paragraph (c) of this section. Special circumstances include the circumstance where the proposed action involves unresolved conflicts concerning alternative uses of available resources within the meaning of section 102(2)(E) of NEPA.

(c) The following categories of actions are categorical exclusions:

(1) Amendments to Parts 1, 2, 4, 7, 8, 9, 10, 11, 19, 21, 25, 55, 75, 95, 110, 140, 150, 170, or 171 of this chapter, and actions on petitions for rulemaking relating to Parts 1, 2, 4, 7, 9, 10, 11, 14, 19, 21, 25, 55, 75, 95, 110, 140, 150, 170, or 171.

(2) Amendments to the regulations in this chapter which are corrective or of a minor or nonpolicy nature and do not substantially modify existing regulations, and actions on petitions for rulemaking relating to these amendments.

(3) Amendments to parts 20, 30, 31, 32, 33, 34, 35, 39, 40, 50, 51, 52, 54, 60, 61, 63, 70, 71, 72, 73, 74, 81, and 100 of this chapter which relate to—

(i) Procedures for filing and reviewing applications for licenses or construction permits or early site permits or other forms of permission or for amendments to or renewals of licenses or construction permits or early site permits or other forms of permission;

(ii) Recordkeeping requirements; or

(iii) Reporting requirements; and

(iv) Actions on petitions for rulemaking relating to these amendments.

(4) Entrance into or amendment, suspension, or termination of all or part of an agreement with a State pursuant to section 274 of the Atomic Energy Act of 1954, as amended, providing for assumption by the State and discontinuance by the Commission of certain regulatory authority of the Commission.

(5) Procurement of general equipment and supplies.

(6) Procurement of technical assistance, confirmatory research provided that the confirmatory research does not involve any significant construction impacts, and personal services relating to the safe operation and protection of commercial reactors, other facilities, and materials subject to NRC licensing and regulation.

(7) Personnel actions.

(8) Issuance, amendment, or renewal of operators' licenses pursuant to part 55 of this chapter.

(9) Issuance of an amendment to a permit or license for a reactor under part 50 or part 52 of this chapter, which changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in part 20 of this chapter, or which changes an inspection or a surveillance requirement, provided that—

(i) The amendment involves no significant hazards consideration;

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite; and

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

(10) Issuance of an amendment to a permit or license under parts 30, 31, 32, 33, 34, 35, 36, 39, 40, 50, 52, 60, 61, 63, 70, or part 72 of this chapter which—

(i) Changes surety, insurance and/or indemnity requirements; or

(ii) Changes recordkeeping, reporting, or administrative procedures or requirements.

(iv) Review and approval of transportation routes pursuant to 10 CFR 73.37.

(11) Issuance of amendments to licenses for fuel cycle plants and radioactive waste disposal sites and amendments to materials licenses identified in § 51.60(b)(1) which are administrative, organizational, or procedural in nature, or which result in a change in process operations or equipment, provided that (i) there is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, (ii) there is no significant increase in individual or cumulative occupational radiation exposure, (iii) there is no significant construction impact, and (iv) there is no significant increase in the potential for or consequences from radiological accidents.

(12) Issuance of an amendment to a license under parts 50, 52, 60, 61, 63, 70, 72, or 75 of this chapter relating solely to safeguards matters (i.e., protection against sabotage or loss or diversion of special nuclear material) or issuance of an approval of a safeguards plan submitted under parts 50, 52, 70, 72, and 73 of this chapter, provided that the amendment or approval does not involve any significant construction impacts. These amendments and approvals are confined to—

(i) Organizational and procedural matters;

(ii) Modifications to systems used for security and/or materials accountability;

(iii) Administrative changes; and

(iv) Review and approval of transportation routes pursuant to 10 CFR 73.37.

(13) Approval of package designs for packages to be used for the transportation of licensed materials.

(14) Issuance, amendment, or renewal of materials licenses issued pursuant to 10 CFR Parts 30, 31, 32, 33, 34, 35, 36, 39, 40 or part 70 authorizing the following types of activities:

(i) Distribution of radioactive material and devices or products containing radioactive material to general licensees and to persons exempt from licensing.

(ii) Distribution of radiopharmaceuticals, generators, reagent kits and/or sealed sources to persons licensed pursuant to 10 CFR 35.18.

(iii) Nuclear pharmacies.

(iv) Medical and veterinary.

(v) Use of radioactive materials for research and development and for educational purposes.

(vi) Industrial radiography.

(vii) Irradiators.

(viii) Use of sealed sources and use of gauging devices, analytical instruments and other devices containing sealed sources.

(ix) Use of uranium as shielding material in containers or devices.

(x) Possession of radioactive material incident to performing services such as installation, maintenance, leak tests and calibration.

(xi) Use of sealed sources and/or radioactive tracers in well-logging procedures.

(xii) Acceptance of packaged radioactive wastes from others for transfer to licensed land burial facilities provided the interim storage period for any package does not exceed 180 days and the total possession limit for all packages held in interim storage at the same time does not exceed 50 curies.

(xiii) Manufacturing or processing of source, byproduct, or special nuclear materials for distribution to other licensees, except processing of source material for extraction of rare earth and other metals.

(xiv) Nuclear laundries.

(xv) Possession, manufacturing, processing, shipment, testing, or other use of depleted uranium military munitions.

(xvi) Any use of source, byproduct, or special nuclear material not listed above which involves quantities and forms of source, byproduct, or special nuclear material similar to those listed in paragraphs (c)(14) (i) through (xv) of this section (Category 14).

(15) Issuance, amendment or renewal of licenses for import of nuclear facilities and materials pursuant to part 110 of this chapter, except for import of spent power reactor fuel.

(16) Issuance or amendment of guides for the implementation of regulations in this chapter, and issuance or amendment of other informational and procedural documents that do not impose any legal requirements.

(17) Issuance of an amendment to a permit or license under parts 30, 40, 50, 52, or part 70 of this chapter which deletes any limiting condition of operation or monitoring requirement based on or applicable to any matter subject to the provisions of the Federal Water Pollution Control Act.

(18) Issuance of amendments or orders authorizing licensees of production or utilization facilities to resume operation, provided the basis

for the authorization rests solely on a determination or redetermination by the Commission that applicable emergency planning requirements are met.

(19) Issuance, amendment, modification, or renewal of a certificate of compliance of gaseous diffusion enrichment facilities pursuant to 10 CFR part 76.

(20) Decommissioning of sites where licensed operations have been limited to the use of--

(i) Small quantities of short-lived radioactive materials; or

(ii) Radioactive materials in sealed sources, provided there is no evidence of leakage of radioactive material from these sealed sources.

(21) Approvals of direct or indirect transfers of any license issued by NRC and any associated amendments of license required to reflect the approval of a direct or indirect transfer of an NRC license.

(22) Issuance of a standard design approval under part 52 of this chapter.

(23) The Commission finding for a combined license under § 52.103(g) of this chapter.

(d) In accordance with section 121 of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10141), the promulgation of technical requirements and criteria that the Commission will apply in approving or disapproving applications under part 60 or 63 of this chapter shall not require an environmental impact statement, an environmental assessment, or any environmental review under subparagraph (E) or (F) of section 102 (2) of NEPA.

[49 FR 9381, Mar. 12, 1984, as amended at 51 FR 9766, Mar. 21, 1986; 51 FR 33231, Sept. 18, 1986; 52 FR 8241, Mar. 17, 1987; 54 FR 27870, July 3, 1989; 58 FR 7737, Feb. 9, 1993; 59 FR 48959, Sept. 23, 1994; 60 FR 22491, May 8, 1995; 61 FR 9902, Mar. 12, 1996; 62 FR 39091, July 21, 1997; 63 FR 66735, Dec. 3, 1998; 65 FR 54950, Sept. 12, 2000; 66 FR 55790, Nov. 2, 2001; 67 FR 78141, Dec. 23, 2002; 72 FR 49509, Aug. 28, 2007]

§ 51.23 Temporary storage of spent fuel after cessation of reactor operation--generic determination of no significant environmental impact.

[Top of File]

(a) The Commission has made a generic determination that, if necessary, spent fuel generated in any reactor can be stored safely and without significant environmental impacts for at least 30 years beyond the licensed life for operation (which may include the term of a revised or renewed license) of that reactor at its spent fuel storage basin or at either onsite or offsite independent spent fuel storage installations. Further, the Commission believes there is reasonable assurance that at least one mined geologic repository will be available within the first quarter of the twenty-first century, and sufficient repository capacity will be available within 30 years beyond the licensed life for operation of any reactor to dispose of the commercial high-level waste and spent fuel originating in such reactor and generated up to that time.

(b) Accordingly, as provided in §§ 51.30(b), 51.53, 51.61, 51.80(b), 51.95, and 51.97(a), and within the scope of the generic determination in paragraph (a) of this section, no discussion of any environmental impact of spent fuel storage in reactor facility storage pools or independent spent fuel storage installations (ISFSI) for the period following the term of the reactor operating license or amendment, reactor combined license or amendment, or initial ISFSI license or amendment for which application is made, is required in any environmental report, environmental impact statement,
environmental assessment, or other analysis prepared in connection with the issuance or amendment of an operating license for a nuclear power reactor under parts 50 and 54 of this chapter, or issuance or amendment of a combined license for a nuclear power reactor under parts 52 and 54 of this chapter, or the issuance of an initial license for storage of spent fuel at an ISFSI, or any amendment thereto.

(c) This section does not alter any requirements to consider the environmental impacts of spent fuel storage during the term of a reactor operating license or combined license, or a license for an ISFSI in a licensing proceeding.

[49 FR 34694, Aug. 31, 1984, as amended at 55 FR 38474, Sept. 18, 1990; 72 FR 49509, Aug. 28, 2007]

Determinations to Prepare Environmental Impact Statements, Environmental Assessments or Findings of No Significant Impact, and Related Procedures

[Top of File]

§ 51.25 Determination to prepare environmental impact statement or environmental assessment; eligibility for categorical exclusion.

Before taking a proposed action subject to the provisions of this subpart, the appropriate NRC staff director will determine on the basis of the criteria and classifications of types of actions in §§ 51.20, 51.21 and 51.22 of this subpart whether the proposed action is of the type listed in § 51.22(c) as a categorical exclusion or whether an environmental impact statement or an environmental assessment should be prepared. An environmental assessment is not necessary if it is determined that an environmental impact statement will be prepared.

§ 51.26 Requirement to publish notice of intent and conduct scoping process.

[Top of File]

(a) Whenever the appropriate NRC staff director determines that an environmental impact statement will be prepared by NRC in connection with a proposed action, a notice of intent will be prepared as provided in § 51.27, and will be published in the Federal Register as provided in § 51.116, and an appropriate scoping process (see §§ 51.27, 51.28, and 51.29) will be conducted.

(b) The scoping process may include a public scoping meeting.

(c) Upon receipt of an application and accompanying environmental impact statement under § 60.22 or § 63.22 of this chapter (pertaining to geologic repositories for high-level radioactive waste), the appropriate NRC staff director will include in the notice of docketing required to be published by § 2.101(f)(8) of this chapter a statement of Commission intention to adopt the environmental impact statement to the extent practicable. However, if the appropriate NRC staff director determines, at the time of such publication or at any time thereafter, that NRC should prepare a supplemental environmental impact statement in connection with the Commission's action on the license application, the NRC shall follow the procedures set out in paragraph (a) of this section.

(d) Whenever the appropriate NRC staff director determines that a supplement to an environmental impact statement will be prepared by the NRC, a notice of intent will be prepared as provided in § 51.27, and will be published in the **Federal Register** as provided in § 51.116. The NRC staff need not conduct a scoping process (see §§ 51.27, 51.28, and 51.29), provided, however, that if scoping is conducted, then the scoping must be directed at matters to be addressed in the supplement. If scoping is conducted in a proceeding for a combined license referencing an early site permit under part 52, then the scoping must be directed at matters to be addressed in the supplement as described in
§ 51.92(e).

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 27870, July 3, 1989; 66 FR 55791, Nov. 2, 2001; 72 FR 49510, Aug. 28, 2007]

§ 51.27 Notice of intent.

[Top of File]

(a) The notice of intent required by § 51.26(a) shall:

(1) State that an environmental impact statement will be prepared;

(2) Describe the proposed action and, to the extent sufficient information is available, possible alternatives;

(3) State whether the applicant or petitioner for rulemaking has filed an environmental report, and, if so, where copies are available for public inspection;

(4) Describe the proposed scoping process, including the role of participants, whether written comments will be accepted, the last date for submitting comments and where comments should be sent, whether a public scoping meeting will be held, the time and place of any scoping meeting or when the time and place of the meeting will be announced; and

(5) State the name, address and telephone number of an individual in NRC who can provide information about the proposed action, the scoping process, and the environmental impact statement.

(b) The notice of intent required by § 51.26(d) shall:

(1) State that a supplement to a final environmental impact statement will be prepared in accordance with § 51.72 or
§ 51.92. For a combined license application that references an early site permit, the supplement to the early site permit environmental impact statement will be prepared in accordance with § 51.92(e);

(2) Describe the proposed action and, to the extent required, possible alternatives. For the case of a combined license referencing an early site permit, identify the proposed action as the issuance of a combined license for the construction and operation of a nuclear power plant as described in the combined license application at the site described in the early site permit referenced in the combined license application;

(3) Identify the environmental report prepared by the applicant and information on where copies are available for public inspection;

(4) Describe the matters to be addressed in the supplement to the final environmental impact statement;

(5) Describe any proposed scoping process that the NRC staff may conduct, including the role of participants, whether written comments will be accepted, the last date for submitting comments and where comments should be sent, whether a public scoping meeting will be held, the time and place of any scoping meeting or when the time and place of the meeting will be announced; and

(6) State the name, address, and telephone number of an individual in NRC who can provide information about the proposed action, the scoping process, and the supplement to the environmental impact statement.

[72 FR 49510, Aug. 28, 2007]

Scoping

[Top of File]

§ 51.28 Scoping--participants.

(a) The appropriate NRC staff director shall invite the following persons to participate in the scoping process:

(1) The applicant or the petitioner for rulemaking;

(2) Any person who has petitioned for leave to intervene in the proceeding or who has been admitted as a party to the proceeding;

(3) Any other Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved or which is authorized to develop and enforce relevant environmental standards;

(4) Affected State and local agencies, including those authorized to develop and enforce relevant environmental standards;

(5) Any affected Indian tribe; and

(6) Any person who has requested an opportunity to participate in the scoping process.

(b) The appropriate NRC staff director may also invite any other appropriate person to participate in the scoping process.

(c) Participation in the scoping process for an environmental impact statement does not entitle the participant to become a party to the proceeding to which the environmental impact statement relates. Participation in an adjudicatory proceeding is governed by the procedures in 10 CFR 2.714 and 2.715. Participation in a rulemaking proceeding in which the Commission has decided to have a hearing is governed by the provisions in the notice of hearing.

§ 51.29 Scoping-environmental impact statement and supplement to environmental impact statement.

[Top of File]

(a) The scoping process for an environmental impact statement shall begin as soon as practicable after publication of the notice of intent as provided in § 51.116, and shall be used to:

(1) Define the proposed action which is to be the subject of the statement or supplement. For environmental impact statements other than a supplement to an early site permit final environmental impact statement prepared for a combined license application, the provisions of 40 CFR 1502.4 will be used for this purpose. For a supplement to an early site permit final environmental impact statement prepared for a combined license application, the proposed action shall be as set forth in the relevant provisions of § 51.92(e).

(2) Determine the scope of the statement and identify the significant issues to be analyzed in depth.

(3) Identify and eliminate from detailed study issues which are peripheral or are not significant or which have been covered by prior environmental review. Discussion of these issues in the statement will be limited to a brief presentation of why they are peripheral or will not have a significant effect on the quality of the human environment or a reference to their coverage elsewhere.

(4) Identify any environmental assessments and other environmental impact statements which are being or will be prepared that are related to but are not part of the scope of the statement under consideration.

(5) Identify other environmental review and consultation requirements related to the proposed action so that other required analyses and studies may be prepared concurrently and integrated with the environmental impact statement.

(6) Indicate the relationship between the timing of the preparation of environmental analyses and the Commission's tentative planning and decision-making schedule.

(7) Identify any cooperating agencies, and as appropriate, allocate assignments for preparation and schedules for completion of the statement to the NRC and any cooperating agencies.

(8) Describe the means by which the environmental impact statement will be prepared, including any contractor assistance to be used.

(b) At the conclusion of the scoping process, the appropriate NRC staff director will prepare a concise summary of the determinations and conclusions reached, including the significant issues identified, and will send a copy of the summary to each participant in the scoping process.

(c) At any time prior to issuance of the draft environmental impact statement, the appropriate NRC staff director may revise the determinations made under paragraph (b) of this section, as appropriate, if substantial changes are made in the proposed action, or if significant new circumstances or information arise which bear on the proposed action or its impacts.

[72 FR 49510, Aug. 28, 2007]

Environmental Assessment

[Top of File]

§ 51.30 Environmental assessment.

(a) An environmental assessment for proposed actions, other than those for a standard design certification under 10 CFR part 52 or a manufacturing license under part 52, shall identify the proposed action and include:

(1) A brief discussion of:

(i) The need for the proposed action;

(ii) Alternatives as required by section 102(2)(E) of NEPA;

(iii) The environmental impacts of the proposed action and alternatives as appropriate; and

(2) A list of agencies and persons consulted, and identification of sources used.

(b) Unless otherwise determined by the Commission, an environmental assessment will not include discussion of any aspect of the storage of spent fuel within the scope of the generic determination in § 51.23(a) and in accordance with the provisions of § 51.23(b).

(c) An environmental assessment for a proposed action regarding a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the Nuclear Waste Policy Act of 1982 (96 Stat. 2242, 42 U.S.C. 10161(b)(1)).

(d) An environmental assessment for a standard design certification under subpart B of part 52 of this chapter must identify the proposed action, and will be limited to the consideration of the costs and benefits of severe accident mitigation design alternatives and the bases for not incorporating severe accident mitigation design alternatives in the design certification. An environmental assessment for an amendment to a design certification will be limited to the consideration of whether the design change which is the subject of the proposed amendment renders a severe accident mitigation design alternative previously rejected in the earlier environmental assessment to become cost beneficial, or results in the identification of new severe accident mitigation design alternatives, in which case the costs and benefits of new severe accident mitigation design alternatives and the bases for not incorporating new severe accident mitigation design alternatives in the design certification must be addressed.

(e) An environmental assessment for a manufacturing license under subpart F of part 52 of this chapter must identify the proposed action, and will be limited to the consideration of the costs and benefits of severe accident mitigation design alternatives and the bases for not incorporating severe accident mitigation design alternatives in the manufacturing license. An environmental assessment for an amendment to a manufacturing license will be limited to consideration of whether the design change which is the subject of the proposed amendment either renders a severe accident mitigation design alternative previously rejected in an environmental assessment to become cost beneficial, or results in the identification of new severe accident mitigation design alternatives, in which case the costs and benefits of new severe accident mitigation design alternatives and the bases for not incorporating new severe accident mitigation design alternatives in the manufacturing license must be addressed. In either case, the environmental assessment will not address the environmental impacts associated with manufacturing the reactor under the manufacturing license.

[49 FR 9381, Mar. 12, 1984, as amended at 49 FR 34694, Aug. 31, 1984; 53 FR 31681, Aug. 19, 1988; 72 FR 49510, Aug. 28, 2007]

§ 51.31 Determinations based on environmental assessment.

[Top of File]

(a) *General*. Upon completion of an environmental assessment for proposed actions other than those involving a standard design certification or a manufacturing license under part 52 of this chapter, the appropriate NRC staff director will determine whether to prepare an environmental impact statement or a finding of no significant impact on the proposed action. As provided in § 51.33, a determination to prepare a draft finding of no significant impact may be made.

(b) *Standard design certification*.

(1) For actions involving the issuance or amendment of a standard design certification, the Commission shall prepare a draft environmental assessment for public comment as part of the proposed rule. The proposed rule must state that:

(i) The Commission has determined in § 51.32 that there is no significant environmental impact associated with the issuance of the standard design certification or its amendment, as applicable; and

(ii) Comments on the environmental assessment will be limited to the consideration of SAMDAs as required by § 51.30(d).

(2) The Commission will prepare a final environmental assessment following the close of the public comment period for the proposed standard design certification.

(c) *Manufacturing license*. (1) Upon completion of the environmental assessment for actions involving issuance or amendment of a manufacturing license (manufacturing license environmental assessment), the appropriate NRC staff director will determine the costs and benefits of severe accident mitigation design alternatives and the bases for not incorporating severe accident mitigation design alternatives in the design of the reactor to be manufactured under the manufacturing license. The NRC staff director may determine to prepare a draft environmental assessment.

(2) The manufacturing license environmental assessment must state that:

(i) The Commission has determined in § 51.32 that there is no significant environmental impact associated with the issuance of a manufacturing license or an amendment to a manufacturing license, as applicable;

(ii) The environmental assessment will not address the environmental impacts associated with manufacturing the reactor under the manufacturing license; and

(iii) Comments on the environmental assessment will be limited to the consideration of severe accident mitigation design alternatives as required by § 51.30(e).

(3) If the NRC staff director makes a determination to prepare and issue a draft environmental assessment for public review and comment before making a final determination on the manufacturing license application, the assessment will be marked, "Draft." The NRC notice of availability on the draft environmental assessment will include a request for comments which specifies where comments should be submitted and when the comment period expires. The notice will state that copies of the environmental assessment and any related environmental documents are available for public inspection and where inspections can be made. A copy of the final environmental assessment will be sent to the U.S. Environmental Protection Agency, the applicant, any party to a proceeding, each commenter, and any other Federal, State, and local agencies, and Indian tribes, State, regional, and metropolitan clearinghouses expressing an interest in the action. Additional copies will be made available in accordance with § 51.123.

(4) When a hearing is held under the regulations in part 2 of this chapter on the proposed issuance of the manufacturing license or amendment, the NRC staff director will prepare a final environmental assessment which may be subject to modification as a result of review and decision as appropriate to the nature and scope of the proceeding.

(5) Only a party admitted into the proceeding with respect to a contention on the environmental assessment, or an entity participating in the proceeding pursuant to § 2.315(c) of this chapter, may take a position and offer evidence on the matters within the scope of the environmental assessment.

[72 FR 49510, Aug. 28, 2007]

Finding of No Significant Impact

[Top of File]

§ 51.32 Finding of no significant impact.

(a) A finding of no significant impact will:

(1) Identify the proposed action;

(2) State that the Commission has determined not to prepare an environmental impact statement for the proposed action;

(3) Briefly present the reasons why the proposed action will not have a significant effect on the quality of the human environment;

(4) Include the environmental assessment or a summary of the environmental assessment. If the assessment is included, the finding need not repeat any of the discussion in the assessment but may incorporate it by reference;

(5) Note any other related environmental documents; and

(6) State that the finding and any related environmental documents are available for public inspection and where the documents may be inspected.

(b) The Commission finds that there is no significant environmental impact associated with the issuance of:

(1) A standard design certification under subpart B of part 52 of this chapter;

(2) An amendment to a design certification;

(3) A manufacturing license under subpart F of part 52 of this chapter; or

(4) An amendment to a manufacturing license.

[72 FR 49511, Aug. 28, 2007]

§ 51.33 Draft finding of no significant impact; distribution.

[Top of File]

(a) As provided in paragraph (b) of this section, the appropriate NRC staff director may make a determination to prepare and issue a draft finding of no significant impact for public review and comment before making a final determination whether to prepare an environmental impact statement or a final finding of no significant impact on the proposed action.

(b) Circumstances in which a draft finding of no significant impact may be prepared will ordinarily include the following:

(1) A finding of no significant impact appears warranted for the proposed action but the proposed action is (i) closely similar to one which normally requires the preparation of an environmental impact statement, or (ii) without precedent; and

(2) The appropriate NRC staff director determines that preparation of a draft finding of no significant impact will further the purposes of NEPA.

(c) A draft finding of no significant impact will (1) be marked "Draft", (2) contain the information specified in § 51.32, (3) be accompanied by or include a request for comments on the proposed action and on the draft finding within thirty (30) days, or such longer period as may be specified in the notice of the draft finding, and (4) be published in the Federal Register as required by §§ 51.35 and 51.119.

(d) A draft finding will be distributed as provided in § 51.74(a). Additional copies will be made available in accordance with § 51.123.

(e) When a draft finding of no significant impact is issued for a proposed action, a final determination to prepare an environmental impact statement or a final finding of no significant impact for that action shall not be made until the last day of the public comment period has expired.

§ 51.34 Preparation of finding of no significant impact.

[Top of File]

(a) Except as provided in paragraph (b) of this section, the finding of no significant impact will be prepared by the NRC staff director authorized to take the action.

(b) When a hearing is held on the proposed action under the regulations in subpart G of part 2 of this chapter or when the action can only be taken by the Commissioners acting as a collegial body, the appropriate NRC staff director will prepare a proposed finding of no significant impact which may be subject to modification as a result of review and decision as appropriate to the nature and scope of the proceeding. In such cases, the presiding officer, the Atomic Safety and Licensing Appeal Board, or the Commission acting as a collegial body, as appropriate, will issue the final finding of no significant impact.

§ 51.35 Requirement to publish finding of no significant impact; limitation on Commission action.

[Top of File]

(a) Whenever the Commission makes a draft or final finding of no significant impact on a proposed action, the finding will be published in the *Federal Register* as provided in § 51.119.

(b) Except as provided in § 51.13, the Commission shall not take the proposed action until after the final finding has been published in the *Federal Register*.

Environmental Reports and Information--Requirements Applicable to Applicants and Petitioners for Rulemaking

[Top of File]

General

§ 51.40 Consultation with NRC staff.

(a) A prospective applicant or petitioner for rulemaking is encouraged to confer with NRC staff as early as possible in its planning process before submitting environmental information or filing an environmental report.

(b) Requests for guidance or information on environmental matters may include inquiries relating to:

(1) Applicable NRC rules and regulations;

(2) Format, content and procedures for filing environmental reports and other environmental information, including the type and quantity of environmental information likely to be needed to address issues and concerns identified in the scoping process described in § 51.29 in a manner appropriate to their relative significance;

(3) Availability of relevant environmental studies and environmental information;

(4) Need for, appropriate level and scope of any environmental studies or information which the Commission may require to be submitted in connection with an application or petition for rulemaking;

(5) Public meetings with NRC staff.

(c) Questions concerning environmental matters should be addressed to the following NRC staff offices as appropriate:

(1) *Utilization facilities:* ATTN: Document Control Desk, Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, telephone (301) 415–1270, e-mail *RidsNrrOd@nrc.gov*.

(2) *Production facilities:* ATTN: Document Control Desk, Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-7800, e-mail *RidsNmssOd@nrc.gov*.

(3) *Materials licenses:* ATTN: Document Control Desk, Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-7800, e-mail *RidsNmssOd@nrc.gov*.

(4) *Rulemaking: ATTN:* Chief, Rules and Directives Branch, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (800) 368-5642, e-mail *NRCREP@nrc.gov*.

(5) *General Environmental Matters:* Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-1700.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 13399, Apr. 25, 1988; 60 FR 24552, May 9, 1995; 68 FR 58810; Oct. 10, 2003; 73 FR 5723, Jan. 31, 2008]

§ 51.41 Requirement to submit environmental information.

[Top of File]

The Commission may require an applicant for a permit, license, or other form of permission, or amendment to or renewal of a permit, license or other form of permission, or a petitioner for rulemaking to submit such information to the Commission as may be useful in aiding the Commission in complying with section 102(2) of NEPA. The Commission will independently evaluate and be responsible for the reliability of any information which it uses.

Environmental Reports--General Requirements

[Top of File]

§ 51.45 Environmental report.

(a) *General*. As required by §§ 51.50, 51.53, 51.54, 51.55, 51.60, 51.61, 51.62, or 51.68, as appropriate, each applicant or petitioner for rulemaking shall submit with its application or petition for rulemaking one signed original of a separate document entitled "Applicant's" or "Petitioner's Environmental Report," as appropriate. An applicant or petitioner for rulemaking may submit a supplement to an environmental report at any time.

(b) *Environmental considerations*. The environmental report shall contain a description of the proposed action, a statement of its purposes, a description of the environment affected, and discuss the following considerations:

(1) The impact of the proposed action on the environment. Impacts shall be discussed in proportion to their significance;

(2) Any adverse environmental effects which cannot be avoided should the proposal be implemented;

(3) Alternatives to the proposed action. The discussion of alternatives shall be sufficiently complete to aid the Commission in developing and exploring, pursuant to section 102(2)(E) of NEPA, "appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." To the extent practicable, the environmental impacts of the proposal and the alternatives should be presented in comparative form;

(4) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and

(5) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

(c) *Analysis*. The environmental report must include an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects. An environmental report prepared at the early site permit stage under § 51.50(b), limited work authorization stage under § 51.49, construction permit stage under § 51.50(a), or combined license stage under § 51.50(c) must include a description of impacts of the preconstruction activities performed by the applicant at the proposed site (i.e., those activities listed in paragraphs (2)(i) through (2)(x) in the definition of "construction" contained in § 51.4), necessary to support the construction and operation of the facility which is the subject of the early site permit, limited work authorization, construction permit, or combined license application. The environmental report must also contain an analysis of the cumulative impacts of the activities to be authorized by the limited work authorization, construction permit, or combined license in light of the preconstruction impacts described in the environmental report. Except for an environmental report prepared at the early site permit stage, or an environmental report prepared at the license renewal stage under § 51.53(c), the analysis in the environmental report should also include consideration of the economic, technical, and other benefits and costs of the proposed action and its alternatives. Environmental reports prepared at the license renewal stage under § 51.53(c) need not discuss the economic or technical benefits and costs of either the proposed action or alternatives except if these benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. In addition, environmental reports prepared under § 51.53(c) need not discuss issues not related to the environmental effects of the proposed action and its alternatives. The analyses for environmental reports shall, to the fullest extent practicable, quantify the various factors considered. To the extent that there are important qualitative considerations or factors that cannot be quantified, those considerations or factors shall be discussed in qualitative terms. The environmental report should contain sufficient data to aid the Commission in its development of an independent analysis.

(d) *Status of compliance*. The environmental report shall list all Federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements. The environmental report shall also include a discussion of the status of compliance with applicable environmental quality standards and requirements including, but not limited to, applicable zoning and land-use regulations, and thermal and other water pollution limitations or requirements which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection. The discussion of alternatives in the report shall include a discussion of whether the alternatives will comply with such applicable environmental quality standards and requirements.

(e) *Adverse information*. The information submitted pursuant to paragraphs (b) through (d) of this section should not be confined to information supporting the proposed action but should also include adverse information.

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28486, June 5, 1996; 61 FR 66542, Dec. 18, 1996; 68 FR 58810, Oct. 10, 2003; 72 FR 49511, Aug. 28, 2007; 72 FR 57443, Oct. 9, 2007; 73 FR 22787, Apr. 28, 2008]

Environmental Reports--Production and Utilization Facilities

[Top of File]

§ 51.49 Environmental report—limited work authorization.

(a) *Limited work authorization submitted as part of complete construction permit or combined license application*. Each applicant for a construction permit or combined license applying for a limited work authorization under § 50.10(d) of this chapter in a complete application under 10 CFR 2.101(a)(1) through (a)(4), shall submit with its application a separate document, entitled, "Applicant's Environmental Report —Limited Work Authorization Stage," which is in
addition to the environmental report required by § 51.50 of this part. Each environmental report must also contain
the following information:

(1) A description of the activities proposed to be conducted under the limited work authorization;

(2) A statement of the need for the activities; and

(3) A description of the environmental impacts that may reasonably be expected to result from the activities, the mitigation measures that the applicant proposes to implement to achieve the level of environmental impacts described, and a discussion of the reasons for rejecting mitigation measures that could be employed by the applicant to further reduce environmental impacts.

(b) *Phased application for limited work authorization and construction permit or combined license*. If the construction permit or combined license application is filed in accordance with § 2.101(a)(9) of this chapter, then the environmental report for part one of the application may be limited to a discussion of the activities proposed to be conducted under the limited work authorization. If the scope of the environmental report for part one is so limited, then part two of the application must include the information required by § 51.50, as applicable.

(c) *Limited work authorization submitted as part of an early site permit application*. Each applicant for an early site permit under subpart A of part 52 of this chapter requesting a limited work authorization shall submit with its application the environmental report required by § 51.50(b). Each environmental report must contain the following information:

(1) A description of the activities proposed to be conducted under the limited work authorization;

(2) A statement of the need for the activities; and

(3) A description of the environmental impacts that may reasonably be expected to result from the activities, the mitigation measures that the applicant proposes to implement to achieve the level of environmental impacts described, and a discussion of the reasons for rejecting mitigation measures that could be employed by the applicant to further reduce environmental impacts.

(d) *Limited work authorization request submitted by early site permit holder*. Each holder of an early site permit requesting a limited work authorization shall submit with its application a document entitled, "Applicant's Environmental Report—Limited Work Authorization under Early Site Permit," containing the following information:

(1) A description of the activities proposed to be conducted under the limited work authorization;

(2) A statement of the need for the activities;

(3) A description of the environmental impacts that may reasonably be expected to result from the activities, the mitigation measures that the applicant proposes to implement to achieve the level of environmental impacts described, and a discussion of the reasons for rejecting mitigation measures that could be employed by the applicant to further reduce environmental impacts; and

(4) Any new and significant information for issues related to the impacts of construction of the facility that were resolved in the early site permit proceeding with respect to the environmental impacts of the activities to be conducted under the limited work authorization.

(5) A description of the process used to identify new and significant information regarding NRC's conclusions in the early site permit environmental impact statement. The process must be a reasonable methodology for identifying this new and significant information.

(e) *Limited work authorization for a site where an environmental impact statement was prepared, but the facility construction was not completed*. If the limited work authorization is for activities to be conducted at a site for which the Commission has previously prepared an environmental impact statement for the construction and operation of a nuclear power plant, and a construction permit was issued but construction of the plant was never completed, then the applicant's environmental report may incorporate by reference the earlier environmental impact statement. In the event of such referencing, the environmental report must identify:

(1) Any new and significant information material to issues related to the impacts of construction of the facility that were resolved in the construction permit proceeding for the matters required to be addressed in paragraph (a) of this section; and

(2) A description of the process used to identify new and significant information regarding the NRC's conclusions in the construction permit environmental impact statement. The process must use a reasonable methodology for identifying this new and significant information.

(f) *Environmental Report*. An environmental report submitted in accordance with this section must separately evaluate the environmental impacts and proposed alternatives attributable to the activities proposed to be conducted under the limited work authorization. At the option of the applicant, the "Applicant's Environmental Report—Limited Work Authorization Stage," may contain the information required to be submitted in the environmental report required under § 51.50, which addresses the impacts of construction and operation for the proposed facility (including the environmental impacts attributable to the limited work authorization), and discusses the overall costs and benefits balancing for the proposed action.

[72 FR 57444, Oct. 9, 2007]

§ 51.50 Environmental report—construction permit, early site permit, or combined license stage.

[Top of File]

(a) *Construction permit stage*. Each applicant for a permit to construct a production or utilization facility covered by § 51.20 shall submit with its application a separate document, entitled "Applicant's Environmental Report—Construction Permit Stage," which shall contain the information specified in §§ 51.45, 51.51, and 51.52. Each environmental report shall identify procedures for reporting and keeping records of environmental data, and any conditions and monitoring requirements for protecting the non-aquatic environment, proposed for possible inclusion in the license as environmental conditions in accordance with § 50.36b of this chapter.

(b) *Early site permit stage*. Each applicant for an early site permit shall submit with its application a separate document, entitled "Applicant's Environmental Report—Early Site Permit Stage," which shall contain the information specified in §§ 51.45, 51.51, and 51.52, as modified in this paragraph.

(1) The environmental report must include an evaluation of alternative sites to determine whether there is any

obviously superior alternative to the site proposed.

(2) The environmental report may address one or more of the environmental effects of construction and operation of a reactor, or reactors, which have design characteristics that fall within the site characteristics and design parameters for the early site permit application, *provided however*, that the environmental report must address all environmental effects of construction and operation necessary to determine whether there is any obviously superior alternative to the site proposed. The environmental report need not include an assessment of the economic, technical, or other benefits (for example, need for power) and costs of the proposed action or an evaluation of alternative energy sources.

(3) For other than light-water-cooled nuclear power reactors, the environmental report must contain the basis for evaluating the contribution of the environmental effects of fuel cycle activities for the nuclear power reactor.

(4) Each environmental report must identify the procedures for reporting and keeping records of environmental data, and any conditions and monitoring requirements for protecting the non-aquatic environment, proposed for possible inclusion in the license as environmental conditions in accordance with § 50.36b of this chapter.

(c) *Combined license stage*. Each applicant for a combined license shall submit with its application a separate document, entitled "Applicant's Environmental Report—Combined License Stage." Each environmental report shall contain the information specified in §§ 51.45, 51.51, and 51.52, as modified in this paragraph. For other than light-water-cooled nuclear power reactors, the environmental report shall contain the basis for evaluating the contribution of the environmental effects of fuel cycle activities for the nuclear power reactor. Each environmental report shall identify procedures for reporting and keeping records of environmental data, and any conditions and monitoring requirements for protecting the non-aquatic environment, proposed for possible inclusion in the license as environmental conditions in accordance with § 50.36b of this chapter. The combined license environmental report may reference information contained in a final environmental document previously prepared by the NRC staff.

(1) *Application referencing an early site permit*. If the combined license application references an early site permit, then the "Applicant's Environmental Report—Combined License Stage" need not contain information or analyses submitted to the Commission in "Applicant's Environmental Report—Early Site Permit Stage," or resolved in the Commission's early site permit environmental impact statement, but must contain, in addition to the environmental information and analyses otherwise required:

(i) Information to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the early site permit;

(ii) Information to resolve any significant environmental issue that was not resolved in the early site permit proceeding;

(iii) Any new and significant information for issues related to the impacts of construction and operation of the facility that were resolved in the early site permit proceeding;

(iv) A description of the process used to identify new and significant information regarding the NRC's conclusions in the early site permit environmental impact statement. The process must use a reasonable methodology for identifying such new and significant information; and

(v) A demonstration that all environmental terms and conditions that have been included in the early site permit will be satisfied by the date of issuance of the combined license. Any terms or conditions of the early site permit that could not be met by the time of issuance of the combined license, must be set forth as terms or conditions of the combined license.

(2) *Application referencing standard design certification*. If the combined license references a standard design certification, then the combined license environmental report may incorporate by reference the environmental assessment previously prepared by the NRC for the referenced design certification. If the design certification environmental assessment is referenced, then the combined license environmental report must contain information to demonstrate that the site characteristics for the combined license site fall within the site parameters in the design certification environmental assessment.

(3) *Application referencing a manufactured reactor*. If the combined license application proposes to use a manufactured reactor, then the combined license environmental report may incorporate by reference the environmental assessment previously prepared by the NRC for the underlying manufacturing license. If the manufacturing license environmental assessment is referenced, then the combined license environmental report must contain information to demonstrate that the site characteristics for the combined license site fall within the site parameters in the manufacturing license environmental assessment. The environmental report need not address the environmental impacts associated with manufacturing the reactor under the manufacturing license.

[68 FR 58810, Oct. 10, 2003; 72 FR 49511, Aug. 28, 2007]

§ 51.51 Uranium fuel cycle environmental data--Table S-3.

[Top of File]

(a) Under § 51.50, every environmental report prepared for the construction permit stage or early site permit stage or combined license stage of a light-water-cooled nuclear power reactor, and submitted on or after September 4, 1979, shall take Table S–3, Table of Uranium Fuel Cycle Environmental Data, as the basis for evaluating the contribution of the environmental effects of uranium mining and milling, the production of uranium hexafluoride, isotopic enrichment, fuel fabrication, reprocessing of irradiated fuel, transportation of radioactive materials and management of low-level wastes and high-level wastes related to uranium fuel cycle activities to the environmental costs of licensing the

nuclear power reactor. Table S–3 shall be included in the environmental report and may be supplemented by a discussion of the environmental significance of the data set forth in the table as weighed in the analysis for the proposed facility.

S-3- of Uranium Fuel Cycle Environmental Data[1]
[Normalized to model LWR annual fuel requirement [WASH-1248] or reference reactor year [NUREG-0116]]
[See Footnotes at end of this table]

Environmental Considerations	Total	Maximum effect per annual fuel requirement or reference reactor year of model 1,000 MWe LWR
Natural Resource Use		
Land (acres)		
Temporarily committed[2]	100	
Undisturbed area	79	
Disturbed area	22	Equivalent to a 110 MWe coal-fired power plant.
Permanently committed	13	
Overburden moved (millions of MT)	2.8	Equivalent to 95 MWe coal-fired power plant.
Water (millions of gallons)		
Discharged to air	160	=2 percent of model 1,000 MWe LWR with cooling tower.
Discharged to water bodies	11,090	
Discharged to ground	127	
Total	11,377	<4 percent of model 1,000 MWe LWR with once through cooling.
Fossil Fuel:		
Electrical energy (thousands of MW-hour)	323	<5 percent of model 1,000 MWe ouput
Equivalent coal (thousands of MT)	118	Equivalent to the consumption of a 45 MWe coal-fired power plant.
Natural gas (millions of scf)	135	<0.4 percent of model 1,000 MWe energy output.
Effluents-Chemical (MT)		
Gases (including entrainment):[3]		
SO_x	4,400	
NO_x[4]	1,190	Equivalent to emissions from 45 MWe coal-fired plant for a year.
Hydrocarbons	14	
CO	29.6	
Particulates	1,154	
Other gases		
F	.67	Principally from UF_6, production, enrichment, and reprocessing. Concentration within range of state standards- below level that has effects on human health.
HCl	.014	
Liquids:		
SO_4	9.9	From enrichment, fuel fabrication, and reprocessing steps. Components that constitute a potential for adverse environmental effect are present in dilute concentrations and receive additional dilution by receiving bodies of water to levels below permissible standards. The constituents that require dilution and the flow of dilution water are: NH_3-600cfs., NO_3-20cfs., Fluoride-70cfs.
NO_3	25.8	
Fluoride	12.9	
CA^{++}	5.4	
$C1^-$	8.5	
Na^+	12.1	
NH_3	10.0	
Fe	.4	
Tailings Solutions (thousands of MT)	240	From mills only-- no significant effluents to environment.
Solids	91,000	Principally from mills-- no significant effluents to environment.

Effluents-- Radiological (curies)		
Gases (including entrainment):		
Rn-222		Presently under reconsideration by the Commission.
Ra-226	.02	
Th-230	.02	
Uranium	.034	
Tritium (thousands)	18.1	
C-14	24	
Kr-85(thousands)	400	
Ru-106	.14	Principally from fuel reprocessing plants.
I-129	1.3	
I-131	.83	
Tc-99		Presently under consideration by the Commission
Fission products and transuranics	.203	
Liquids:		
Uranium and daughters	2.1	Principally from milling-- included tailings liquor and returned to ground--no effluents; therefore, no effect on the environment.
Ra-226	.0034	From UF_6 production.
Th-230	.0015	
Th-234	.01	From fuel fabrication plants-- concentration 10 percent of 10 CFR 20 for total processing 26 annual fuel requirements for model LWR.
Fission and activation products	5.9×10^{-6}	
Solids (buried on site):		
Other than high level (shallow)	11,300	9,100 Ci comes from low level reactor wastes and 1,5000 Ci comes from reactor decontamination and decommissioning--buried at land burial facilities. 600 Ci comes from mills--included in tailing returned to ground. Approximately 60 Ci comes from conversion and spent fuel storage. No significant effluent to the environment.
TRU and HLW (deep)	1.1×10^{7}	Buried at Federal Repository
Effluents-- thermal (billions of British thermal units)	4,063	<5 percent of model 1,000 MWe LWR.
Transportation (person-rem):		
Exposure of workers and general public	2.5	
Occupational exposure	22.6	From reprocessing and waste management.

[49 FR 9381, Mar. 12, 1984; 49 FR 10922, Mar. 23, 1984, as amended at 67 FR 77652, Dec. 19, 2002; 72 FR 49512, Aug. 28, 2007]

[1] In some cases where no entry appears it is clear from the background documents that the matter was addressed and that, in effect, the Table, should be read as if a specific zero entry had been made. However there are other areas that are not addressed at all in the Table. Table S-3 does not include health effects from the effluents described in the Table, or estimates of releases of Radon-222 from the uranium fuel cycle or estimates of Technetium-99 released from waste management or reprocessing activities. These issues may be the subject of litigation in the individual licensing proceedings.

Data supporting this table are given in the Environmental Survey of the Uranium Fuel Cycle," WASH-1248, April 1974; the "Environmental Survey of Reprocessing and Waste Management Portion of the LWR Fuel Cycle," NUREG-0116 (Supp. 1 to WASH-1248); the "Public Comments and Task Force Responses Regarding the Environmental Survey of the Reprocessing and Waste Management Portions of the LWR Fuel Cycle," NUREG-0216 (Supp.2 to WASH-1248): and in the record of final rulemaking pertaining to Uranium Fuel Cycle Impacts from Spent Fuel Reprocessing and Radiocative Waste Management, Docket RM-50-3. The contributions from reprocessing, waste management and transporttation of wastes are maximized for either of the two fuel cycles (uranium only and fuel recycle). The contribution from transportation excludes transportation of cold fuel to a reactor and of irradiated fuel and radioactive wastes from a reactor which are considered in Table S-4 of § 51.20(g). The contributions from the other steps of the fuel cycle are given in columns A-E of Table S-3A of WASH-1248.

[2] The contributions to temporarily committed land from reprocessing are not prorated over 30 years, since the complete temporary impact accrues regardless of whether the plant services one reactor for one year or 57 reactors for 30 years.

[3] Estimated effluents based upon combustion of equivalent coal for power generation.

[4] 1.2 percent from natural gas use and process.

§ 51.52 Environmental effects of transportation of fuel and waste--Table S-4.

[Top of File]

Under § 51.50, every environmental report prepared for the construction permit stage or early site permit stage or combined license stage of a light-water-cooled nuclear power reactor, and submitted after February 4, 1975, shall contain a statement concerning transportation of fuel and radioactive wastes to and from the reactor. That statement shall indicate that the reactor and this transportation either meet all of the conditions in paragraph (a) of this section or all of the conditions of paragraph (b) of this section.

(a)(1) The reactor has a core thermal power level not exceeding 3,800 megawatts;

(2) The reactor fuel is in the form of sintered uranium dioxide pellets having a uranium-235 enrichment not exceeding 4% by weight, and the pellets are encapsulated in zircaloy rods;

(3) The average level of irradiation of the irradiated fuel from the reactor does not exceed 33,000 megawatt-days per metric ton, and no irradiated fuel assembly is shipped until at least 90 days after it is discharged from the reactor;

(4) With the exception of irradiated fuel, all radioactive waste shipped from the reactor is packaged and in a solid form;

(5) Unirradiated fuel is shipped to the reactor by truck; irradiated fuel is shipped from the reactor by truck, rail, or barge; and radioactive waste other than irradiated fuel is shipped from the reactor by truck or rail; and

(6) The environmental impacts of transportation of fuel and waste to and from the reactor, with respect to normal conditions of transport and possible accidents in transport, are as set forth in Summary Table S-4 in paragraph (c) of this section; and the values in the table represent the contribution of the transportation to the environmental costs of licensing the reactor.

(b) For reactors not meeting the conditions of paragraph (a) of this section, the statement shall contain a full description and detailed analysis of the environmental effects of transportation of fuel and wastes to and from the reactor, including values for the environmental impact under normal conditions of transport and for the environmental risk from accidents in transport. The statement shall indicate that the values determined by the analysis represent the contribution of such effects to the environmental costs of licensing the reactor.

Summary Table S-4--Environmental Impact of Transportation of Fuel and Waste To and From One Light-Water-Cooled Nuclear Power Reactor [1]

Normal Conditions of Transport

	Environmental Impact
Heat (per irradiated fuel cask in transit)	250,000 Btu/hr.
Weight (governed by Federal or State restrictions)	73,000 lbs. Per truck; 100 tons per cask per rail car.
Traffic density:	
Truck	Less than 1 per day.
Rail	Less than 3 per month.

Exposed Population	Estimated Number of Persons Exposed	Range of Doses to Exposed Individuals[2] (per reactor year)	Cumulative Dose to Exposed Population (per reactor year)[3]
Transportation workers	200	0.01 to 300 millirem	4 man-rem.
General public:			
Onlookers	1,100	0.003 to 1.3 millirem	3 man-rem.
Along Route	600,000	0.0001 to 0.06 millirem	

Accidents in Transport

Types of Effects	Environmental Risk
Radiological effects	Small[4]
Common (nonradiological) causes	1 fatal injury in 100 reactor years; 1 nonfatal injury in 10 reactor years; $475 property damage per reactor year.

[49 FR 9381, Mar. 12, 1984; 49 FR 10922, Mar. 23, 1984, as amended at 53 FR 43420, Oct. 27, 1988; 72 FR 49512, Aug. 28, 2007]

[1]Data supporting this table are given in the Commission's "Environmental Survey of Transportation of Radioactive Materials to and from Nuclear Power Plants," WASH-1238, December 1972 , and Supp. 1 NUREG-75/038 April 1975. Both documents are available for inspection and copying at the Commission's Public Document Room, 2120 L Street NW., Washington, DC and may be obtained from the National Technical Information Service, Springfield, VA 22161 . WASH-1238 is available form NTIS at a cost of $5.45 (microfiche, $2.25) and NUREG-75/038 is available at a cost of $3.25 (microfiche $2.25).

[2]The Federal Radiation Council has recommended that the radiation doses from all sources of radiation other than natural background and medical exposures should be limited to 5,000 millirem per year for individuals as a result of occupational exposure and should be limited to 500 millirem per year for individuals in the general population. The dose to individuals due to average natural background radiation is about 130 millirem per year.

[3]Man-rem is an expression for the summation of whole body doses to individuals in a group. Thus, if each member of a population group of 1,000 people were to receive a dose of 0.001 rem (1 millirem), or if 2 people were to receive a dose of 0.5 rem (500 millirem) each, the total man-rem dose in each case would be 1 man-rem.

[4]Athough the environmental risk of radiological effects stemming from transportation accidents is currently incapable of being numerically quantified, the risk remains small regardless of whether it is being appiled to a single reactor or a multireactor site.

§ 51.53 Postconstruction environmental reports.

[Top of File]

(a) *General*. Any environmental report prepared under the provisions of this section may incorporate by reference any information contained in a prior environmental report or supplement thereto that relates to the production or utilization facility or site, or any information contained in a final environmental document previously prepared by the NRC staff that relates to the production or utilization facility or site. Documents that may be referenced include, but are not limited to, the final environmental impact statement; supplements to the final environmental impact statement, including supplements prepared at the license renewal stage; NRC staff-prepared final generic environmental impact
statements; and environmental assessments and records of decisions prepared in connection with the construction permit, operating license, early site permit, combined license and any license amendment for that facility.

(b) *Operating license stage*. Each applicant for a license to operate a production or utilization facility covered by § 51.20 shall submit with its application a separate document entitled "Supplement to Applicant's Environmental Report--Operating License Stage," which will update "Applicant's Environmental Report--Construction Permit Stage." Unless otherwise required by the Commission, the applicant for an operating license for a nuclear power reactor shall submit this report only in connection with the first licensing action authorizing full-power operation. In this report, the applicant shall discuss the same matters described in §§ 51.45, 51.51, and 51.52, but only to the extent that they differ from those discussed or reflect new information in addition to that discussed in the final environmental impact statement prepared by the Commission in connection with the construction permit. No discussion of need for power, or of alternative energy sources, or of alternative sites for the facility, or of any aspect of the storage of spent fuel for the facility within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b) is required in this report.

(c) *Operating license renewal stage*. (1) Each applicant for renewal of a license to operate a nuclear power plant under part 54 of this chapter shall submit with its application a separate document entitled "Applicant's Environmental Report--Operating License Renewal Stage."

(2) The report must contain a description of the proposed action, including the applicant's plans to modify the facility or its administrative control procedures as described in accordance with § 54.21 of this chapter. This report must describe in detail the modifications directly affecting the environment or affecting plant effluents that affect the environment. In addition, the applicant shall discuss in this report the environmental impacts of alternatives and any other matters described in § 51.45. The report is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such costs and benefits are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. The environmental report need not discuss other issues not related to the environmental effects of the proposed action and the alternatives. In addition, the environmental report need not discuss any aspect of the storage of spent fuel for the facility within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b).

(3) For those applicants seeking an initial renewed license and holding an operating license, construction permit, or combined license as of June 30, 1995, the environmental report shall include the information required in paragraph
(c)(2) of this section subject to the following conditions and considerations:

(i) The environmental report for the operating license renewal stage is not required to contain analyses of the environmental impacts of the license renewal issues identified as Category 1 issues in Appendix B to subpart A of this part.

(ii) The environmental report must contain analyses of the environmental impacts of the proposed action, including the impacts of refurbishment activities, if any, associated with license renewal and the impacts of operation during the renewal term, for those issues identified as Category 2 issues in Appendix B to subpart A of this part. The required analyses are as follows:

(A) If the applicant's plant utilizes cooling towers or cooling ponds and withdraws make-up water from a river whose annual flow rate is less than 3.15×10^{12} ft^3/year (9×10^{10} m^3/year), an assessment of the impact of the proposed action on the flow of the river and related impacts on instream and riparian ecological communities must be provided. The applicant shall also provide an assessment of the impacts of the

withdrawal of water from the river on alluvial aquifers during low flow.

(B) If the applicant's plant utilizes once-through cooling or cooling pond heat dissipation systems, the applicant shall provide a copy of current Clean Water Act 316(b) determinations and, if necessary, a 316(a) variance in accordance with 40 CFR part 125, or equivalent State permits and supporting documentation. If the applicant can not provide these documents, it shall assess the impact of the proposed action on fish and shellfish resources resulting from heat shock and impingement and entrainment.

(C) If the applicant's plant uses Ranney wells or pumps more than 100 gallons (total onsite) of ground water per minute, an assessment of the impact of the proposed action on ground-water use must be provided.

(D) If the applicant's plant is located at an inland site and utilizes cooling ponds, an assessment of the impact of the proposed action on groundwater quality must be provided.

(E) All license renewal applicants shall assess the impact of refurbishment and other license-renewal-related construction activities on important plant and animal habitats. Additionally, the applicant shall assess the impact of the proposed action on threatened or endangered species in accordance with the Endangered Species Act.

(F) If the applicant's plant is located in or near a nonattainment or maintenance area, an assessment of vehicle exhaust emissions anticipated at the time of peak refurbishment workforce must be provided in accordance with the Clean Air Act as amended.

(G) If the applicant's plant uses a cooling pond, lake, or canal or discharges into a river having an annual average flow rate of less than 3.15×10^{12} ft^3/year (9×10^{10} m^3/year), an assessment of the impact of the proposed action on public health from thermophilic organisms in the affected water must be provided.

(H) If the applicant's transmission lines that were constructed for the specific purpose of connecting the plant to the transmission system do not meet the recommendations of the National Electric Safety Code for preventing electric shock from induced currents, an assessment of the impact of the proposed action on the potential shock hazard from the transmission lines must be provided.

(I) An assessment of the impact of the proposed action on housing availability, land-use, and public schools (impacts from refurbishment activities only) within the vicinity of the plant must be provided. Additionally, the applicant shall provide an assessment of the impact of population increases attributable to the proposed project on the public water supply.

(J) All applicants shall assess the impact of the proposed project on local transportation during periods of license renewal refurbishment activities.

(K) All applicants shall assess whether any historic or archaeological properties will be affected by the proposed project.

(L) If the staff has not previously considered severe accident mitigation alternatives for the applicant's plant in an environmental impact statement or related supplement or in an environmental assessment, a consideration of alternatives to mitigate severe accidents must be provided.

(M) The environmental effects of transportation of fuel and waste shall be reviewed in accordance with § 51.52. The review of impacts shall also discuss the generic and cumulative impacts associated with transportation operation in the vicinity of a high-level waste repository site. The candidate site at Yucca Mountain should be used for the purpose of impact analysis as long as that site is under consideration for licensing.

(iii) The report must contain a consideration of alternatives for reducing adverse impacts, as required by § 51.45(c), for all Category 2 license renewal issues in Appendix B to subpart A of this part. No such consideration is required for Category 1 issues in Appendix B to subpart A of this part.

(iv) The environmental report must contain any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware.

(d) *Postoperating license stage*. Each applicant for a license amendment authorizing decommissioning activities for a production or utilization facility either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license amendment approving a license termination plan or decommissioning plan under § 50.82 of this chapter either for unrestricted use or based on continuing use restrictions applicable to the site; and each applicant for a license or license amendment to store spent fuel at a nuclear power reactor after expiration of the operating license for the nuclear power reactor shall submit with its application a separate document, entitled "Supplement to Applicant's Environmental Report--Post Operating License Stage," which will update "Applicant's Environmental Report--Operating License Stage," as appropriate, to reflect any new information or significant environmental change associated with the applicant's proposed decommissioning activities or with the applicant's proposed activities with respect to the planned storage of spent fuel.

[61 FR 66543, Dec. 18, 1996, as amended at 64 FR 48506, Sept. 3, 1999; 68 FR 58810, Oct. 10, 2003; 72 FR 49513, Aug. 28, 2007]

§ 51.54 Environmental report--manufacturing license.

[Top of File]

(a) Each applicant for a manufacturing license under subpart F of part 52 of this chapter shall submit with its application a separate

document entitled, "Applicant's Environmental Report—Manufacturing License." The environmental report must address the costs and benefits of severe accident mitigation design alternatives, and the bases for not incorporating severe accident mitigation design alternatives into the design of the reactor to be manufactured. The environmental report need not address the environmental impacts associated with manufacturing the reactor under the manufacturing license, the benefits and impacts of utilizing the reactor in a nuclear power plant, or an evaluation of alternative energy sources.

(b) Each applicant for an amendment to a manufacturing license shall submit with its application a separate document entitled, "Applicant's Supplemental Environmental Report—Amendment to Manufacturing License." The environmental report must address whether the design change which is the subject of the proposed amendment either renders a severe accident mitigation design alternative previously rejected in an environmental assessment to become cost beneficial, or results in the identification of new severe accident mitigation design alternatives that may be reasonably incorporated into the design of the manufactured reactor. The environmental report need not address the environmental impacts associated with manufacturing the reactor under the manufacturing license.

[51 FR 40311, Nov. 6, 1986, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49513, Aug. 28, 2007]

§ 51.55 Environmental report—standard design certification.

[Top of File]

(a) Each applicant for a standard design certification under subpart B of part 52 of this chapter shall submit with its application a separate document entitled, "Applicant's Environmental Report—Standard Design Certification." The environmental report must address the costs and benefits of severe accident mitigation design alternatives, and the bases for not incorporating severe accident mitigation design alternatives in the design to be certified.

(b) Each applicant for an amendment to a design certification shall submit with its application a separate document entitled, "Applicant's Supplemental Environmental Report—Amendment to Standard Design Certification." The environmental report must address whether the design change which is the subject of the proposed amendment either renders a severe accident mitigation design alternative previously rejected in an environmental assessment to become cost beneficial, or results in the identification of new severe accident mitigation design alternatives that may be reasonably incorporated into the design certification.

[51 FR 40311, Nov. 6, 1986, as amended at 53 FR 24052, June 27, 1988; 54 FR 15398, Apr. 18, 1989; 61 FR 28488, June 5, 1996; 61 FR 66544, Dec. 18, 1996; 62 FR 59276, Nov. 3, 1997; 68 FR 58810, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 72 FR 49513, Aug. 28, 2007]

§ 51.58 Environmental report-number of copies; distribution.

[Top of File]

(a) Each applicant for a license or permit to site, construct, manufacture, or operate a production or utilization facility covered by §§ 51.20 (b)(1), (b)(2), (b)(3), or (b)(4), each applicant for renewal of an operating or combined license for a nuclear power plant, each applicant for a license amendment authorizing the decommissioning of a production or utilization facility covered by § 51.20, and each applicant for a license or license amendment to store spent fuel at a nuclear power plant after expiration of the operating license or combined license for the nuclear power plant shall submit a copy to the Director of the Office of Nuclear Reactor Regulation, the Director of the Office of New Reactors, the Director of the Office of Nuclear Material Safety and Safeguards, as appropriate, of an environmental report or any supplement to an environmental report. These reports must be sent either by mail addressed: ATTN: Document Control Desk; U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland, between the hours of 7:30 a.m. and 4:15 p.m. eastern time; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/esubmittals.html*, by calling (301) 415–0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. If the communication is on paper, the signed original must be sent. If a submission due date falls on a Saturday, Sunday, or Federal holiday, the next Federal working day becomes the official due date. The applicant shall maintain the capability to generate additional copies of the environmental report or any supplement to the environmental report for subsequent distribution to parties and Boards in the NRC proceedings; Federal, State, and local officials; and any affected Indian tribes, in accordance with written instructions issued by the Director of the Office of New Reactors, the Director of the Office of Nuclear Reactor Regulation, or the Director of the Office of Nuclear Material Safety and Safeguards, as appropriate.

(b) Each applicant for a license to manufacture a nuclear power reactor, or for an amendment to a license to manufacture, seeking approval of the final design of the nuclear power reactor under subpart F of part 52 of this chapter, shall submit to the Commission an environmental report or any supplement to an environmental report in the manner specified in § 50.3 of this chapter. The applicant shall maintain the capability to generate additional copies of the environmental report or any supplement to the environmental report for subsequent distribution to parties and Boards in the NRC proceeding; Federal, State, and local officials; and any affected Indian tribes, in accordance with written instructions issued by the Director of the Office of New Reactors or the Director of the Office of Nuclear Reactor Regulation.

[51 FR 40311, Nov. 6, 1986, as amended at 53 FR 24052, June 27, 1988; 54 FR 15398, Apr. 18, 1989; 61 FR 28488, June 5, 1996; 61 FR 66544, Dec. 18, 1996; 62 FR 59276, Nov. 3, 1997; 68 FR 58810, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 72 FR 49513, Aug. 28, 2007]

Environmental Reports--Materials Licenses

[Top of File]

§ 51.60 Environmental report--materials licenses.

(a) Each applicant for a license or other form of permission, or an amendment to or renewal of a license or other form of permission issued pursuant to parts 30, 32, 33, 34, 35, 36, 39, 40, 61, 70 and/or 72 of this chapter, and covered by paragraphs (b)(1) through (b)(5) of this section, shall submit with its application to: ATTN: Document Control Desk, Director, Nuclear Material Safety and Safeguards, a separate document, entitled "Applicant's Environmental Report" or "Supplement to Applicant's Environmental Report," as appropriate. The "Applicant's Environmental Report" shall contain the information specified in § 51.45. If the application is for an amendment to or a renewal of a license or other form of permission for which the applicant has previously submitted an environmental report, the supplement to applicant's environmental report may be limited to incorporating by reference, updating or supplementing the information previously submitted to reflect any significant environmental change, including any significant environmental change resulting from operational experience or a change in operations or proposed decommissioning activities. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate.

(b) As required by paragraph (a) of this section, each applicant shall prepare an environmental report for the following types of actions:

(1) Issuance or renewal of a license or other form of permission for:

(i) Possession and use of special nuclear material for processing and fuel fabrication, scrap recovery, or conversion of uranium hexafluoride pursuant to part 70 of this chapter.

(ii) Possession and use of source material for uranium milling or production of uranium hexafluoride pursuant to part 40 of this chapter.

(iii) Storage of spent fuel in an independent spent fuel storage installation (ISFSI) or the storage of spent fuel or high-level radio-active waste in a monitored retrievable storage installation (MRS) pursuant to part 72 of this chapter.

(iv) Receipt and disposal of radioactive waste from other persons pursuant to part 61 of this chapter.

(v) Processing of source material for extraction of rare earth and other metals.

(vi) Use of radioactive tracers in field flood studies involving secondary and tertiary oil and gas recovery.

(vii) Construction and operation of a uranium enrichment facility.

(2) Issuance of an amendment that would authorize or result in (i) a significant expansion of a site, (ii) a significant change in the types of effluents, (iii) a significant increase in the amounts of effluents, (iv) a significant increase in individual or cumulative occupational radiation exposure, (v) a significant increase in the potential for or consequences from radiological accidents, or (vi) a significant increase in spent fuel storage capacity, in a license or other form of permission to conduct an activity listed in paragraph (b)(1) of this section.

(3) Amendment of a license to authorize the decommissioning of an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) pursuant to part 72 of this chapter.

(4) Issuance of a license amendment pursuant to part 61 of this chapter authorizing (i) closure of a land disposal site, (ii) transfer of the license to the disposal site owner for the purpose of institutional control, or (iii) termination of the license at the end of the institutional control period.

(5) Any other licensing action for which the Commission determines an Environmental Report is necessary.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 31681, Aug. 19, 1988; 57 FR 18392, Apr. 30, 1992; 58 FR 7737, Feb. 9, 1993; 62 FR 59276, Nov. 3, 1997; 68 FR 58811, Oct. 10, 2003]

§ 51.61 Environmental report--independent spent fuel storage installation (ISFSI) or monitored retrievable storage installation (MRS) license.

[Top of File]

Each applicant for issuance of a license for storage of spent fuel in an independent spent fuel storage installation (ISFSI) or for the storage of spent fuel and high-level radioactive waste in a monitored retrievable storage installation (MRS) pursuant to part 72 of this chapter shall submit with its application to: ATTN: Document Control Desk, Director, Office of Nuclear Material Safety and Safeguards, a separate document entitled "Applicant's Environmental Report--ISFSI License" or "Applicant's Environmental Report--MRS License," as appropriate. If the applicant is the U.S. Department of Energy, the environmental report may be in the form of either an environmental impact statement or an environmental assessment, as appropriate. The environmental report shall contain the information specified in § 51.45 and shall address the siting evaluation factors contained in subpart E of part 72 of this chapter. Unless otherwise required by the Commission, in accordance with the generic determination in § 51.23(a) and the provisions in § 51.23(b), no discussion of the environmental impact of the

storage of spent fuel at an ISFSI beyond the term of the license or amendment applied for is required in an environmental report submitted by an applicant for an initial license for storage of spent fuel in an ISFSI, or any amendment thereto.

[53 FR 31681, Aug. 19, 1988; 68 FR 58811, Oct. 10, 2003]

§ 51.62 Environmental report--land disposal of radioactive waste licensed under 10 CFR part 61.

[Top of File]

(a) Each applicant for issuance of a license for land disposal of radioactive waste pursuant to part 61 of this chapter shall submit with its application to: ATTN: Document Control Desk, Director of Nuclear Material Safety and Safeguards, a separate document, entitled "Applicant's Environmental Report--License for Land Disposal of Radioactive Waste." The environmental report and any supplement to the environmental report may incorporate by reference information contained in the application or in any previous application, statement or report filed with the Commission provided that such references are clear and specific and that copies of the information so incorporated are available at the NRC Web site, *http://www.nrc.gov,* and/or at the NRC Public Document Room.

(b) The environmental report shall contain the information specified in § 51.45, shall address the applicant's environmental monitoring program required by §§ 61.12(l), 61.53 and 61.59(b) of this chapter, and shall be as complete as possible in the light of information that is available at the time the environmental report is submitted.

(c) The applicant shall supplement the environmental report in a timely manner as necessary to permit the Commission to review, prior to issuance, amendment or renewal of a license, new information regarding the environmental impact of previously proposed activities, information regarding the environmental impact of any changes in previously proposed activities, or any significant new information regarding the environmental impact of closure activities and long-term performance of the disposal site.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 43420, Oct. 27, 1988; 64 FR 48952, Sept. 9, 1999; 68 FR 58811, Oct. 10, 2003]

§ 51.66 Environmental report--number of copies; distribution.

[Top of File]

Each applicant for a license or other form of permission, or an amendment to or renewal of a license or other form of permission issued under parts 30, 32, 33, 34, 35, 36, 39, 40, 61, 70, and/or 72 of this chapter, and covered by §§ 51.60(b)(1) through (6); or by §§ 51.61 or 51.62 shall submit to the Director of Nuclear Material Safety and Safeguards an environmental report or any supplement to an environmental report in the manner specified in § 51.58(a). The applicant shall maintain the capability to generate additional copies of the environmental report or any supplement to the environmental report for subsequent distribution to Federal, State, and local officials, and any affected Indian tribes in accordance with written instructions issued by the Director of Nuclear Material Safety and Safeguards.

[49 FR 9381, Mar. 12, 1984, as amended at 52 FR 8241, Mar. 17, 1987; 58 FR 7737, Feb. 9, 1993; 68 FR 58811, Oct. 10, 2003; 72 FR 49514, Aug. 28, 2007]

§ 51.67 Environmental information concerning geologic repositories.

[Top of File]

(a) In lieu of an environmental report, the Department of Energy, as an applicant for a license or license amendment pursuant to part 60 or 63 of this chapter, shall submit to the Commission any final environmental impact statement which the Department prepares in connection with any geologic repository developed under Subtitle A of Title I, or under Title IV, of the Nuclear Waste Policy Act of 1982, as amended. (See § 60.22 or § 63.22 of this chapter as to the required time and manner of submission.) The statement shall include, among the alternatives under consideration, denial of a license or construction authorization by the Commission.

(b) Under applicable provisions of law, the Department of Energy may be required to supplement its final environmental impact statement if it makes a substantial change in its proposed action that is relevant to environmental concerns or determines that there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts. The Department shall submit any supplement to its final environmental impact statement to the Commission. (See § 60.22 or § 63.22 of this chapter as to the required time and manner of submission.)

(c) Whenever the Department of Energy submits a final environmental impact statement, or a final supplement to an environmental impact statement, to the Commission pursuant to this section, it shall also inform the Commission of the status of any civil action for judicial review initiated pursuant to section 119 of the Nuclear Waste Policy Act of 1982. This status report, which the Department shall update from time to time to reflect changes in status, shall:

(1) State whether the environmental impact statement has been found by the courts of the United States to be adequate or inadequate; and

(2) Identify any issues relating to the adequacy of the environmental impact statement that may remain subject to judicial review.

[54 FR 27870, July 3, 1989, as amended at 66 FR 55791, Nov. 2, 2001]

Environmental Reports--Rulemaking

[Top of File]

§ 51.68 Environmental report--rulemaking.

Petitioners for rulemaking requesting amendments of parts 30, 31, 32, 33, 34, 35, 36, 39, 40 or part 70 of this chapter concerning the exemption from licensing and regulatory requirements of or authorizing general licenses for any equipment, device, commodity or other product containing byproduct material, source material or special nuclear material shall submit with the petition a separate document entitled "Petitioner's Environmental Report," which shall contain the information specified in § 51.45.

[49 FR 9381, Mar. 12, 1984, as amended at 52 FR 8241, Mar. 17, 1987; 58 FR 7737, Feb. 9, 1993; 68 FR 58811, Oct. 10, 2003]

Environmental Impact Statements

[Top of File]

Draft Environmental Impact Statements--General RequirementS

§ 51.70 Draft environmental impact statement--general.

(a) The NRC staff will prepare a draft environmental impact statement as soon as practicable after publication of the notice of intent to prepare an environmental impact statement and completion of the scoping process. To the fullest extent practicable, environmental impact statements will be prepared concurrently or integrated with environmental impact analyses and related surveys and studies required by other Federal law.

(b) The draft environmental impact statement will be concise, clear and analytic, will be written in plain language with appropriate graphics, will state how alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of NEPA and of any other relevant and applicable environmental laws and policies, will identify any methodologies used and sources relied upon, and will be supported by evidence that the necessary environmental analyses have been made. The format provided in section 1(a) of appendix A of this subpart should be used. The NRC staff will independently evaluate and be responsible for the reliability of all information used in the draft environmental impact statement.

(c) The Commission will cooperate with State and local agencies to the fullest extent possible to reduce duplication between NEPA and State and local requirements, in accordance with 40 CFR 1506.2 (b) and (c).

§ 51.71 Draft environmental impact statement--contents.

[Top of File]

(a) *Scope.* The draft environmental impact statement will be prepared in accordance with the scope decided upon in the scoping process required by §§ 51.26 and 51.29. As appropriate and to the extent required by the scope, the draft statement will address the topics in paragraphs (b), (c), (d) and (e) of this section and the matters specified in §§ 51.45, 51.50, 51.51, 51.52, 51.53, 51.54, 51.61 and 51.62.

(b) *Analysis of major points of view.* To the extent sufficient information is available, the draft environmental impact statement will include consideration of major points of view concerning the environmental impacts of the proposed action and the alternatives, and contain an analysis of significant problems and objections raised by other Federal, State, and local agencies, by any affected Indian tribes, and by other interested persons.

(c) *Status of compliance.* The draft environmental impact statement will list all Federal permits, licenses, approvals, and other entitlements which must be obtained in implementing the proposed action and will describe the status of compliance with those requirements. If it is uncertain whether a Federal permit, license, approval, or other entitlement is necessary, the draft environmental impact statement will so indicate.

(d) *Analysis.* Unless excepted in this paragraph or § 51.75, the draft environmental impact statement will include a preliminary analysis that considers and weighs the environmental effects of the proposed action; the environmental impacts of alternatives to the proposed action; and alternatives available for reducing or avoiding adverse environmental effects and consideration of the economic, technical, and other benefits and costs of the proposed action and alternatives and indicate what other interests and considerations of Federal policy, including factors not related to environmental quality if applicable, are relevant to the consideration of environmental effects of the proposed action identified under paragraph (a) of this section. The draft supplemental environmental impact statement prepared at the license renewal stage under § 51.95(c) need not discuss the economic or technical benefits and costs of either the proposed action or alternatives except if benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. In addition, the supplemental environmental impact statement prepared at the license renewal stage need not discuss other issues not related to the environmental effects of the proposed action and associated alternatives. The draft supplemental environmental impact statement for license renewal prepared under § 51.95(c) will rely on conclusions as amplified by the supporting information in the GEIS for issues designated as Category 1 in appendix B to subpart A of this part. The draft supplemental environmental impact statement must contain an analysis of those issues identified as Category 2 in appendix B to subpart A of this part

that are open for the proposed action. The analysis for all draft environmental impact statements will, to the fullest extent practicable, quantify the various factors considered.
To the extent that there are important qualitative considerations or factors that cannot be quantified, these considerations or factors will be discussed in qualitative terms. Consideration will be given to compliance with environmental quality standards and requirements that have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection, including applicable zoning and land-use regulations and water pollution limitations or requirements issued or imposed under the Federal Water Pollution Control Act. The
environmental impact of the proposed action will be considered in the analysis with respect to matters covered by environmental quality standards and requirements irrespective of whether a certification or license from the appropriate authority has been obtained.[3] While satisfaction of Commission standards and criteria pertaining to radiological effects will be necessary to meet the licensing requirements of the Atomic Energy Act, the analysis will, for the purposes of NEPA, consider the radiological effects of the proposed action and alternatives.

(e) *Effect of limited work authorization*. If a limited work authorization was issued either in connection with or subsequent to an early site permit, or in connection with a construction permit or combined license application, then the environmental impact statement for the construction permit or combined license application will not address or consider the sunk costs associated with the limited work authorization.

(f) Preliminary recommendation. The draft environmental impact statement normally will include a preliminary recommendation by the NRC staff respecting the proposed action. This preliminary recommendation will be based on the information and analysis described in paragraphs (a) through (d) of this section and §§ 51.75, 51.76, 51.80, 51.85, and 51.95, as appropriate, and will be reached after considering the environmental effects of the proposed action and reasonable alternatives,[4] and, except for supplemental environmental impact statements for the operating license renewal stage prepared pursuant to § 51.95(c), after weighing the costs and benefits of the proposed action. In lieu of a recommendation, the NRC staff may indicate in the draft statement that two or more alternatives remain under consideration.

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28488, June 5, 1996; 61 FR 66544, Dec. 18, 1996; 72 FR 49514, Aug. 28, 2007; 72 FR 57445, Oct. 9, 2007]

3. Compliance with the environmental quality standards and requirements of the Federal Water Pollution Control Act (imposed by EPA or designated permitting states) is not a substitute for, and does not negate the requirement for NRC to weigh all environmental effects of the proposed action, including the degradation, if any, of water quality, and to consider alternatives to the proposed action that are available for reducing adverse effects. Where an environmental assessment of aquatic impact from plant discharges is available from the permitting authority, the NRC will consider the assessment in its determination of the magnitude of environmental impacts for striking an overall cost-benefit balance at the construction permit and operating license and early site permit and combined license stages, and in its determination of whether the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decision-makers would be unreasonable at the license renewal stage. When no such assessment of aquatic impacts is available from the permitting authority, NRC will establish on its own, or in conjunction with the permitting authority and other agencies having relevant expertise, the magnitude of potential impacts for striking an overall cost-benefit balance for the facility at the construction permit and operating
license and early site permit and combined license stages, and in its determination of whether the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decision-makers would be unreasonable at the license renewal stage.

4. The consideration of reasonable alternatives to a proposed action involving nuclear power reactors (e.g., alternative energy sources) is intended to assist the NRC in meeting its NEPA obligations and does not preclude any State authority from making separate determinations with respect to these alternatives and in no way preempts, displaces, or affects the authority of States or other Federal agencies to address these issues.

§ 51.72 Supplement to draft environmental impact statement.

[Top of File]

(a) The NRC staff will prepare a supplement to a draft environmental impact statement for which a notice of availability has been published in the Federal Register as provided in § 51.117, if:

(1) There are substantial changes in the proposed action that are relevant to environmental concerns; or

(2) There are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(b) The NRC staff may prepare a supplement to a draft environmental impact statement when, in its opinion, preparation of a supplement will further the purposes of NEPA.

(c) The supplement to a draft environmental impact statement will be prepared and noticed in the same manner as the draft environmental impact statement except that a scoping process need not be used.

§ 51.73 Request for comments on draft environmental impact statement.

[Top of File]

Each draft environmental impact statement and each supplement to a draft environmental impact statement distributed in accordance with § 51.74, and each news release provided pursuant to § 51.74(d) will be accompanied by or include a request for comments on the proposed action and on the draft environmental impact statement or any supplement to the draft environmental impact statement and will state where comments should be submitted and the date on which the comment period closes. A minimum comment period of 45 days will be provided. The comment period will be calculated from the date on which the Environmental Protection Agency notice stating that the draft statement or the supplement to the draft statement has been filed with EPA is published in the Federal Register. If no comments are provided within the time specified, it will be presumed, unless the agency or person requests an extension of time, that the agency or person has no comment to make. To the extent practicable, NRC staff will grant reasonable requests for extensions of time of up to fifteen (15) days.

§ 51.74 Distribution of draft environmental impact statement and supplement to draft environmental impact statement; news releases.

[Top of File]

(a) A copy of the draft environmental impact statement will be distributed to:

(1) The Environmental Protection Agency.

(2) Any other Federal agency which has special expertise or jurisdiction by law with respect to any environmental impact involved or which is authorized to develop and enforce relevant environmental standards.

(3) The applicant or petitioner for rulemaking and any other party to the proceeding.

(4) Appropriate State and local agencies authorized to develop and enforce relevant environmental standards.

(5) Appropriate State, regional and metropolitan clearinghouses.

(6) Appropriate Indian tribes when the proposed action may have an environmental impact on a reservation.

(7) Upon written request, any organization or group included in the master list of interested organizations and groups maintained under § 51.122.

(8) Upon written request, any other person to the extent available.

(b) Additional copies will be made available in accordance with § 51.123.

(c) A supplement to a draft environmental impact statement will be distributed in the same manner as the draft environmental impact statement to which it relates.

(d) News releases stating the availability for comment and place for obtaining or inspecting a draft environmental statement or supplement will be provided to local newspapers and other appropriate media.

(e) A notice of availability will be published in the Federal Register in accordance with § 51.117.

Draft Environmental Impact Statements--Production and Utilization Facilities

[Top of File]

§ 51.75 Draft environmental impact statement—construction permit, early site permit, or combined license.

(a) *Construction permit stage*. A draft environmental impact statement relating to issuance of a construction permit for a production or utilization facility will be prepared in accordance with the procedures and measures described in §§ 51.70, 51.71, 51.72, and 51.73. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.51 shall be evaluated on the basis of impact values set forth in Table S–3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft environmental impact statement. With the exception of radon-222 and technetium-99 releases, no further discussion of fuel cycle release values and other numerical data that appear explicitly in the table shall be required.[5] The impact statement shall take account of dose commitments and health effects from fuel cycle effluents set forth in Table S–3 and shall in addition take account of economic, socioeconomic, and possible cumulative impacts and other fuel cycle impacts as may reasonably appear significant.

(b) *Early site permit stage*. A draft environmental impact statement relating to issuance of an early site permit for a production or utilization facility will be prepared in accordance with the procedures and measures described in §§ 51.70, 51.71, 51.72, 51.73, and this section. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.51 shall be evaluated on the basis of impact values set forth in Table S–3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft environmental impact statement. With the exception of radon-222 and technetium-99 releases, no further discussion of fuel cycle release values and other numerical data that appear explicitly in the table shall be required.[5] The impact statement

shall take account of dose commitments and health effects from fuel cycle effluents set forth in Table S–3 and shall in addition take account of economic, socioeconomic, and possible cumulative impacts and other fuel cycle impacts as may reasonably appear significant. The draft environmental impact statement must include an evaluation of alternative sites to determine whether there is any obviously superior alternative to the site proposed. The draft environmental impact statement must also include an evaluation of the environmental effects of construction and operation of a reactor, or reactors, which have design characteristics that fall within the site characteristics and design parameters for the early site permit application, but only to the extent addressed in the early site permit environmental report or otherwise necessary to determine whether there is any obviously superior alternative to the site proposed. The draft environmental impact statement must not include an assessment of the economic, technical, or other benefits (for example, need for power) and costs of the proposed action or an evaluation of alternative energy sources, unless these matters are addressed in the early site permit environmental report.

(c) *Combined license stage*. A draft environmental impact statement relating to issuance of a combined license that does not reference an early site permit will be prepared in accordance with the procedures and measures described in §§ 51.70, 51.71, 51.72, and 51.73. The contribution of the environmental effects of the uranium fuel cycle activities specified in § 51.51 shall be evaluated on the basis of impact values set forth in Table S–3, Table of Uranium Fuel Cycle Environmental Data, which shall be set out in the draft environmental impact statement. With the exception of radon-222 and technetium-99 releases, no further discussion of fuel cycle release values and other numerical data that appear explicitly in the table shall be required.[5] The impact statement shall take account of dose commitments and health effects from fuel cycle effluents set forth in Table S–3 and shall in addition take account of economic, socioeconomic, and possible cumulative impacts and other fuel cycle impacts as may reasonably appear significant. The impact statement will include a discussion of the storage of spent fuel for the nuclear power plant within the scope of the generic determination in§ 51.23(a) and in accordance with§ 51.23(b).

(1) *Combined license application referencing an early site permit*. If the combined license application references an early site permit, then the NRC staff shall prepare a draft supplement to the early site permit environmental impact statement. The supplement must be prepared in accordance with § 51.92(e).

(2) *Combined license application referencing a standard design certification*. If the combined license application references a standard design certification and the site characteristics of the combined license's site fall within the site parameters specified in the design certification environmental assessment, then the draft combined license environmental impact statement shall incorporate by reference the design certification environmental assessment, and summarize the findings and conclusions of the environmental assessment with respect to severe accident mitigation design alternatives.

(3) *Combined license application referencing a manufactured reactor*. If the combined license application proposes to use a manufactured reactor and the site characteristics of the combined license's site fall within the site parameters specified in the manufacturing license environmental assessment, then the draft combined license environmental impact statement shall incorporate by reference the manufacturing license environmental assessment, and summarize the findings and conclusions of the environmental assessment with respect to severe accident mitigation design alternatives. The combined license environmental impact statement report will not address the environmental impacts associated with manufacturing the reactor under the manufacturing license.

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28489, June 5, 1996; 72 FR 49514, Aug. 28, 2007]

5. Values for releases of Rn-222 and Tc-99 are not given in the table. The amount and significance of Rn-222 releases from the fuel cycle and Tc-99 releases from waste management or reprocessing activities shall be considered in the draft environmental impact statement and may be the subject of litigation in individual licensing proceedings.

§ 51.76 Draft environmental impact statement—limited work authorization.

[Top of File]

The NRC will prepare a draft environmental impact statement relating to issuance of a limited work authorization in accordance with the procedures and measures described in §§ 51.70, 51.71, and 51.73, as further supplemented or modified in the following paragraphs.

(a) *Limited work authorization submitted as part of complete construction permit or combined license application*. If the application for a limited work authorization is submitted as part of a complete construction permit or combined license application, then the NRC may prepare a partial draft environmental impact statement. The analysis called for by § 51.71(d) must be limited to the activities proposed to be conducted under the limited work authorization. Alternatively, the NRC may prepare a complete draft environmental impact statement prepared in accordance with § 51.75(a) or (c), as applicable.

(b) *Phased application for limited work authorization under § 2.101(a)(9) of this chapter*. If the application for a limited work authorization is submitted in accordance with § 2.101(a)(9) of this chapter, then the draft environmental impact statement for part one of the application may be limited to consideration of the activities proposed to be conducted under the limited work authorization, and the proposed redress plan. However, if the environmental report contains the full set of information required to be submitted under § 51.50(a) or (c), then a draft environmental impact statement must be prepared in accordance with § 51.75(a) or (c), as applicable. Siting issues, including whether there is an obviously superior alternative site, or issues related to operation of the proposed nuclear power plant at the site, including need for power, may not be considered. After part two of the application is docketed, the NRC will prepare a draft supplement to the final environmental impact statement for part two of the application under § 51.72. No updating of the information contained in the final environmental impact statement prepared for part one is necessary in preparation of the supplemental environmental impact statement. The draft supplement must consider all environmental impacts associated with the prior issuance of the limited work authorization, but may not address or consider the sunk costs associated with the limited work authorization.

(c) *Limited work authorization submitted as part of an early site permit application*. If the application for a limited work authorization is

submitted as part of an application for an early site permit, then the NRC will prepare an environmental impact statement in accordance with § 51.75(b). However, the analysis called for by § 51.71(d) must also address the activities proposed to be conducted under the limited work authorization.

(d) *Limited work authorization request submitted by an early site permit holder*. If the application for a limited work authorization is submitted by a holder of an early site permit, then the NRC will prepare a draft supplement to the environmental impact statement for the early site permit. The supplement is limited to consideration of the activities proposed to be conducted under the limited work authorization, the adequacy of the proposed redress plan, and whether there is new and significant information identified with respect to issues related to the impacts of construction of the facility that were resolved in the early site permit proceeding with respect to the environmental impacts of the activities to be conducted under the limited work authorization. No other updating of the information contained in the final environmental impact statement prepared for the early site permit is required.

(e) *Limited work authorization for a site where an environmental impact statement was prepared, but the facility construction was not completed*. If the limited work authorization is for activities to be conducted at a site for which the Commission has previously prepared an environmental impact statement for the construction and operation of a nuclear power plant, and a construction permit was issued but construction of the plant was not completed, then the draft environmental impact statement shall incorporate by reference the earlier environmental impact statement. The draft environmental impact statement must be limited to a consideration of whether there is significant new information with respect to the environmental impacts of construction, relevant to the activities to be conducted under the limited work authority, so that the conclusion of the referenced environmental impact statement on the impacts of construction would, when analyzed in accordance with § 51.71, lead to the conclusion that the limited work authorization should not be issued or should be issued with appropriate conditions.

(f) *Draft environmental impact statement*. A draft environmental impact statement prepared under this section must separately evaluate the environmental impacts and proposed alternatives attributable to the activities proposed to be conducted under the limited work authorization. However, if the "Applicant's Environmental Report—Limited Work Authorization Stage," also contains the information required to be submitted in the environmental report required under § 51.50, then the environmental impact statement must address the impacts of construction and operation for the proposed facility (including the environmental impacts attributable to the limited work authorization), and discuss the overall costs and benefits balancing for the underlying proposed action, in accordance with § 51.71, and § 51.75(a) or (c), as applicable.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 15398, Apr. 18, 1989; 72 FR 49515, Aug. 28, 2007; 72 FR 57445, Oct. 9, 2007]

§ 51.77 Distribution of draft environmental impact statement.

[Top of File]

(a) In addition to the distribution authorized by § 51.74, a copy of a draft environmental statement for a licensing action for a production or utilization facility, except an action authorizing issuance, amendment or renewal of a license to manufacture a nuclear power reactor pursuant to 10 CFR part § 52, appendix M will also be distributed to:

(1) The chief executive of the municipality or county identified in the draft environmental impact statement as the preferred site for the proposed facility or activity.

(2) Upon request, the chief executive of each municipality or county identified in the draft environmental impact statement as an alternative site.

(b) Additional copies will be made available in accordance with § 51.123.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 15398, Apr. 18, 1989]

Draft Environmental Impact Statements--Materials Licenses

[Top of File]

§ 51.80 Draft environmental impact statement--materials license.

(a) The NRC staff will either prepare a draft environmental impact statement or as provided in § 51.92, a supplement to a final environmental impact statement for each type of action identified in § 51.20(b) (7) through (12). Except as the context may otherwise require, procedures and measures similar to those described in §§ 51.70, 51.71, 51.72 and 51.73 will be followed.

(b)(1) *Independent spent fuel storage installation (ISFSI)*. Unless otherwise determined by the Commission and in accordance with the generic determination in § 51.23(a) and the provisions of § 51.23(b), a draft environmental impact statement on the issuance of an initial license for storage of spent fuel at an independent spent fuel storage installation (ISFSI) or any amendment thereto, will address environmental impacts of spent fuel only for the term of the license or amendment applied for.

(2) *Monitored retrievable storage installation (MRS)*. As provided in sections 141 (c), (d), and (e) and 148 (a) and (c) of the Nuclear Waste Policy Act of 1982, as amended (NWPA) (96 Stat. 2242, 2243, 42 U.S.C. 10161 (c), (d), (e); 101 Stat. 1330-235, 1330-236, 42 U.S.C. 10168 (a) and (c)), a draft environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPA (96 Stat. 2242, 42 U.S.C. 10161(b)(1)) but may consider alternative facility designs which are consistent with these design criteria.

[49 FR 34695, Aug. 31, 1984, as amended at 53 FR 31682, Aug. 19, 1988]

§ 51.81 Distribution of draft environmental impact statement.

[Top of File]

Copies of the draft environmental impact statement and any supplement to the draft environmental impact statement will be distributed in accordance with the provisions of § 51.74.

Draft Environmental Impact Statements--Rulemaking

[Top of File]

§ 51.85 Draft environmental impact statement--rulemaking.

Except as the context may otherwise require, procedures and measures similar to those described in §§ 51.70, 51.71, 51.72 and 51.73 will be followed in proceedings for rulemaking for which the Commission has determined to prepare an environmental impact statement.

§ 51.86 Distribution of draft environmental impact statement.

[Top of File]

Copies of the draft environmental impact statement and any supplement to the draft environmental impact statement will be distributed in accordance with the provisions of § 51.74.

Legislative Environmental Impact Statements--Proposals for Legislation

[Top of File]

§ 51.88 Proposals for legislation.

The Commission will, as a matter of policy, follow the provisions of 40 CFR 1506.8 regarding the NEPA process for proposals for legislation.

Final Environmental Impact Statements--General Requirements

[Top of File]

§ 51.90 Final environmental impact statement--general.

After receipt and consideration of comments requested pursuant to §§ 51.73 and 51.117, the NRC staff will prepare a final environmental impact statement in accordance with the requirements in §§ 51.70(b) and 51.71 for a draft environmental impact statement. The format provided in section 1(a) of appendix A of this subpart should be used.

§ 51.91 Final environmental impact statement--contents.

[Top of File]

(a)(1) The final environmental impact statement will include responses to any comments on the draft environmental impact statement or on any supplement to the draft environmental impact statement. Responses to comments may include:

(i) Modification of alternatives, including the proposed action;

(ii) Development and evaluation of alternatives not previously given serious consideration;

(iii) Supplementation or modification of analyses;

(iv) Factual corrections;

(v) Explanation of why comments do not warrant further response, citing sources, authorities or reasons which support this conclusion.

(2) All substantive comments received on the draft environmental impact statement or any supplement to the draft environmental impact statement (or summaries thereof where the response has been exceptionally voluminous) will be attached to the final statement, whether

or not each comment is discussed individually in the text of the statement.

(3) If changes in the draft environmental impact statement in response to comments are minor and are confined either to factual corrections or to explanations of why the comments do not warrant further response, the changes may be made by attaching errata sheets to the draft statement. The entire document with a new cover may then be issued as the final environmental impact statement.

(b) The final environmental impact statement will discuss any relevant responsible opposing view not adequately discussed in the draft environmental impact statement or in any supplement to the draft environmental impact statement, and respond to the issues raised.

(c) The final environmental impact statement will state how the alternatives considered in it and decisions based on it will or will not achieve the requirements of sections 101 and 102(1) of NEPA and of any other relevant and applicable environmental laws and policies.

(d) The final environmental impact statement will include a final analysis and a final recommendation on the action to be taken.

§ 51.92 Supplement to the final environmental impact statement.

[Top of File]

(a) If the proposed action has not been taken, the NRC staff will prepare a supplement to a final environmental impact statement for which a notice of availability has been published in the **Federal Register** as provided in § 51.118, if:

(1) There are substantial changes in the proposed action that are relevant to environmental concerns; or

(2) There are new and significant circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

(b) In a proceeding for a combined license application under 10 CFR part 52 referencing an early site permit under part 52, the NRC staff shall prepare a supplement to the final environmental impact statement for the referenced early site permit in accordance with paragraph (e) of this section.

(c) The NRC staff may prepare a supplement to a final environmental impact statement when, in its opinion, preparation of a supplement will further the purposes of NEPA.

(d) The supplement to a final environmental impact statement will be prepared in the same manner as the final environmental impact statement except that a scoping process need not be used.

(e) The supplement to an early site permit final environmental impact statement which is prepared for a combined license application in accordance with § 51.75(c)(1) and paragraph (b) of this section must:

(1) Identify the proposed action as the issuance of a combined license for the construction and operation of a nuclear power plant as described in the combined license application at the site described in the early site permit referenced in the combined license application;

(2) Incorporate by reference the final environmental impact statement prepared for the early site permit;

(3) Contain no separate discussion of alternative sites;

(4) Include an analysis of the economic, technical, and other benefits and costs of the proposed action, to the extent that the final environmental impact statement prepared for the early site permit did not include an assessment of these benefits and costs;

(5) Include an analysis of other energy alternatives, to the extent that the final environmental impact statement prepared for the early site permit did not include an assessment of energy alternatives;

(6) Include an analysis of any environmental issue related to the impacts of construction or operation of the facility that was not resolved in the proceeding on the early site permit; and

(7) Include an analysis of the issues related to the impacts of construction and operation of the facility that were resolved in the early site permit proceeding for which new and significant information has been identified, including, but not limited to, new and significant information demonstrating that the design of the facility falls outside the site characteristics and design parameters specified in the early site permit.

(f)(1) A supplement to a final environmental impact statement will be accompanied by or will include a request for comments as provided in § 51.73 and a notice of availability will be published in the **Federal Register** as provided in § 51.117 if paragraphs (a) or (b) of this section applies.

(2) If comments are not requested, a notice of availability of a supplement to a final environmental impact statement will be published in the **Federal Register** as provided in § 51.118.

[72 FR 49515, Aug. 28, 2007]

§ 51.93 Distribution of final environmental impact statement and supplement to final environmental impact statement; news releases.

[Top of File]

(a) A copy of the final environmental impact statement will be distributed to:

(1) The Environmental Protection Agency.

(2) The applicant or petitioner for rulemaking and any other party to the proceeding.

(3) Appropriate State, regional and metropolitan clearinghouses.

(4) Each commenter.

(b) Additional copies will be made available in accordance with § 51.123.

(c) If the final environmental impact statement is unusually long or there are so many comments on a draft environmental impact statement or any supplement to a draft environmental impact statement that distribution of the entire final statement to all commenters is impracticable, a summary of the final statement and the substantive comments will be distributed. When the final environmental impact statement has been prepared by adding errata sheets to the draft environmental impact statement as provided in § 51.91(a)(3), only the comments, the responses to the comments and the changes to the environmental impact statement will be distributed.

(d) A supplement to a final environmental impact statement will be distributed in the same manner as the final environmental impact statement to which it relates.

(e) News releases stating the availability and place for obtaining or inspecting a final environmental impact statement or supplement will be provided to local newspapers and other appropriate media.

(f) A notice of availability will be published in the Federal Register in accordance with § 51.118.

§ 51.94 Requirement to consider final environmental impact statement.

[Top of File]

The final environmental impact statement, together with any comments and any supplement, will accompany the application or petition for rulemaking through, and be considered in, the Commission's decisionmaking process. The final environmental impact statement, together with any comments and any supplement, will be made a part of the record of the appropriate adjudicatory or rulemaking proceeding.

Final Environmental Impact Statements--Production and Utilization Facilities

[Top of File]

§ 51.95 Postconstruction environmental impact statements.

(a) *General*. Any supplement to a final environmental impact statement or any environmental assessment prepared
under the provisions of this section may incorporate by reference any information contained in a final environmental document previously prepared by the NRC staff that relates to the same production or utilization facility. Documents that may be referenced include, but are not limited to, the final environmental impact statement; supplements to the final environmental impact statement, including supplements prepared at the operating license stage; NRC staff prepared final generic environmental impact statements; environmental assessments and records of decisions
prepared in connection with the construction permit, the operating license, the early site permit, or the combined license and any license amendment for that facility. A supplement to a final environmental impact statement will include a request for comments as provided in § 51.73.

(b) *Initial operating license stage*. In connection with the issuance of an operating license for a production or utilization facility, the NRC staff will prepare a supplement to the final environmental impact statement on the construction permit for that facility, which will update the prior environmental review. The supplement will only cover matters that differ from the final environmental impact statement or that reflect significant new information concerning matters discussed in the final environmental impact statement. Unless otherwise determined by the Commission, a supplement on the operation of a nuclear power plant will not include a discussion of need for power, or of alternative energy sources, or of alternative sites, or of any aspect of the storage of spent fuel for the nuclear power plant within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b), and will only be prepared in connection with the first licensing action authorizing full-power operation.

(c) *Operating license renewal stage*. In connection with the renewal of an operating license or combined license for a nuclear power plant under parts 52 or 54 of this chapter, the Commission shall prepare an environmental impact

statement, which is a supplement to the Commission's NUREG–1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996), which is available in the NRC Public Document Room, 11555 Rockville Pike, Rockville, Maryland.

(1) The supplemental environmental impact statement for the operating license renewal stage shall address those issues as required by § 51.71. In addition, the NRC staff must comply with 40 CFR 1506.6(b)(3) in conducting the additional scoping process as required by § 51.71 (a).

(2) The supplemental environmental impact statement for license renewal is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. In addition, the supplemental environmental impact statement prepared at the license renewal stage need not discuss other issues not related to the environmental effects of the proposed action and the alternatives, or any aspect of the storage of spent fuel for the facility within the scope of the generic determination in § 51.23(a) and in accordance with § 51.23(b). The analysis of alternatives in the supplemental environmental impact statement should be limited to the environmental impacts of such alternatives and should otherwise be prepared in accordance with § 51.71 and Appendix A to subpart A of this part.

(3) The supplemental environmental impact statement shall be issued as a final impact statement in accordance with §§ 51.91 and 51.93 after considering any significant new information relevant to the proposed action contained in the supplement or incorporated by reference.

(4) The supplemental environmental impact statement must contain the NRC staff's recommendation regarding the environmental acceptability of the license renewal action. In order to make its recommendation and final conclusion on the proposed action, the NRC staff, adjudicatory officers, and Commission shall integrate the conclusions, as amplified by the supporting information in the generic environmental impact statement for issues designated Category 1 (with the exception of offsite radiological impacts for collective effects and the disposal of spent fuel and high level waste) or resolved Category 2,information developed for those open Category 2 issues applicable to the plant in accordance with § 51.53(c)(3)(ii), and any significant new information. Given this information, the NRC staff, adjudicatory officers, and Commission shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

(d) *Postoperating license stage*. In connection with the amendment of an operating or combined license authorizing decommissioning activities at a production or utilization facility covered by § 51.20, either for unrestricted use or based on continuing use restrictions applicable to the site, or with the issuance, amendment or renewal of a license to store spent fuel at a nuclear power reactor after expiration of the operating or combined license for the nuclear power reactor, the NRC staff will prepare a supplemental environmental impact statement for the post operating or post
combined license stage or an environmental assessment, as appropriate, which will update the prior environmental documentation prepared by the NRC for compliance with NEPA under the provisions of this part. The supplement or assessment may incorporate by reference any information contained in the final environmental impact statement—for
the operating or combined license stage, as appropriate, or in the records of decision prepared in connection with the early site permit, construction permit, operating license, or combined license for that facility. The supplement will include a request for comments as provided in § 51.73. Unless otherwise required by the Commission in accordance with the generic determination in § 51.23(a) and the provisions of § 51.23(b), a supplemental environmental impact statement for the postoperating or post combined license stage or an environmental assessment, as appropriate, will address the environmental impacts of spent fuel storage only for the term of the license, license amendment or license renewal applied for.

[61 FR 66545, Dec. 18, 1996; 72 FR 49516, Aug. 28, 2007

Final Environmental Impact Statements--Materials Licenses

[Top of File]

§ 51.97 Final environmental impact statement--materials license.

(a) *Independent spent fuel storage installation* (ISFSI). Unless otherwise determined by the Commission, and in accordance with the generic determination in § 51.23(a) and the provisions of § 51.23(b), a final environmental impact statement on the issuance of an initial license for the storage of spent fuel at an independent spent fuel storage installation (ISFSI) or any amendment thereto, will address environmental impacts of spent fuel storage only for the term of the license or amendment applied for.

(b) *Monitored retrievable storage facility* (MRS). As provided in sections 141 (c), (d), and (e) and 148 (a) and (c) of the Nuclear Waste Policy Act of 1982, as amended (NWPA) (96 Stat. 2242, 2243, 42 U.S.C. 10161 (c), (d), (e); 101 Stat. 1330-235, 1330-236, 42 U.S.C. 10168 (a), (c)) a final environmental impact statement for the construction of a monitored retrievable storage installation (MRS) will not address the need for the MRS or any alternative to the design criteria for an MRS set forth in section 141(b)(1) of the NWPA (96 Stat. 2242, 42 U.S.C. 10161(b)(1)) but may consider alternative facility designs which are consistent with these design criteria.

(c) *Uranium enrichment facility*. As provided in section 5(e) of the Solar, Wind, Waste, and Geothermal Power Production Incentives Act of 1990 (104 Stat. 2834 at 2835, 42 U.S.C. 2243), a final environmental impact statement must be prepared before the hearing on the issuance of a license for a uranium enrichment facility is completed.

[49 FR 34695, Aug. 31, 1984, as amended at 53 FR 31682, Aug. 19, 1988; 57 FR 18392, Apr. 30, 1992]

Final Environmental Impact Statements--Rulemaking

[Top of File]

§ 51.99 [Reserved]

NEPA Procedure and Administrative Action

[Top of File]

General

§ 51.100 Timing of Commission action.

(a)(1) Except as provided in § 51.13 and paragraph (b) of this section, no decision on a proposed action, including the issuance of a permit, license, or other form of permission, or amendment to or renewal of a permit, license, or other form of permission, or the issuance of an effective regulation, for which an environmental impact statement is required, will be made and no record of decision will be issued until the later of the following dates:

(i) Ninety (90) days after publication by the Environmental Protection Agency of a *Federal Register* notice stating that the draft environmental impact statement has been filed with EPA.

(ii) Thirty (30) days after publication by the Environmental Protection Agency of a *Federal Register* notice stating that the final environmental impact statement has been filed with EPA.

(2) If a notice of filing of a final environmental impact statement is published by the Environmental Protection Agency within ninety (90) days after a notice of filing of a draft environmental impact statement has been published by EPA, the minimum thirty (30) day period and the minimum ninety (90) day period may run concurrently to the extent they overlap.

(b) In any rulemaking proceeding for the purpose of protecting the public health or safety or the common defense and security, the Commission may make and publish the decision on the final rule at the same time that the Environmental Protection Agency publishes the *Federal Register* notice of filing of the final environmental impact statement.

§ 51.101 Limitations on actions.

[Top of File]

(a) Until a record of decision is issued in connection with a proposed licensing or regulatory action for which an environmental impact statement is required under § 51.20, or until a final finding of no significant impact is issued in connection with a proposed licensing or regulatory action for which an environmental assessment is required under § 51.21:

(1) No action concerning the proposal may be taken by the Commission which would (i) have an adverse environmental impact, or (ii) limit the choice of reasonable alternatives.

(2) Any action concerning the proposal taken by an applicant which would (i) have an adverse environmental impact, or (ii) limit the choice of reasonable alternatives may be grounds for denial of the license. In the case of an application covered by §§ 30.32(f), 40.31(f), 50.10 (c), 70.21(f), or §§ 72.16 and 72.34 of this chapter, the provisions of this paragraph will be applied in accordance with §§ 30.33(a)(5), 40.32(e), 50.10 (c) and (e), 70.23(a)(7) or § 72.40(b) of this chapter, as appropriate.

(b) While work on a required program environmental impact statement is in progress, the Commission will not undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action:

(1) Is justified independently of the program;

(2) Is itself accompanied by an adequate environmental impact statement; and

(3) Will not prejudice the ultimate decision on the program. Absent any satisfactory explanation to the contrary, interim action which tends to determine subsequent development or limit reasonable alternatives, will be considered prejudicial.

(c) This section does not preclude any applicant for an NRC permit, license, or other form of permission, or amendment to or renewal of an NRC permit, license, or other form of permission, (1) from developing any plans or designs necessary to support an application; or (2) after prior notice and consultation with NRC staff, (i) from performing any physical work necessary to support an application, or (ii) from performing any other physical work relating to the proposed action if the adverse environmental impact of that work is de minimis.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 31682, Aug. 19, 1988]

§ 51.102 Requirement to provide a record of decision; preparation.

[Top of File]

(a) A Commission decision on any action for which a final environmental impact statement has been prepared shall be accompanied by or include a concise public record of decision.

(b) Except as provided in paragraph (c) of this section, the record of decision will be prepared by the NRC staff director authorized to take the action.

(c) When a hearing is held on the proposed action under the regulations in subpart G of part 2 of this chapter or when the action can only be taken by the Commissioners acting as a collegial body, the initial decision of the presiding officer or the final decision of the Atomic Safety and Licensing Appeal Board or the final decision of the Commissioners acting as a collegial body will constitute the record of decision. An initial or final decision constituting the record of decision will be distributed as provided in § 51.93.

§ 51.103 Record of decision--general.

[Top of File]

(a) The record of decision required by § 51.102 shall be clearly identified and shall:

(1) State the decision.

(2) Identify all alternatives considered by the Commission in reaching the decision, state that these alternatives were included in the range of alternatives discussed in the environmental impact statement, and specify the alternative or alternatives which were considered to be environmentally preferable.

(3) Discuss preferences among alternatives based on relevant factors, including economic and technical considerations where appropriate, the NRC's statutory mission, and any essential considerations of national policy, which were balanced by the Commission in making the decision and state how these considerations entered into the decision.

(4) State whether the Commission has taken all practicable measures within its jurisdiction to avoid or minimize environmental harm from the alternative selected, and if not, to explain why those measures were not adopted. Summarize any license conditions and monitoring programs adopted in connection with mitigation measures.

(5) In making a final decision on a license renewal action pursuant to Part 54 of this chapter, the Commission shall determine whether or not the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

(6) In a construction permit or a combined license proceeding where a limited work authorization under 10 CFR 50.10 was issued, the Commission's decision on the construction permit or combined license application will not address or consider the sunk costs associated with the limited work authorization in determining the proposed action.

(b) The record of decision may be integrated into any other record prepared by the Commission in connection with the action.

(c) The record of decision may incorporate by reference material contained in a final environmental impact statement.

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28490, June 5, 1996; 61 FR 66546, Dec. 18, 1996; 61 FR 68543, Dec. 30, 1996; 72 FR 57445, Oct. 9, 2007]

§ 51.104 NRC proceeding using public hearings; consideration of environmental impact statement.

[Top of File]

(a)(1) In any proceeding in which (i) a hearing is held on the proposed action, (ii) a final environmental impact statement has been prepared in connection with the proposed action, and (iii) matters within the scope of NEPA and this subpart are in issue, the NRC staff may not offer the final environmental impact statement in evidence or present the position of the NRC staff on matters within the scope of NEPA and this subpart until the final environmental impact statement is filed with the Environmental Protection Agency, furnished to commenting agencies and made available to the public.

(2) Any party to the proceeding may take a position and offer evidence on the aspects of the proposed action within the scope of NEPA and this subpart in accordance with the provisions of part 2 of this chapter applicable to that proceeding or in accordance with the terms of the notice of hearing.

(3) In the proceeding the presiding officer will decide those matters in controversy among the parties within the scope of NEPA and this subpart.

(b) In any proceeding in which a hearing is held where the NRC staff has determined that no environmental impact statement need be prepared for the proposed action, unless the Commission orders otherwise, any party to the proceeding may take a position and offer evidence on the aspects of the proposed action within the scope of NEPA and this subpart in accordance with the provisions of part 2 of this

chapter applicable to that proceeding or in accordance with the terms of the notice of hearing. In the proceeding, the presiding officer will decide any such matters in controversy among the parties.

(c) In any proceeding in which a limited work authorization is requested, unless the Commission orders otherwise, a party to the proceeding may take a position and offer evidence only on the aspects of the proposed action within the scope of NEPA and this subpart which are within the scope of that party's admitted contention, in accordance with the provisions of part 2 of this chapter applicable to the limited work authorization or in accordance with the terms of any notice of hearing applicable to the limited work authorization. In the proceeding, the presiding officer will decide all
matters in controversy among the parties.

[72 FR 57445, Oct. 9, 2007]

Production and Utilization Facilities

[Top of File]

§ 51.105 Public hearings in proceedings for issuance of construction permits or early site permits; limited work authorizations.

(a) In addition to complying with applicable requirements of § 51.104, in a proceeding for the issuance of a construction permit or early site permit for a nuclear power reactor, testing facility, fuel reprocessing plant or isotopic enrichment plant, the presiding officer will:

(1) Determine whether the requirements of Sections 102(2) (A), (C), and (E) of NEPA and the regulations in this subpart have been met;

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken;

(3) Determine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the construction permit or early site permit should be issued, denied, or appropriately conditioned to protect environmental values;

(4) Determine, in an uncontested proceeding, whether the NEPA review conducted by the NRC staff has been adequate; and

(5) Determine, in a contested proceeding, whether in accordance with the regulations in this subpart, the construction permit or early site permit should be issued as proposed by the NRC's Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate.

(b) The presiding officer in an early site permit hearing shall not admit contentions proffered by any party concerning the benefits assessment (e.g., need for power) or alternative energy sources if those issues were not addressed by the applicant in the early site permit application.

(c)(1) In addition to complying with the applicable provisions of § 51.104, in any proceeding for the issuance of a construction permit for a nuclear power plant or an early site permit under part 52 of this chapter, where the applicant requests a limited work authorization under § 50.10(d) of this chapter, the presiding officer shall—

(i) Determine whether the requirements of Section 102(2)(A), (C), and (E) of NEPA and the regulations in the subpart have been met, with respect to the activities to be conducted under the limited work authorization;

(ii) Independently consider the balance among conflicting factors with respect to the limited work authorization which is contained in the record of the proceeding, with a view to determining the appropriate action to be taken;

(iii) Determine whether the redress plan will adequately redress the activities performed under the limited work authorization, should limited work activities be terminated by the holder or the limited work authorization be revoked by the NRC, or upon effectiveness of the Commission's final decision denying the associated construction permit or early site permit, as applicable;

(iv) In an uncontested proceeding, determine whether the NEPA review conducted by the NRC staff for the limited work authorization has been adequate; and

(v) In a contested proceeding, determine whether, in accordance with the regulations in this subpart, the limited work authorization should be issued as proposed.

(2) If the limited work authorization is for activities to be conducted at a site for which the Commission has previously prepared an environmental impact statement for the construction and operation of a nuclear power plant, and a construction permit was issued but construction of the plant was never completed, then in making the determinations in paragraph (c)(1) of this section, the presiding officer shall be limited to a consideration whether there is, with respect to construction activities encompassed by the environmental impact statement which are analogous to the activities to be conducted under the limited work authorization, new and significant information on the environmental
impacts of those activities, such that the limited work authorization should not be issued as proposed.

(3) The presiding officer's determination in this paragraph shall be made in a partial initial decision to be issued separately from, and in advance of, the presiding officer's decision in paragraph (a) of this section.

[72 FR 49516, Aug. 28, 2007; 72 FR 57446, Oct. 9, 2007; 73 FR 5724, Jan. 31, 2008]

§ 51.105a Public hearings in proceedings for issuance of manufacturing licenses.

[Top of File]

In addition to complying with applicable requirements of § 51.31(c), in a proceeding for the issuance of a manufacturing license, the presiding officer will determine whether, in accordance with the regulations in this subpart, the manufacturing license should be issued as proposed by the NRC's Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate.

[72 FR 49516, Aug. 28, 2007; 73 FR 5724, Jan. 31, 2008]

§ 51.106 Public hearings in proceedings for issuance of operating licenses.

[Top of File]

(a) Consistent with the requirements of this section and as appropriate, the presiding officer in an operating license hearing shall comply with any applicable requirements of §§ 51.104 and 51.105.

(b) During the course of a hearing on an application for issuance of an operating license for a nuclear power reactor, or a testing facility, the presiding officer may authorize, pursuant to § 50.57(c) of this chapter, the loading of nuclear fuel in the reactor core and limited operation within the scope of § 50.57(c) of this chapter, upon compliance with the procedures described therein. In any such hearing, where any party opposes such authorization on the basis of matters covered by subpart A of this part, the provisions of §§ 51.104 and 51.105 will apply, as appropriate.

(c) The presiding officer in an operating license hearing shall not admit contentions proffered by any party concerning need for power or alternative energy sources or alternative sites for the facility for which an operating license is requested.

(d) The presiding officer in an operating license hearing shall not raise issues concerning alternative sites for the facility for which an operating license is requested *sua sponte*.

§ 51.107 Public hearings in proceedings for issuance of combined licenses; limited work authorizations.

[Top of File]

(a) In addition to complying with the applicable requirements of § 51.104, in a proceeding for the issuance of a combined license for a nuclear power reactor under part 52 of this chapter, the presiding officer will:

(1) Determine whether the requirements of Sections 102(2) (A), (C), and (E) of NEPA and the regulations in this subpart have been met;

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken;

(3) Determine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs, and considering reasonable alternatives, whether the combined license should be issued, denied, or appropriately conditioned to protect environmental values;

(4) Determine, in an uncontested proceeding, whether the NEPA review conducted by the NRC staff has been adequate; and

(5) Determine, in a contested proceeding, whether in accordance with the regulations in this subpart, the combined license should be issued as proposed by the NRC's Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate.

(b) If a combined license application references an early site permit, then the presiding officer in the combined license hearing shall not admit any contention proffered by any party on environmental issues which have been accorded finality under § 52.39 of this chapter, unless the contention:

(1) Demonstrates that the nuclear power reactor proposed to be built does not fit within one or more of the site characteristics or design parameters included in the early site permit;

(2) Raises any significant environmental issue that was not resolved in the early site permit proceeding; or

(3) Raises any issue involving the impacts of construction and operation of the facility that was resolved in the early site permit proceeding for which new and significant information has been identified.

(c) If the combined license application references a standard design certification, or proposes to use a manufactured reactor, then the presiding officer in a combined license hearing shall not admit contentions proffered by any party concerning severe accident mitigation design alternatives unless the contention demonstrates that the site characteristics fall outside of the site parameters in the standard design certification or underlying manufacturing license for the manufactured reactor.

(d)(1) In any proceeding for the issuance of a combined license where the applicant requests a limited work authorization under § 50.10(d) of this chapter, the presiding officer, in addition to complying with any applicable provision of § 51.104, shall:

(i) Determine whether the requirements of Section 102(2)(A), (C), and (E) of NEPA and the regulations in this subpart have been met, with respect to the activities to be conducted under the limited work authorization;

(ii) Independently consider the balance among conflicting factors with respect to the limited work authorization which is contained in the record of the proceeding, with a view to determining the appropriate action to be taken;

(iii) Determine whether the redress plan will adequately redress the activities performed under the limited work authorization, should limited work activities be terminated by the holder or the limited work authorization be revoked by the NRC, or upon effectiveness of the Commission's final decision denying the combined license application;

(iv) In an uncontested proceeding, determine whether the NEPA review conducted by the NRC staff for the limited work authorization has been adequate; and

(v) In a contested proceeding, determine whether, in accordance with the regulations in this subpart, the limited work authorization should be issued as proposed by the Director of New Reactors or the Director of Nuclear Reactor Regulation, as applicable.

(2) If the limited work authorization is for activities to be conducted at a site for which the Commission has previously prepared an environmental impact statement for the construction and operation of a nuclear power plant, and a construction permit was issued but construction of the plant was never completed, then in making the determinations in paragraph (c)(1) of this section, the presiding officer shall be limited to a consideration whether there is, with respect to construction activities encompassed by the environmental impact statement which are analogous to the activities to be conducted under the limited work authorization, new and significant information on the environmental impacts of those activities, so that the limited work authorization should not be issued as proposed by the Director of New Reactors or the Director of Nuclear Reactor Regulation, as applicable.

(3) In making the determination required by this section, the presiding officer may not address or consider the sunk costs associated with the limited work authorization.

(4) The presiding officer's determination in this paragraph shall be made in a partial initial decision to be issued separately from, and in advance of, the presiding officer's decision in paragraph (a) of this section on the combined license.

[72 FR 49517, Aug. 28, 2007; 72 FR 57446, Oct. 9, 2007; 73 FR 5724, Jan. 31, 2008]

§ 51.108 Public hearings on Commission findings that inspections, tests, analyses, and acceptance criteria of combined licenses are met

[Top of File]

In any public hearing requested under 10 CFR 52.103(b), the Commission will not admit any contentions on environmental issues, the adequacy of the environmental impact statement for the combined license issued under subpart C of part 52, or the adequacy of any other environmental impact statement or environmental assessment referenced in the combined license application. The Commission will not make any environmental findings in connection with the finding under 10 CFR 52.103(g).

[72 FR 49517, Aug. 28, 2007]

§ 51.109 Public hearings in proceedings for issuance of materials license with respect to a geologic repository.

[Top of File]

(a)(1) In a proceeding for issuance of a construction authorization for a high-level radioactive waste repository at a geologic repository operations area under parts 60 and 63 of this chapter, and in a proceeding for issuance of a license to receive and possess source, special nuclear, and byproduct material at a geologic repository operations area under parts 60 and 63 of this chapter, the NRC staff shall, upon the publication of the notice of hearing in the Federal Register, present its position on whether it is practicable to adopt, without further supplementation, the environmental impact statement (including any supplement thereto) prepared by the Secretary of Energy. If the position of the staff is that supplementation of the environmental impact statement by NRC is required, it shall file its final supplemental

environmental impact statement with the Environmental Protection Agency, furnish that statement to commenting agencies, and make it available to the public, before presenting its position, or as soon thereafter as may be practicable. In discharging its responsibilities under this paragraph, the staff shall be guided by the principles set forth in paragraphs (c) and (d) of this section.

(2) Any other party to the proceeding who contends that it is not practicable to adopt the DOE environmental impact statement, as it may have been supplemented, shall file a contention to that effect within thirty (30) days after the publication of the notice of hearing in the Federal Register. Such contention must be accompanied by one or more affidavits which set forth factual and/or technical bases for the claim that, under the principles set forth in paragraphs (c) and (d) of this section, it is not practicable to adopt the DOE environmental impact statement, as it may have been supplemented. The presiding officer shall resolve disputes concerning adoption of the DOE environmental impact statement by using, to the extent possible, the criteria and procedures that are followed in ruling on motions to reopen under § 2.326 of this chapter.

(b) In any such proceeding, the presiding officer will determine those matters in controversy among the parties within the scope of NEPA and this subpart, specifically including whether, and to what extent, it is practicable to adopt the environmental impact statement prepared by the Secretary of Energy in connection with the issuance of a construction authorization and license for such repository.

(c) The presiding officer will find that it is practicable to adopt any environmental impact statement prepared by the Secretary of Energy in connection with a geologic repository proposed to be constructed under Title I of the Nuclear Waste Policy Act of 1982, as amended, unless:

(1)(i) The action proposed to be taken by the Commission differs from the action proposed in the license application submitted by the Secretary of Energy; and

(ii) The difference may significantly affect the quality of the human environment; or

(2) Significant and substantial new information or new considerations render such environmental impact statement inadequate.

(d) To the extent that the presiding officer determines it to be practicable, in accordance with paragraph (c) of this section, to adopt the environmental impact statement prepared by the Secretary of Energy, such adoption shall be deemed to satisfy all responsibilities of the Commission under NEPA and no further consideration under NEPA or this subpart shall be required.

(e) To the extent that it is not practicable, in accordance with paragraph (c) of this section, to adopt the environmental impact statement prepared by the Secretary of Energy, the presiding officer will:

(1) Determine whether the requirements of section 102(2) (A), (C), and (E) of NEPA and the regulations in this subpart have been met;

(2) Independently consider the final balance among conflicting factors contained in the record of the proceeding with a view to determining the appropriate action to be taken;

(3) Determine, after weighing the environmental, economic, technical and other benefits against environmental and other costs, whether the construction authorization or license should be issued, denied, or appropriately conditioned to protect environmental values;

(4) Determine, in an uncontested proceeding, whether the NEPA review conducted by the NRC staff has been adequate; and

(5) Determine, in a contested proceeding, whether in accordance with the regulations in this subpart, the construction authorization or license should be issued as proposed.

(f) In making the determinations described in paragraph (e), the environmental impact statement will be deemed modified to the extent that findings and conclusions differ from those in the final statement prepared by the Secretary of Energy, as it may have been supplemented. The initial decision will be distributed to any persons not otherwise entitled to receive it who responded to the request in the notice of docketing, as described in § 51.26(c). If the Commission or the Atomic Safety and Licensing Appeal Board reaches conclusions different from those of the presiding officer with respect to such matters, the final environmental impact statement will be deemed modified to that extent and the decision will be similarly distributed.

(g) The provisions of this section shall be followed, in place of those set out in § 51.104, in any proceedings for the issuance of a license to receive and possess source, special nuclear, and byproduct material at a geologic repository operations area.

[54 FR 27870, July 3, 1989; 69 FR 2276, Jan. 14, 2004]

Rulemaking

[Top of File]

§ 51.110 [Reserved]

Public Notice of and Access to Environmental Documents

[Top of File]

§ 51.116 Notice of intent.

(a) In accordance with § 51.26, the appropriate NRC staff director will publish in the Federal Register a notice of intent stating that an environmental impact statement will be prepared. The notice will contain the information specified in § 51.27.

(b) Copies of the notice will be sent to appropriate Federal, State, and local agencies, and Indian tribes, appropriate State, regional, and metropolitan clearinghouses and to interested persons upon request. A public announcement of the notice of intent will also be made.

§ 51.117 Draft environmental impact statement--notice of availability.

[Top of File]

(a) Upon completion of a draft environmental impact statement or any supplement to a draft environmental impact statement, the appropriate NRC staff director will publish a notice of availability of the statement in the Federal Register.

(b) The notice will request comments on the proposed action and on the draft statement or any supplement to the draft statement and will specify where comments should be submitted and when the comment period expires.

(c) The notice will (1) state that copies of the draft statement or any supplement to the draft statement are available for public inspection; (2) state where inspection may be made, and (3) state that any comments of Federal, State, and local agencies, Indian tribes or other interested persons will be made available for public inspection when received.

(d) Copies of the notice will be sent to appropriate Federal, State, and local agencies, and Indian tribes, appropriate State, regional, and metropolitan clearinghouses, and to interested persons upon request.

§ 51.118 Final environmental impact statement--notice of availability.

[Top of File]

(a) Upon completion of a final environmental impact statement or any supplement to a final environmental impact statement, the appropriate NRC staff director will publish a notice of availability of the statement in the Federal Register. The notice will state that copies of the final statement or any supplement to the final statement are available for public inspection and where inspection may be made. Copies of the notice will be sent to appropriate Federal, State, and local agencies, and Indian tribes, appropriate State, regional, and metropolitan clearinghouses and to interested persons upon request.

(b) Upon adoption of a final environmental impact statement or any supplement to a final environmental impact statement prepared by the Department of Energy with respect to a geologic repository that is subject to the Nuclear Waste Policy Act of 1982, the appropriate NRC staff director shall follow the procedures set out in paragraph (a) of this section.

[49 FR 9381, Mar. 12, 1984, as amended at 54 FR 27871, July 3, 1989]

§ 51.119 Publication of finding of no significant impact; distribution.

[Top of File]

(a) As required by § 51.35, the appropriate NRC staff director will publish the finding of no significant impact in the Federal Register. The finding of no significant impact will be identified as a draft or final finding, and will contain the information specified in §§ 51.32 or 51.33, as appropriate. A draft finding of no significant impact will include a request for comments which specifies where comments should be submitted and when the comment period expires.

(b) The finding will state that copies of the finding, the environmental assessment setting forth the basis for the finding and any related environmental documents are available for public inspection and where inspection may be made.

(c) A copy of a final finding will be sent to appropriate Federal, State, and local agencies, and Indian tribes, appropriate State, regional, and metropolitan clearinghouses, the applicant or petitioner for rulemaking and any other party to the proceeding, and if a draft finding was issued, to each commenter. Additional copies will be made available in accordance with § 51.123.

§ 51.120 Availability of environmental documents for public inspection.

[Top of File]

Copies of environmental reports, draft and final environmental impact statements, environmental assessments, and findings of no significant impact, together with any related comments and environmental documents, will be made available at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room.

[49 FR 9381, Mar. 12, 1984, as amended at 53 FR 43421, Oct. 27, 1988]

§ 51.121 Status of NEPA actions.

[Top of File]

Individuals or organizations desiring information on the NRC's NEPA process or on the status of specific NEPA actions should address inquiries to:

(a) *Utilization facilities:* ATTN: Document Control Desk, Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, telephone (301) 415–1270, e-mail *RidsNrrOd@nrc.gov*.

(b) *Production facilities:* ATTN: Document Control Desk, Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-7800, e-mail *RidsNmssOd@nrc.gov*.

(c) *Materials licenses:* ATTN: Document Control Desk, Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (301) 415-7800, e-mail *RidsNmssOd@nrc.gov*.

(d) *Rulemaking:* ATTN: Chief, Rules and Directives Branch, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone (800) 368-5642, e-mail *NRCREP@nrc.gov*.

(e) *General Environmental Matters:* Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 415-1700.

[53 FR 13399, Apr. 25, 1988, as amended at 60 FR 24552, May 9, 1995; 68 FR 58811, Oct. 10, 2003; 73 FR 5724, Jan. 31, 2008]

§ 51.122 List of interested organizations and groups.

[Top of File]

The NRC Office of Information Resources Management will maintain a master list of organizations and groups, including relevant conservation commissions, known to be interested in the Commission's licensing and regulatory activities. The NRC Office of Information Resources Management with the assistance of the appropriate NRC staff director will select from this master list those organizations and groups that may have an interest in a specific NRC NEPA action and will promptly notify such organizations and groups of the availability of a draft environmental impact statement or a draft finding of no significant impact.

[49 FR 9381, Mar. 12, 1984, as amended at 52 FR 31612, Aug. 12, 1987; 54 FR 53316, Dec. 28, 1989]

§ 51.123 Charges for environmental documents; distribution to public; distribution to governmental agencies.

[Top of File]

(a) *Distribution to public.* Upon written request to the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, e-mail *DISTRIBUTION@nrc.gov*, and to the extent available, single copies of draft environmental impact statements and draft findings of no significant impact will be made available to interested persons without charge. Single copies of final environmental impact statements and final findings of no significant impact will also be provided without charge to the persons listed in §§ 51.93(a) and 51.119 (c), respectively. When more than one copy of an environmental impact statement or a finding of no significant impact is requested or when available NRC copies have been exhausted, the requestor will be advised that the NRC will provide copies at the charges specified in § 9.35 of this chapter.

(b) *Distribution to governmental agencies.* Upon written request to the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, e-mail *DISTRIBUTION@nrc.gov*, and to the extent available, copies of draft and final environmental impact statements and draft final findings of no significant impact will be made available in the number requested to Federal, State and local agencies, Indian Tribes, and State, regional, and metropolitan clearinghouses. When available NRC copies have been exhausted, the requester will be advised that the NRC will provide copies at the charges specified in § 9.35 of this chapter.

(c) *Charges*. Charges for the reproduction of environmental documents by the NRC at locations other than the NRC Public Document Room located in Washington, DC vary according to location.

[50 FR 21037, May 22, 1985, as amended at 52 FR 31612, Aug. 21, 1987; 53 FR 43421, Oct. 27, 1988; 61 FR 9902, Mar. 12, 1996; 64 FR 48952, Sept. 9, 1999; 68 FR 58812, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005]

Commenting

[Top of File]

§ 51.124 Commission duty to comment.

It is the policy of the Commission to comment on draft environmental impact statements prepared by other Federal agencies, consistent with the provisions of 40 CFR 1503.2 and 1503.3.

Responsible Official

[Top of File]

§ 51.125 Responsible official.

The Executive Director for Operations shall be responsible for overall review of NRC NEPA compliance, except for matters under the jurisdiction of a presiding officer, administrative judge, administrative law judge, Atomic Safety and Licensing Board, Atomic Safety and Licensing Appeal Board, or the Commission acting as a collegial body.

Appendix A to Subpart A--Format for Presentation of Material in Environmental Impact Statements

[Top of File]

1. *General*

(a) The Commission will use a format for environmental impact statements which will encourage good analysis and clear presentation of the alternatives including the proposed action. The following standard format for environmental impact statements should be followed unless there is a compelling reason to do otherwise:

(1) Cover sheet*

(2) Summary*

(3) Table of Contents

(4) Purpose of and Need for Action*

(5) Alternatives including the proposed action*

(6) Affected Environment*

(7) Environmental Consequences and Mitigating Actions*

(8) List of Preparers*

(9) List of Agencies, Organizations and Persons to Whom Copies of the Statement are Sent

(10) Substantive Comments Received and NRC Staff Responses

(11) Index

(12) Appendices (if any)*

If a different format is used, it shall include paragraphs (1), (2), (3), (8), (9), (10), and (11) of this section and shall include the substance of paragraphs (4), (5), (6), (7), and (12) of this section, in any appropriate format.

Additional guidance on the presentation of material under the format headings identified by an asterisk is set out in sections 2. - 9. of this appendix.

(b) The techniques of tiering and incorporation by reference described respectively in 40 CFR 1502.20 and 1508.28 and 40 CFR 1502.21[1] of CEQ's NEPA regulations may be used as appropriate to aid in the presentation of issues, eliminate repetition or reduce the size of an environmental impact statement. In appropriate circumstances, draft or final environmental impact statements prepared by other Federal agencies may be adopted in whole or in part in accordance with the procedures outlined in 40 CFR 1506.3[2] of CEQ's NEPA regulations. In final environmental impact statements, material under the following format headings will normally be presented in less than 150 pages: Purpose of and Need for Action, Alternatives Including the Proposed Action, Affected Environment, and Environmental Consequences and Mitigating Actions. For proposals of unusual scope or complexity, the material presented under these format headings may extend to 300 pages.

2. *Cover sheet*.

The cover sheet will not exceed one page. It will include:

(a) The name of the NRC office responsible for preparing the statement and a list of any cooperating agencies.

(b) The title of the proposed action that is the subject of the statement with a list of the states, counties or municipalities where the facility or other subject of the action is located, as appropriate.

(c) The name, address, and telephone number of the individual in NRC who can supply further information.

(d) A designation of the statement as a draft or final statement, or a draft or final supplement.

(e) A one paragraph abstract of the statement.

(f) For draft environmental impact statements, the date by which comments must be received. This date may be specified in the form of the following or a substantially similar statement:

"Comments should be filed no later than[3] days after the date on which the Environmental Protection Agency notice stating that the draft environmental impact statement has been filed with EPA is published in the Federal Register. Comments received after the expiration of the comment period will be considered if it is practical to do so but assurance of consideration of late comments cannot be given."

3. *Summary*.

Each environmental impact statement will contain a summary which adequately and accurately summarizes the statement. The summary will stress the major issues considered. The summary will discuss the areas of controversy, will identify any remaining issues to be resolved, and will present the major conclusions and recommendations. The summary will normally not exceed 15 pages.

4. *Purpose of and need for action*.

The statement will briefly describe and specify the need for the proposed action. The alternative of no action will be discussed. In the case of nuclear power plant construction or siting, consideration will be given to the potential impact of conservation measures in determining the demand for power and consequent need for additional generating capacity.

5. *Alternatives including the proposed action*.

This section is the heart of the environmental impact statement. It will present the environmental impacts of the proposal and the alternatives in comparative form. Where important to the comparative evaluation of alternatives, appropriate mitigating measures of the alternatives will be discussed. All reasonable alternatives will be identified. The range of alternatives discussed will encompass those proposed to be considered by the ultimate decisionmaker. An otherwise reasonable alternative will not be excluded from discussion solely on the ground that it is not within the jurisdiction of the NRC.[4] The discussion of alternatives will take into accounts, without duplicating, the environmental information and analyses included in sections, 4., 6. and 7. of this appendix.

In the draft environmental impact statement, this section will either include a preliminary recommendation on the action to be taken, or identify the alternatives under consideration.

In the final environmental impact statement, this section will include a final recommendation on the action to be taken.

6. *Affected environment*.

The environmental impact statement will succinctly describe the environment to be affected by the proposed action. Data and analyses in the statement will be commensurate with the importance of the impact, with less important material summarized, consolidated, or simply referenced. Effort and attention will be concentrated on important issues; useless bulk will be eliminated.

7. *Environmental consequences and mitigating actions*.

This section discusses the environmental consequences of alternatives, including the proposed actions and any mitigating actions which may be taken. Alternatives eliminated from detailed study will be identified and a discussion of those alternatives will be confined to a brief statement of the reasons why the alternatives were eliminated. The level of information for each alternative considered in detail will reflect the depth of analysis required for sound decisionmaking.

The discussion will include any adverse environmental effects which cannot be avoided should the alternative be implemented, the relationship between short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and any irreversible or irretrievable commitments of resources which would be involved in the alternative should it be implemented. This section will include discussions of:

(a) Direct effects and their significance.

(b) Indirect effects and their significance.

(c) Possible conflicts between the alternative and the objectives of Federal, regional, State, and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned.

(d) Means to mitigate adverse environmental impacts.

8. *List of preparers*.

The environmental impact statement will list the names and qualifications (expertise, experience, professional disciplines), of the persons who were primarily responsible for preparing the environmental impact statement or significant background papers. Persons responsible for making an independent evaluation of information submitted by the applicant or petitioner for rulemaking or others will be included in the list. Where possible, the persons who are responsible for a particular analysis, including analyses in background papers, will be identified.

9. *Appendices*.

An appendix to an environmental impact statement will:

(a) Consist of material prepared in connection with an environmental impact statement (as distinct from material which is not so prepared and which is incorporated by reference (40 CFR 1502.21)).

(b) Normally consist of material which substantiates any analysis fundamental to the impact statement. Discussion of methodology used may be placed in an appendix.

(c) Normally be analytic.

(d) Be relevant to the decision to be made.

(e) Be circulated with the environmental impact statement or be readily available on request.

Discussion of Footnotes

1. *Tiering*.

40 CFR 1502.20 states:

"Agencies are encouraged to tier their environmental impact statements to eliminate repetitive discussions of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (§ 1508.28). Whenever a broad environmental impact statement has been prepared (such as a program or policy statement) and a subsequent statement or environmental assessment is then prepared on an action included within the entire program or policy (such as a site specific action) the subsequent statement or environmental assessment need only summarize the issues discussed in the broader statement and incorporate discussions from the broader statement by reference and shall concentrate on the issues specific to the subsequent action. The subsequent document shall state where the earlier document is available. Tiering may also be appropriate for different stages of actions. (Sec. 1508.28)."

40 CFR 1508.28 states:

"`Tiering' refers to the coverage of general matters in broader environmental impact statements (such as national program or policy statements) with subsequent narrower statements or environmental analyses (such as regional or basinwide program statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared. Tiering is appropriate when the sequence of statements or analyses is:

"(a) From a program, plan, or policy environmental impact statement to a program, plan, or policy statement or analysis of lesser scope or to a site-specific statement or analysis.

"(b) From an environmental impact statement on a specific action at an early stage (such as need and site selection) to a supplement (which is preferred) or a subsequent statement or analysis at a later stage (such as environmental mitigation). Tiering in such cases is appropriate when it helps the lead agency to focus on the issues which are ripe for decision and exclude from consideration issues already decided or not yet ripe."

Incorporation by reference. 40 CFR 1502.21 states:

"Agencies shall incorporate material into an environmental impact statement by reference when the effect will be to cut down on bulk without impeding agency and public review of the action. The incorporated material shall be cited in the statement and its content briefly described. No material may be incorporated by reference unless it is reasonably available for inspection by potentially interested persons within the time allowed for comment. Material based on proprietary data which is itself not available for review and comment shall not be incorporated by reference."

2. *Adoption*.

40 CFR 1506.3 states:

"(a) An agency may adopt a Federal draft or final environmental impact statement or portion thereof provided that the statement or portion thereof meets the standards for an adequate statement under these regulations.

"(b) If the actions covered by the original environmental impact statement and the proposed action are substantially the same, the agency adopting another agency's statement is not required to recirculate it except as a final statement. Otherwise the adopting agency shall treat the statement as a draft and recirculate it (except as provided in paragraph (c) of this section).

"(c) A cooperating agency may adopt without recirculating the environmental impact statement of a lead agency when, after an independent review of the statement, the cooperating agency concludes that its comments and suggestions have been satisfied.

"(d) When an agency adopts a statement which is not final within the agency that prepared it, or when the action it assesses is the subject of a referral under part 1504, or when the statement's adequacy is the subject of a judicial action which is not final, the agency shall so specify."

[49 FR 9381, Mar. 12, 1984, as amended at 61 FR 28490, June 5, 1996; 61 FR 66546, Dec. 18, 1996]

1. Tiering--40 CFR 1502.20, 40 CFR 1508.28; Incorporation by reference--40 CFR 1502.21.

2.Adoption--40 CFR 1506.3.

3. The number of days in the comment period should be inserted. The minimum comment period is 45 days (see § 51.73.)

4. With respect to limitations on NRC's NEPA authority and responsibility imposed by the Federal Water Pollution Control Act Amendments of 1972, see §§ 51.10(c), 51.22(c)(17) and 51.71(d).

Appendix B to Subpart A--Environmental Effect of Renewing the Operating License of a Nuclear Power Plant

[Top of File]

The Commission has assessed the environmental impacts associated with granting a renewed operating license for a nuclear power plant to a licensee who holds either an operating license or construction permit as of June 30, 1995. Table B-1 summarizes the Commission's findings on the scope and magnitude of environmental impacts of renewing the operating license for a nuclear power plant as required by section 102(2) of the National Environmental Policy Act of 1969, as amended. Table B-1, subject to an evaluation of those issues identified in Category 2 as requiring further analysis and possible significant new information, represents the analysis of the environmental impacts associated with renewal of any operating license and is to be used in accordance with § 51.95(c). On a 10-year cycle, the Commission intends to review the material in this appendix and update it if necessary. A scoping notice must be published in the *Federal Register* indicating the results of the NRC's review and inviting public comments and proposals for other areas that should be updated.

Table B-1.--Summary of Findings on NEPA Issues for License Renewal of Nuclear Power Plants[1]

Issue	Category[2]	Findings[3]
Surface Water Quality, Hydrology, and Use (for all plants)		
Impacts of refurbishment on surface water quality	1	SMALL. Impacts are expected to be negligible during refurbishment because best management practices are expected to be employed to control soil erosion and spills.
Impacts of refurbishment on surface water use	1	SMALL. Water use during refurbishment will not increase appreciably or will be reduced during plant outage.
Altered current patterns at intake and discharge structures.	1	SMALL. Altered current patterns have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Altered salinity gradients	1	SMALL. Salinity gradients have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Altered thermal stratification of lakes	1	SMALL. Generally, lake stratification has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.
Temperature effects on sediment transport capacity	1	SMALL. These effects have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Scouring caused by discharged cooling water	1	SMALL. Scouring has not been found to be a problem at most operating nuclear power plants and has caused only localized effects at a few plants. It is not expected to be a problem during the license renewal term.
Eutrophication	1	SMALL. Eutrophication has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.

Discharge of chlorine or other biocides	1	SMALL. Effects are not a concern among regulatory and resource agencies, and are not expected to be a problem during the license renewal term.
Discharge of sanitary wastes and minor chemical spills	1	SMALL. Effects are readily controlled through NPDES permit and periodic modifications, if needed, and are not expected to be a problem during the license renewal term
Discharge of other metals in waste water	1	SMALL. These discharges have not been found to be a problem at operating nuclear power plants with cooling-tower-based heat dissipation systems and have been satisfactorily mitigated at other plants. They are not expected to be a problem during the license renewal term.
Water use conflicts (plants with once-through cooling systems)	1	SMALL. These conflicts have not been found to be a problem at operating nuclear power plants with once-through heat dissipation systems.
Water use conflicts (plants with cooling ponds or cooling towers using make-up water from a small river with low flow)	2	SMALL OR MODERATE. The issue has been a concern at nuclear power plants with cooling ponds and at plants with cooling towers. Impacts on instream and riparian communities near these plants could be of moderate significance in some situations. See § 51.53
Aquatic Ecology (for all plants)		
Refurbishment	1	SMALL. During plant shutdown and refurbishment there will be negligible effects on aquatic biota because of a reduction of entrainment and impingement of organisms or a reduced release of chemicals.
Accumulation of contaminants in sediments or biota	1	SMALL. Accumulation of contaminants has been a concern at a few nuclear power plants but has been satisfactorily mitigated by replacing copper alloy condenser tubes with those of another metal. It is not expected to be a problem during the license renewal term.
Entrainment of phytoplankton and zooplankton	1	SMALL. Entrainment of phytoplankton and zooplankton has not been found to be a problem at operating nuclear power plants and is not expected to be a problem during the license renewal term.
Cold shock	1	SMALL. Cold shock has been satisfactorily mitigated at operating nuclear plants with once-through cooling systems, has not endangered fish populations or been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds, and is not expected to be a problem during the license renewal term.
Thermal plume barrier to migrating fish	1	SMALL. Thermal plumes have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Distribution of aquatic organisms	1	SMALL. Thermal discharge may have localized effects but is not expected to affect the larger geographical distribution of aquatic organisms.
Premature emergence of aquatic insects	1	SMALL. Premature emergence has been found to be a localized effect at some operating nuclear power plants but has not been a problem and is not expected to be a problem during the license renewal term.
Gas supersaturation (gas bubble disease)	1	SMALL. Gas supersaturation was a concern at a small number of operating nuclear power plants with once-through cooling systems but has been satisfactorily mitigated. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.
Low dissolved oxygen in the discharge	1	SMALL. Low dissolved oxygen has been a concern at one nuclear power plant with a once-through cooling system but has been effectively mitigated. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.
Losses from predation, parasitism, and disease among organisms exposed to sublethal stresses	1	SMALL. These types of losses have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.

Stimulation of nuisance organisms (e.g., shipworms)	1	SMALL. Stimulation of nuisance organisms has been satisfactorily mitigated at the single nuclear power plant with a once-through cooling system where previously it was a problem. It has not been found to be a problem at operating nuclear power plants with cooling towers or cooling ponds and is not expected to be a problem during the license renewal term.
Aquatic Ecology (for plants with once-through and cooling pond heat dissipation systems)		
Entrainment of fish and shellfish in early life stages	2	SMALL, MODERATE, OR LARGE. The impacts of entrainment are small at many plants but may be moderate or even large at a few plants with once-through and cooling-pond cooling systems. Further, ongoing efforts in the vicinity of these plants to restore fish populations may increase the numbers of fish susceptible to intake effects during the license renewal period, such that entrainment studies conducted in support of the original license may no longer be valid. See § 51.53(c)(3)(ii)(B).
Impingement of fish and shellfish	2	SMALL, MODERATE, OR LARGE. The impacts of impingement are small at many plants but may be moderate or even large at a few plants with once-through and cooling-pond cooling systems. See § 51.53(c)(3)(ii)(B).
Heat shock	2	SMALL, MODERATE, OR LARGE. Because of continuing concerns about heat shock and the possible need to modify thermal discharges in response to changing environmental conditions, the impacts may be of moderate or large significance at some plants. See § 51.53(c)(3)(ii)(B).
Aquatic Ecology (for plants with cooling-tower-based heat dissipation systems)		
Entrainment of fish and shellfish in early life stages	1	SMALL. Entrainment of fish has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Impingement of fish and shellfish	1	SMALL. The impingement has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Heat shock	1	SMALL. Heat shock has not been found to be a problem at operating nuclear power plants with this type of cooling system and is not expected to be a problem during the license renewal term.
Ground-water Use and Quality		
Impacts of refurbishment on ground-water use and quality	1	SMALL. Extensive dewatering during the original construction on some sites will not be repeated during refurbishment on any sites. Any plant wastes produced during refurbishment will be handled in the same manner as in current operating practices and are not expected to be a problem during the license renewal term.
Ground-water use conflicts (potable and service water; plants that use <100 gpm)	1	SMALL. Plants using less than 100 gpm are not expected to cause any ground-water use conflicts.
Ground-water use conflicts (potable and service water, and dewatering; plants that use >100 gpm)	2	SMALL, MODERATE, OR LARGE. Plants that use more than 100 gpm may cause ground-water use conflicts with nearby ground-water users. See § 51.53(c)(3)(ii)(C).
Ground-water use conflicts (plants using cooling towers withdrawing make-up water from a small river)	2	SMALL, MODERATE, OR LARGE. Water use conflicts may result from surface water withdrawals from small water bodies during low flow conditions which may affect aquifer recharge, especially if other ground-water or upstream surface water users come on line before the time of license renewal. See § 51.53(c)(3)(ii)(A).
Ground-water use conflicts (Ranney wells)	2	SMALL, MODERATE, OR LARGE. Ranney wells can result in potential ground-water depression beyond the site boundary. Impacts of large ground-water withdrawal for cooling tower makeup at nuclear power plants using Ranney wells must be evaluated at the time of application for license renewal. See § 51.53(c)(3)(ii)(C).
Ground-water quality degradation (Ranney wells)	1	SMALL. Ground-water quality at river sites may be degraded by induced infiltration of poor-quality river water into an aquifer that supplies large quantities of reactor cooling water. However, the lower quality infiltrating water would not preclude the current uses of ground water and is not expected to be a problem during the license renewal term.

Ground-water quality degradation (saltwater intrusion)	1	SMALL. Nuclear power plants do not contribute significantly to saltwater intrusion) intrusion.
Ground-water quality degradation (cooling ponds in salt marshes)	1	SMALL. Sites with closed-cycle cooling ponds may degrade ground-water quality. Because water in salt marshes is brackish, this is not a concern for plants located in salt marshes.
Ground-water quality degradation (cooling ponds at inland sites)	2	SMALL, MODERATE, OR LARGE. Sites with closed-cycle cooling ponds may degrade ground-water quality. For plants located inland, the quality of the ground water in the vicinity of the ponds must be shown to be adequate to allow continuation of current uses.
Terrestrial Resources		
Refurbishment impacts	2	SMALL, MODERATE, OR LARGE. Refurbishment impacts are insignificant if no loss of important plant and animal habitat occurs. However, it cannot be known whether important plant and animal communities may be affected until the specific proposal is presented with the license renewal application
Cooling tower impacts on crops and ornamental vegetation	1	SMALL. Impacts from salt drift, icing, fogging, or increased humidity associated with cooling tower operation have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Cooling tower impacts on native plants	1	SMALL. Impacts from salt drift, icing, fogging, or increased humidity associated with cooling tower operation have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Bird collisions with cooling towers	1	SMALL. These collisions have not been found to be a problem at operating nuclear power plants and are not expected to be a problem during the license renewal term.
Cooling pond impacts on terrestrial resources	1	SMALL. Impacts of cooling ponds on terrestrial ecological resources are considered to be of small significance at all sites.
Power line right-of-way management (cutting and herbicide application)	1	SMALL. The impacts of right-of-way maintenance on wildlife are expected to be of small significance at all sites.
Bird collision with power lines	1	SMALL. Impacts are expected to be of small significance at all sites.
Impacts of electromagnetic fields on flora and fauna (plants, agricultural crops, honeybees, wildlife, livestock)	1	SMALL. No significant impacts of electromagnetic fields on terrestrial flora and fauna have been identified. Such effects are not expected to be a problem during the license renewal term.
Floodplains and wetland on power line right of way		SMALL. Periodic vegetation control is necessary in forested wetlands underneath power lines and can be achieved with minimal damage to the wetland. No significant impact is expected at any nuclear power plant during the license renewal term.
Threatened or Endangered Species (for all plants)		
Threatened or endangered species	2	SMALL, MODERATE, OR LARGE. Generally, plant refurbishment and continued operation are not expected to adversely affect threatened or endangered species. However, consultation with appropriate agencies would be needed at the time of license renewal to determine whether threatened or endangered species are present and whether they would be adversely affected.
Air Quality		
Air quality during refurbishment (nonattainment and maintenance areas)	2	SMALL, MODERATE, OR LARGE. Air quality impacts from plant refurbishment associated with license renewal are expected to be small. However, vehicle exhaust emissions could be cause for concern at locations in or near nonattainment or maintenance areas. The significance of the potential impact cannot be determined without considering the compliance status of each site and the numbers of workers expected to be employed during the outage. See § 51.53
Air quality effects of transmission lines	1	SMALL. Production of ozone and oxides of nitrogen is insignificant and does not contribute measurably to ambient levels of these gases.
Land Use		

Onsite land use	1	SMALL. Projected onsite land use changes required during refurbishment and the renewal period would be a small fraction of any nuclear power plant site and would involve land that is controlled by the applicant.
Power line right of way	1	SMALL. Ongoing use of power line right of ways would continue with no change in restrictions. The effects of these restrictions are of small significance.
Human Health		
Radiation exposures to the public during refurbishment	1	SMALL. During refurbishment, the gaseous effluents would result in doses that are similar to those from current operation. Applicable regulatory dose limits to the public are not expected to be exceeded.
Occupational radiation exposures during refurbishment	1	SMALL. Occupational doses from refurbishment are expected to be within the range of annual average collective doses experienced for pressurized-water reactors and boiling-water reactors. Occupational mortality risk from all causes including radiation is in the mid-range for industrial settings.
Microbiological organisms (occupational health)	1	SMALL. Occupational health impacts are expected to be controlled by continued application of accepted industrial hygiene practices to minimize worker exposures.
Microbiological organisms (public health) (plants using lakes or canals, or cooling towers or cooling ponds that discharge to a small river)	2	SMALL, MODERATE, OR LARGE. These organisms are not expected to be a problem at most operating plants except possibly at plants using cooling ponds, lakes, or canals that discharge to small rivers. Without site-specific data, it is not possible to predict the effects generically. See § 51.53
Noise	1	SMALL. Noise has not been found to be a problem at operating plants and is not expected to be a problem at any plant during the license renewal term.
Electromagnetic fields, acute effects (electric shock)	2	SMALL, MODERATE, OR LARGE. Electrical shock resulting from direct access to energized conductors or from induced charges in metallic structures have not been found to be a problem at most operating plants and generally are not expected to be a problem during the license renewal term. However, site-specific review is required to determine the significance of the electric shock potential at the site.
Electromagnetic fields, chronic effects[5]	[4]NA	UNCERTAIN. Biological and physical studies of 60 - Hz electromagnetic fields have not found consistent evidence linking harmful effects with field exposures. However, because the state of the science is currently inadequate, no generic conclusion on human health impacts is possible.[5]
Radiation exposures to public (license renewal term)	1	SMALL. Radiation doses to the public will continue at current levels associated with normal operations.
Occupational radiation exposures (license renewal term)	1	SMALL. Projected maximum occupational doses during the license renewal term are within the range of doses experienced during normal operations and normal maintenance outages, and would be well below regulatory limits.
Socioeconomics		
Housing impacts	2	SMALL, MODERATE, OR LARGE. Housing impacts are expected to be of small significance at plants located in a medium or high population area and not in an area where growth control measures that limit housing development are in effect. Moderate or large housing impacts of the workforce associated with refurbishment may be associated with plants located in sparsely populated areas or in areas with growth control measures that limit housing development.
Public services: public safety, social services, and tourism and recreation	1	SMALL. Impacts to public safety, social services, and tourism and recreation are expected to be of small significance at all sites.
Public services: public utilities	2	SMALL OR MODERATE. An increased problem with water shortages at some sites may lead to impacts of moderate significance on public water supply availability.
Public services, education (refurbishment)	2	SMALL, MODERATE, OR LARGE. Most sites would experience impacts of small significance but larger impacts are possible depending on site- and project-specific factors.
Public services, education (license renewal term)	1	SMALL. Only impacts of small significance are expected.

Offsite land use (refurbishment)	2	SMALL OR MODERATE. Impacts may be of moderate significance at plants in low population areas
Offsite land use (license renewal term)	2	SMALL, MODERATE, OR LARGE. Significant changes in land use may be associated with population and tax revenue changes resulting from license renewal
Public services, Transportation	2	SMALL, MODERATE, OR LARGE. Transportation impacts are generally expected to be of small significance. However, the increase in traffic associated with the additional workers and the local road and traffic control conditions may lead to impacts of moderate or large significance at some sites.
Historic and archaeological resources	2	SMALL, MODERATE, OR LARGE. Generally, plant refurbishment and continued operation are expected to have no more than small adverse impacts on historic and archaeological resources. However, the National Historic Preservation Act requires the Federal agency to consult with the State Historic Preservation Officer to determine whether there are properties present that require protection
Aesthetic impacts (refurbishment)	1	SMALL. No significant impacts are expected during refurbishment.
Aesthetic impacts (license renewal term)	1	SMALL. No significant impacts are expected during the license renewal term.
Aesthetic impacts of transmission lines (license renewal term)	1	SMALL. No significant impacts are expected during the license renewal term.
Postulated Accidents		
Design basis accidents	1	SMALL. The NRC staff has concluded that the environmental impacts of design basis accidents are of small significance for all plants.
Severe accidents	2	SMALL. The probability weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to ground water, and societal and economic impacts from severe accidents are small for all plants. However, alternatives to mitigate severe accidents must be considered for all plants that have not considered such alternatives.
Uranium Fuel Cycle and Waste Management		
Offsite radiological impacts (individual effects from other than the disposal of spent fuel and high level waste	1	SMALL. Off-site impacts of the uranium fuel cycle have been considered by the Commission in Table S - 3 of this part. Based on information in the GEIS, impacts on individuals from radioactive gaseous and liquid releases including radon-222 and technetium-99 are small.
Offsite radiological impacts (collective effects)	1	The 100 year environmental dose commitment to the U.S. population from the fuel cycle, high level waste and spent fuel disposal excepted, is calculated to be about 14,800 person rem, or 12 cancer fatalities, for each additional 20-year power reactor operating term. Much of this, especially the contribution of radon releases from mines and tailing piles, consists of tiny doses summed over large populations. This same dose calculation can theoretically be extended to include many tiny doses over additional thousands of years as well as doses outside the U. S. The result of such a calculation would be thousands of cancer fatalities from the fuel cycle, but this result assumes that even tiny doses have some statistical adverse health effect which will not ever be mitigated (for example no cancer cure in the next thousand years), and that these doses projected over thousands of ears are meaningful. However, these assumptions are questionable. In particular, science cannot rule out the possibility that there will be no cancer fatalities from these tiny doses. For perspective, the doses are very small fractions of regulatory limits, and even smaller fractions of natural background exposure to the same populations. Nevertheless, despite all the uncertainty, some judgement as to the regulatory NEPA implications of these matters should be made and it makes no sense to repeat the same judgement in every case. Even taking the uncertainties into account, the Commission concludes that these impacts are acceptable in that these impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR Part 54 should be eliminated. Accordingly, while the commission has not assigned a single

		level of significance for the collective effects of the fuel cycle, this issue is considered Category 1.
Offsite radiological impacts (spent fuel and high level waste disposal)	1	For the high level waste and spent fuel disposal component of the fuel cycle, there are no current regulatory limits for offsite releases of radionuclides for the current candidate repository site. However, if we assume that limits are developed along the lines of the 1995 National Academy of Sciences (NAS) report, "Technical Bases for Yucca Mountain Standards," and that in accordance with the Commission's Waste Confidence Decision, 10 CFR 51.23, a repository can and likely will be developed at some site which will comply with such limits, peak doses to virtually all individuals will be 100 millirem per year or less. However, while the Commission has reasonable confidence that these assumptions will prove correct, there is considerable uncertainty since the limits are yet to be developed, no repository application has been completed or reviewed, and uncertainty is inherent in the models used to evaluate possible pathways to the human environment. The NAS report indicated that 100 millirem per year should be considered as a starting point for limits for individual doses, but notes that some measure of consensus exists among national and international bodies that the limits should be a fraction of the 100 millirem per year. The lifetime individual risk from 100 millirem annual dose limit is about 3×10^{-3}. Estimating cumulative doses to populations over thousands of years is more problematic. The likelihood an consequences of events that could seriously compromise the integrity of a deep geologic repository were evaluated by the Department of Energy in the "Final Environmental Impact Statement: Management of Commercially Generated Radioactive Waste," October 1980. The evaluation estimated the 70-year whole-body dose commitment to the maximum individual and to the regional population resulting from several modes of breaching a reference repository in the year of closure, after 1,000 years, after 100,000 years and after 100,000,000 years. Subsequently, the NRC and other federal agencies have expended considerable effort to develop models for the design and for the licensing of a high level waste repository, especially for the candidate repository at Yucca Mountain. More meaningful estimates of doses to population may be possible in the future as more is understood about the performance of the proposed Yucca Mountain repository. Such estimates would involve very great uncertainty, especially with respect to cumulative population doses over thousands of years. The standard proposed by the NAS is a limit on maximum individual dose. The relationship of potential new regulatory requirements, based on the NAS report, and cumulative population impacts has not been determined, although the report articulates the view that protection of individuals will adequately protect the population for a repository at Yucca Mountain. However, EPA's generic repository standards in 40 CFR part 191 generally provide an indication of the order of magnitude of cumulative risk to population that could result from the licensing of a Yucca Mountain repository, assuming the ultimate standards will be within the range of standards now under consideration. The standards in 40 CFR part 191 protect the population by imposingamount of radioactive material released over 10,000 years. The cumulative release limits are based on EPA's population impact goal of 1,000 premature cancer deaths worldwide for a 100,000 metric tonne (MTHM) repository. Nevertheless, despite all the uncertainty, some judgement as to the regulatory NEPA implications of these matters should be made and it makes no sense to repeat the same judgement in every case. Even taking the uncertainties into account, the Commission concludes that these impacts are acceptable in that these impacts would not be sufficiently large to require the NEPA conclusion, for any plant, that the option of extended operation under 10 CFR part 54 should be eliminated. Accordingly, while the Commission has not assigned a single level of significance for the impacts pf spent fuel and high level waste disposal, this issue is considered in Category 1.

Non-radiological impacts of the uranium fuel cycle	1	SMALL. The nonradiological impacts of the uranium fuel cycle resulting from the renewal of an operating license for any plant are found to be small.
Low-level waste storage and disposal	1	SMALL. The comprehensive regulatory controls that are in place and the low public doses being achieved at reactors ensure that the radiological impacts to the environment will remain small during the term of a renewed license. The maximum additional on-site land that may be required for low-level waste storage during the term of a renewed license and associated impacts will be small. Nonradiological impacts on air and water will be negligible. The radiological and nonradiological environmental impacts of long-term disposal of low-level waste from any individual plant at licensed sites are small. In addition, the Commission concludes that there is reasonable assurance that sufficient low-level waste disposal capacity will be made available when needed for facilities to be decommissioned consistent with NRC decommissioning requirements.
Mixed waste storage and disposal	1	SMALL. The comprehensive regulatory controls and the facilities and procedures that are in place ensure proper handling and storage, as well as negligible doses and exposure to toxic materials for the public and the environment at all plants. License renewal will not increase the small, continuing risk to human health and the environment posed by mixed waste at all plants. The radiological and nonradiological environmental impacts of long-term disposal of mixed waste from any individual plant at licensed sites are small. In addition, the Commission concludes that there is reasonable assurance that sufficient mixed waste disposal capacity will be made available when needed for facilities to be decommissioned consistent with NRC decommissioning requirements.
On-site spent fuel	1	SMALL. The expected increase in the volume of spent fuel from an additional 20 years of operation can be safely accommodated on site with small environmental effects through dry or pool storage at all plants if a permanent repository or monitored retrievable storage is not available.
Nonradiological waste	1	SMALL. No changes to generating systems are anticipated for license renewal. Facilities and procedures are in place to ensure continued proper handling and disposal at all plants.
Transportation	1	SMALL. The impacts of transporting spent fuel enriched up to 5 percent uranium-235 with average burnup for the peak rod to current levels approved by NRC up to 62,000 MWd/MTU and the cumulative impacts of transporting high-level waste to a single repository, such as Yucca Mountain, Nevada are found to be consistent with the impact values contained in 10 CFR 51.52(c), Summary Table S–4—Environmental Impact of Transportation of Fuel and Waste to and from One Light-Water- Cooled Nuclear Power Reactor. If fuel enrichment or burnup conditions are not met, the applicant must submit an assessment of the implications for the environmental impact values reported in § 51.52.
Decommissioning		
Radiation doses	1	SMALL. Doses to the public will be well below applicable regulatory standards regardless of which decommissioning method is used. Occupational doses would increase no more than 1 man-rem caused by buildup of long-lived radionuclides during the license renewal term.
Waste management	1	SMALL. Decommissioning at the end of a 20-year license renewal period would generate no more solid wastes than at the end of the current license term. No increase in the quantities of Class C or greater than Class C wastes would be expected.
Air quality	1	SMALL. Air quality impacts of decommissioning are expected to be negligible either at the end of the current operating term or at the end of the license renewal term.
Water quality	1	SMALL. The potential for significant water quality impacts from erosion or spills is no greater whether decommissioning occurs after a 20-year license renewal period or after the original 40-year operation period, and measures are readily available to avoid such impacts.

Ecological resources	1	SMALL. Decommissioning after either the initial operating period or after a 20-year license renewal period is not expected to have any direct ecological impacts.
Socioeconomic impacts	1	SMALL. Decommissioning would have some short-term socioeconomic impacts. The impacts would not be increased by delaying decommissioning until the end of a 20-year relicense period, but they might be decreased by population and economic growth.
Environmental Justice		
Environmental justice	[4]NA	NONE. The need for and the content of an analysis of environmental justice will be addressed in plant-specific reviews.[6]

[61 FR 66546, Dec. 18, 1996, as amended at 62 FR 59276, Nov. 3, 1997; 64 FR 48507, Sept. 3, 1999; 66 FR 39278, July 30, 2001]

1. Data supporting this table are contained in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996) and NUREG-1437, Vol. 1, Addendum 1, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Main Report Section 6.3--'Transportation,' Table 9.1 'Summary of findings on NEPA issues for license renewal of nuclear power plants,' Final Report" (August 1999).

2. The numerical entries in this column are based on the following category definitions:

Category 1: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown:

(1) The environmental impacts associated with the issue have been determined to apply either to all plants or, for some issues, to plants having a specific type of cooling system or other specified plant or site characteristic;

(2) A single significance level (i.e., small, moderate, or large) has been assigned to the impacts (except for collective off site radiological impacts from the fuel cycle and from high level waste and spent fuel disposal); and

(3) Mitigation of adverse impacts associated with the issue has been considered in the analysis, and it has been determined that additional plant-specific mitigation measures are likely not to be sufficiently beneficial to warrant implementation.

The generic analysis of the issue may be adopted in each plant-specific review.

Category 2: For the issue, the analysis reported in the Generic Environmental Impact Statement has shown that one or more of the criteria of Category 1 cannot be met, and therefore additional plant-specific review is required.

3. The impact findings in this column are based on the definitions of three significance levels. Unless the significance level is identified as beneficial, the impact is adverse, or in the case of "small," may be negligible. The definitions of significance follow:

SMALL--For the issue, environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission's regulations are considered small as the term is used in this table.

MODERATE--For the issue, environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource.

LARGE--For the issue, environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.

For issues where probability is a key consideration (i.e. accident consequences), probability was a factor in determining significance.

4. NA (not applicable). The categorization and impact finding definitions do not apply to these issues.

5. If, in the future, the Commission finds that, contrary to current indications, a consensus has been reached by appropriate Federal health agencies that there are adverse health effects from electromagnetic fields, the commission will require applicants to submit plant-specific reviews of these health effects as part of their license renewal applications. Until such time, applicants for license renewal are not required to submit information on this issue.

6. Environmental Justice was not addressed in NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants," because guidance for implementing Executive Order 12898 issued on February 11, 1994, was not available prior to completion of NUREG-1437. This issue will be addressed in individual license renewal reviews.

PART 52—LICENSES, CERTIFICATIONS, AND APPROVALS FOR NUCLEAR POWER PLANTS

[Top of File]

General Provisions

[Top of File]

§ 52.0 Scope; applicability of 10 CFR Chapter I provisions

(a) This part governs the issuance of early site permits, standard design certifications, combined licenses, standard design approvals, and manufacturing licenses for nuclear power facilities licensed under Section 103 of the Atomic Energy Act of 1954, as amended (68 Stat. 919), and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242). This part also gives notice to all persons who knowingly provide to any holder of or applicant for an approval, certification, permit, or license, or to a contractor, subcontractor, or consultant of any of them, components, equipment,
materials, or other goods or services that relate to the activities of a holder of or applicant for an approval, certification, permit, or license, subject to this part, that they may be individually subject to NRC enforcement action for violation of the provisions in 10 CFR 52.4.

(b) Unless otherwise specifically provided for in this part, the regulations in 10 CFR Chapter I apply to a holder of or applicant for an approval, certification, permit, or license. A holder of or applicant for an approval, certification, permit, or license issued under this part shall comply with all requirements in 10 CFR Chapter I that are applicable. A license, approval, certification, or permit issued under this part is subject to all requirements in 10 CFR Chapter I which, by their terms, are applicable to early site permits, design certifications, combined licenses, design approvals, or manufacturing licenses.

[72 FR 49517, Aug. 28, 2007]

§ 52.1 Definitions.

[Top of File]

(a) As used in this part—

Combined license means a combined construction permit and operating license with conditions for a nuclear power facility issued under subpart C of this part.

Decommission means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits—

(i) Release of the property for unrestricted use and termination of the license; or

(ii) Release of the property under restricted conditions and termination of the license.

Design characteristics are the actual features of a reactor or reactors. Design characteristics are specified in a standard design approval, a standard design certification, a combined license application, or a manufacturing license.

Design parameters are the postulated features of a reactor or reactors that could be built at a proposed site. Design parameters are specified in an early site permit.

Early site permit means a Commission approval, issued under subpart A of this part, for a site or sites for one or more nuclear power facilities. An early site permit is a partial construction permit.

License means a license, including an early site permit, combined license or manufacturing license under this part or a renewed license issued by the Commission under this part or part 54 of this chapter.

Licensee means a person who is authorized to conduct activities under a license issued by the Commission.

Limited work authorization means the authorization provided by the Director of New Reactors or the Director of Nuclear Reactor Regulation under § 50.10 of this chapter.

Major feature of the emergency plans means an aspect of those plans necessary to:

(i) Address in whole or part one or more of the 16 standards in 10 CFR 50.47(b); or

(ii) Describe the emergency planning zones as required in 10 CFR 50.33(g).

Manufacturing license means a license, issued under subpart F of this part, authorizing the manufacture of nuclear power reactors but not

their construction, installation, or operation at the sites on which the reactors are to be operated.

Modular design means a nuclear power station that consists of two or more essentially identical nuclear reactors (modules) and each module is a separate nuclear reactor capable of being operated independent of the state of completion or operating condition of any other module co-located on the same site, even though the nuclear power station may have some shared or common systems.

Prototype plant means a nuclear power plant that is used to test new safety features, such as the testing required under 10 CFR 50.43(e). The prototype plant is similar to a first-of-akind or standard plant design in all features and size, but may include additional safety features to protect the public and the plant staff from the possible consequences of accidents during the testing period.

Site characteristics are the actual physical, environmental and demographic features of a site. Site characteristics are specified in an early site permit or in a final safety analysis report for a combined license.

Site parameters are the postulated physical, environmental and demographic features of an assumed site. Site parameters are specified in a standard design approval, standard design certification, or manufacturing license.

Standard design means a design which is sufficiently detailed and complete to support certification or approval in accordance with subpart B or E of this part, and which is usable for a multiple number of units or at a multiple number of sites without reopening or repeating the review.

Standard design approval or design approval means an NRC staff approval, issued under subpart E of this part, of a final standard design for a nuclear power reactor of the type described in 10 CFR 50.22. The approval may be for either the final design for the entire reactor facility or the final design of major portions thereof.

Standard design certification or design certification means a Commission approval, issued under subpart B of this part, of a final standard design for a nuclear power facility. This design may be referred to as a certified standard design.

(b) All other terms in this part have the meaning set out in 10 CFR 50.2, or Section 11 of the Atomic Energy Act, as applicable.

[63 FR 1897, Jan. 13, 1998; 72 FR 49518, Aug. 28, 2007; 72 FR 57446, Oct. 9, 2007]

§52.2 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

[72 FR 49519, Aug. 28, 2007]

§ 52.3 Written communications.

[Top of File]

(a) *General requirements*. All correspondence, reports, applications, and other written communications from an applicant, licensee, or holder of a standard design approval to the Nuclear Regulatory Commission concerning the regulations in this part, individual license conditions, or the terms and conditions of an early site permit or standard design approval, must be sent either by mail addressed: ATTN: Document Control Desk, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland, between the hours of 7:30 a.m. and 4:15 p.m. eastern time; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, e-mail, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/eie.html*, by calling (301) 415–6030, by e-mail at *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. If the communication is on paper, the signed original must be sent. If a submission due date falls on a Saturday, Sunday, or Federal holiday, the next Federal working day becomes the official due date.

(b) *Distribution requirements*. Copies of all correspondence, reports, and other written communications concerning the regulations in this part or individual license conditions, or the terms and conditions of an early site permit or standard design approval, must be submitted to the persons listed in paragraph (b)(1) of this section (addresses for the NRC Regional Offices are listed in appendix D to part 20 of this chapter).

(1) *Applications for amendment of permits and licenses; reports; and other communications*. All written communications (including responses to: generic letters, bulletins, information notices, regulatory information summaries, inspection reports, and miscellaneous requests for additional information) that are required of holders of early site permits, standard design approvals, combined licenses, or manufacturing licenses issued under this part must be submitted as follows, except as otherwise specified in paragraphs (b)(2) through (b)(7) of this section: to the NRC's Document Control Desk (if on paper, the signed original), with a copy to the appropriate Regional Office,

and a copy to the appropriate NRC Resident Inspector, if one has been assigned to the site of the facility or the place of manufacture of a reactor licensed under subpart F of this part.

(2) *Applications and amendments to applications*. Applications for early site permits, standard design approvals, combined licenses, manufacturing licenses and amendments to any of these types of applications must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector, if one has been assigned to the site of the facility or the place of manufacture of a reactor licensed under subpart F of this part, except as otherwise specified in paragraphs (b)(3) through (b)(7) of this section. If the application or amendment is on paper, the submission to the Document Control Desk must be the signed original.

(3) *Acceptance review application*. Written communications required for an application for determination of suitability for docketing must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office. If the communication is on paper, the submission to the Document Control Desk must be the signed original.

(4) *Security plan and related submissions*. Written communications, as defined in paragraphs (b)(4)(i) through (iv) of this section, must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office. If the communication is on paper, the submission to the Document Control Desk must be the signed original.

(i) Physical security plan under § 52.79 of this chapter;

(ii) Safeguards contingency plan under § 52.79 of this chapter;

(iii) Change to security plan, guard training and qualification plan, or safeguards contingency plan made without prior Commission approval under § 50.54(p) of this chapter;

(iv) Application for amendment of physical security plan, guard training and qualification plan, or safeguards contingency plan under § 50.90 of this chapter.

(5) *Emergency plan and related submissions*. Written communications as defined in paragraphs (b)(5)(i) through (iii) of this section must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector if one has been assigned to the site of the facility. If the communication is on paper, the submission to the Document Control Desk must be the signed original.

(i) Emergency plan under § 52.17(b) or § 52.79(a);

(ii) Change to an emergency plan under § 50.54(q) of this chapter;

(iii) Emergency implementing procedures under appendix E, Section V of part 50 of this chapter.

(6) *Updated FSAR*. An updated final safety analysis report (FSAR) or replacement pages under § 50.71(e) of this chapter, or the regulations in this part must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector if one has been assigned to the site of the facility or the place of manufacture of a reactor licensed under subpart F of this part. Paper copy submissions may be made using replacement pages; however, if a licensee chooses to use electronic submission, all subsequent updates or submissions must be performed electronically on a total replacement basis. If the communication is on paper, the submission to the Document Control Desk must be the signed original. If the communications are submitted electronically, see Guidance for Electronic Submissions to the Commission.

(7) *Quality assurance related submissions*.

(i) A change to the safety analysis report quality assurance program description under § 50.54(a)(3) or § 50.55(f)(4) of this chapter, or a change to a licensee's NRC-accepted quality assurance topical report under § 50.54(a)(3) or § 50.55(f)(4) of this chapter, must be submitted to the NRC's Document Control Desk, with a copy to the appropriate Regional Office, and a copy to the appropriate NRC Resident Inspector if one has been assigned to the site of the facility. If the communication is on paper, the submission to the Document Control Desk must be the signed original.

(ii) A change to an NRC-accepted quality assurance topical report from nonlicensees (i.e., architect/engineers, NSSS suppliers, fuel suppliers, constructors, etc.) must be submitted to the NRC's Document Control Desk. If the communication is on paper, the signed original must be sent.

(8) *Certification of permanent cessation of operations*. The licensee's certification of permanent cessation of operations under § 52.110(a)(1), must state the date on which operations have ceased or will cease, and must be submitted to the NRC's Document Control Desk. This submission must be under oath or affirmation.

(9) *Certification of permanent fuel removal*. The licensee's certification of permanent fuel removal under § 52.110(a)(1), must state the date on which the fuel was removed from the reactor vessel and the disposition of the fuel, and must be submitted to the NRC's Document Control Desk. This submission must be under oath or affirmation.

(c) *Form of communications*. All paper copies submitted to meet the requirements set forth in paragraph (b) of this section must be typewritten, printed or otherwise reproduced in permanent form on unglazed paper. Exceptions to these requirements imposed on paper

submissions may be granted for the submission of micrographic, photographic, or similar forms.

(d) *Regulation governing submission*. Applicants, licensees, and holders of standard design approvals submitting correspondence, reports, and other written communications under the regulations of this part are requested but not required to cite whenever practical, in the upper right corner of the first page of the submission, the specific regulation or other basis requiring submission.

[72 FR 49519, Aug. 28, 2007]

§ 52.4 Deliberate misconduct.

[Top of File]

(a) *Applicability*. This section applies to any:

(1) Licensee;

(2) Holder of a standard design approval;

(3) Applicant for a standard design certification;

(4) Applicant for a license or permit;

(5) Applicant for a standard design approval;

(6) Employee of a licensee;

(7) Employee of an applicant for a license, a standard design certification, or a standard design approval;

(8) Any contractor (including a supplier or consultant), subcontractor, or employee of a contractor or subcontractor of any licensee; or

(9) Any contractor (including a supplier or consultant), subcontractor, or employee of a contractor or subcontractor of any applicant for a license, a standard design certification, or a standard design approval.

(b) *Definitions*. For purposes of this section:

Deliberate misconduct means an intentional act or omission that a person or entity knows:

(i) Would cause a licensee or an applicant for a license, standard design certification, or standard design approval to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license, standard design certification, or standard design approval; or

(ii) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, holder of a standard design approval, applicant for a license, standard design certification, or standard design approval, or contractor, or subcontractor.

(c) *Prohibition against deliberate misconduct*. Any person or entity subject to this section, who knowingly provides to any licensee, any applicant for a license, standard design certification or standard design approval, or a contractor, or subcontractor of a person or entity subject to this section, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities under this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, holder of a standard design approval, or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission, any standard design approval, or standard design certification; or

(2) Deliberately submit to the NRC; a licensee, an applicant for a license, standard design certification or standard design approval; or a licensee's, standard design approval holder's, or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(d) A person or entity who violates paragraph (c)(1) or (c)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

[72 FR 49520, Aug. 28, 2007]

§ 52.5 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, holder of a standard design approval, an applicant for a license, standard design certification, or standard design approval, a contractor or subcontractor of a Commission licensee, holder of a standard design approval, applicant for a license, standard design certification, or standard design approval, against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in Section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in the introductory text of paragraph (a) of this section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in the introductory text of paragraph (a) of this section or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in the introductory text of paragraph (a) of this section; and (v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a), (e), or (f) of this section by a Commission licensee, a holder of a standard design approval, an applicant for a Commission license, standard design certification, or a standard design approval, or a contractor or subcontractor of a Commission licensee, holder of a standard design approval, or any applicant may be grounds for—

(1) Denial, revocation, or suspension of the license or standard design approval;

(2) Withdrawal or revocation of a proposed or final standard design certification;

(3) Imposition of a civil penalty on the licensee, holder of a standard design approval, or applicant (including an applicant for a standard design certification under this part following Commission adoption of final design certification rule) or a contractor or subcontractor of the licensee, holder of a standard design approval, or applicant.

(4) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) Each licensee, each holder of a standard design approval, and each applicant for a license, standard design certification, or standard design approval, shall prominently post the revision of NRC Form 3, "Notice to Employees," referenced in 10 CFR 19.11(e). This form must be posted at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than thirty (30) days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, standard design certification, or standard design approval under 10 CFR part 52, and for 30 days following license termination or the expiration or termination of the standard design certification or standard design approval under 10 CFR part 52.

(2) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415–7232, via e-mail to *forms@nrc.gov*, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the NRC's home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor under Section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee

from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

(g) Part 19 of this chapter sets forth requirements and regulatory provisions applicable to licensees, holders of a standard design approval, applicants for a license, standard design certification, or standard design approval, and contractors or subcontractors of a Commission licensee, or holder of a standard design approval, and are in addition to the requirements in this section.

[72 FR 49520, Aug. 28, 2007; 72 FR 63974, Nov. 14, 2007]

§ 52.6 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by a licensee (including an early site permit holder, a combined license holder, and a manufacturing license holder), a holder of a standard design approval under this part, and an applicant for a license or an applicant for a standard design certification or a standard design approval under this part, and information required by statute or by the Commission's regulations, orders, license conditions, or terms and conditions of a standard design approval to be maintained by the licensee, the holder of a standard design approval under this part, the applicant for a standard design certification under this part following Commission adoption of a final design certification rule, and an applicant for a license, a standard design certification, or a standard design approval under this part shall be complete and accurate in all material respects.

(b) Each applicant or licensee, each holder of a standard design approval under this part, and each applicant for a standard design certification under this part following Commission adoption of a final design certification regulation, shall notify the Commission of information identified by the applicant or the licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant, licensee, or holder violates this paragraph only if the applicant, licensee, or holder fails to notify the Commission of information that the applicant, licensee, or holder has been identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within 2 working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[72 FR 49521, Aug. 28, 2007]

§ 52.7 Specific exemptions.

[Top of File]

The Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part. The Commission’s consideration will be governed by § 50.12 of this chapter, unless other criteria are provided for in this part, in which case the Commission’s consideration will be governed by the criteria in this part. Only if those criteria are not met will the Commission’s consideration be governed by § 50.12 of this chapter. The Commission’s consideration of requests for exemptions from requirements of the regulations of other parts in this chapter, which are applicable by virtue of this part, shall be governed by the exemption requirements of those parts.

[72 FR 49521, Aug. 28, 2007]

§ 52.8 Combining licenses; elimination of repetition.

[Top of File]

(a) An applicant for a license under this part may combine in its application several applications for different kinds of licenses under the regulations of this chapter.

(b) An applicant may incorporate by reference in its application information contained in previous applications, statements or reports filed with the Commission, provided, however, that such references are clear and specific.

(c) The Commission may combine in a single license the activities of an applicant which would otherwise be licensed separately.

[62 FR 52188, Oct. 6, 1997, as amended at 64 FR 72015, Dec. 23, 1999; 57 FR 76100, Nov. 4, 2002; 71 FR 4478, Jan. 27, 2006; 72 FR 49522, Aug. 28, 2007]

§ 52.9 Jurisdictional limits.

[Top of File]

No permit, license, standard design approval, or standard design certification under this part shall be deemed to have been issued for

activities which are not under or within the jurisdiction of the United States.

[63 FR 1897, Jan. 13, 1998; 72 FR 49522, Aug. 28, 2007]

§ 52.10 Attacks and destructive acts.

[Top of File]

Neither an applicant for a license to manufacture, construct, and operate a utilization facility under this part, nor for an amendment to this license, or an applicant for an early site permit, a standard design certification, or standard design approval under this part, or for an amendment to the early site permit, standard design certification, or standard design approval, is required to provide for design features or other measures for the specific purpose of protection against the effects of—

(a) Attacks and destructive acts, including sabotage, directed against the facility by an enemy of the United States, whether a foreign government or other person; or

(b) Use or deployment of weapons incident to U.S. defense activities.

[72 FR 49522, Aug. 28, 2007]

§ 52.11 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements
contained in this part under Control Number 3150–0151.

(b) The approved information collection requirements contained in this part appear in §§ 52.7, 52.15, 52.16, 52.17, 52.29, 52.35, 52.39, 52.45, 52.46, 52.47, 52.57, 52.63, 52.75, 52.77, 52.79, 52.80, 52.93, 52.99, 52.110, 52.135,
52.136, 52.137, 52.155, 52.156, 52.157, 52.158, 52.171, 52.177, and appendices A, B, C, D, and N of part 52.

[72 FR 49522, Aug. 28, 2007]

Subpart A—Early Site Permits

[Top of File]

§ 52.12 Scope of subpart.

This subpart sets out the requirements and procedures applicable to Commission issuance of an early site permit for approval of a site for one or more nuclear power facilities separate from the filing of an application for a construction permit or combined license for the facility.

[72 FR 49522, Aug. 28, 2007]

§ 52.13 Relationship to other subparts.

[Top of File]

This subpart applies when any person who may apply for a construction permit under 10 CFR part 50, or for a combined license under this part seeks an early site permit from the Commission separately from an application for a construction permit or a combined license.

[72 FR 49522, Aug. 28, 2007]

§ 52.15 Filing of applications.

[Top of File]

(a) Any person who may apply for a construction permit under 10 CFR part 50, or for a combined license under this
part, may file an application for an early site permit with the Director, Office of New Reactors, or the Director, Office of
Nuclear Reactor Regulation, as appropriate. An application for an early site permit may be filed notwithstanding the fact that an application for a construction permit or a combined license has not been filed in connection with the site for which a permit is sought.

(b) The application must comply with the applicable filing requirements of §§ 52.3 and 50.30 of this chapter.

(c) The fees associated with the filing and review of an application for the initial issuance or renewal of an early site permit are set forth in 10 CFR part 170.

[72 FR 49522, Aug. 28, 2007]

§ 52.16 Contents of applications; general information.

[Top of File]

The application must contain all of the information required by 10 CFR 50.33(a) through (d) and (j) of this chapter.

[72 FR 49522, Aug. 28, 2007]

§ 52.17 Contents of applications; technical information.

[Top of File]

(a)For applications submitted before September 27, 2007, the rule provisions in effect at the date of docketing apply unless otherwise requested by the applicant in writing. The application must contain:

(1) A site safety analysis report. The site safety analysis report shall include the following:

(i) The specific number, type, and thermal power level of the facilities, or range of possible facilities, for which the site may be used;

(ii) The anticipated maximum levels of radiological and thermal effluents each facility will produce;

(iii) The type of cooling systems, intakes, and outflows that may be associated with each facility;

(iv) The boundaries of the site;

(v) The proposed general location of each facility on the site;

(vi) The seismic, meteorological, hydrologic, and geologic characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated;

(vii) The location and description of any nearby industrial, military, or transportation facilities and routes;

(viii) The existing and projected future population profile of the area surrounding the site;

(ix) A description and safety assessment of the site on which a facility is to be located. The assessment must contain an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequence evaluation factors identified in paragraphs (a)(1)(ix)(A) and (a)(1)(ix)(B) of this section. In performing this assessment, an applicant shall assume a fission product release [1] from the core into the containment assuming that the facility is operated at the ultimate power level contemplated. The applicant shall perform an evaluation and analysis of the postulated fission product release, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents, together with applicable site characteristics, including site meteorology, to evaluate the offsite radiological consequences. Site characteristics must comply with part 100 of this chapter. The evaluation must determine that:

(A) An individual located at any point on the boundary of the exclusion area for any 2 hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem [2] total effective dose equivalent (TEDE).

(B) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a radiation dose in excess of 25 rem TEDE;

(x) Information demonstrating that site characteristics are such that adequate security plans and measures can be developed;

(xi) For applications submitted after September 27, 2007, a description of the quality assurance program applied to site-related activities for the future design, fabrication, construction, and testing of the structures, systems, and components of a facility or facilities that may be constructed on the site. Appendix B to 10 CFR part 50 sets forth the requirements for quality assurance programs for nuclear power plants. The description of the quality assurance program for a nuclear power plant site shall include a discussion of how the applicable requirements of appendix B to part 50 of this chapter

will be satisfied; and

(xii) An evaluation of the site against applicable sections of the Standard Review Plan (SRP) revision in effect 6 months before the docket date of the application. The evaluation required by this section shall include an identification and description of all differences in analytical techniques and procedural measures proposed for a site and those corresponding techniques and measures given in the SRP acceptance criteria. Where such a difference exists, the evaluation shall discuss how the proposed alternative provides an acceptable method of complying with the Commission's regulations, or portions thereof, that underlie the corresponding SRP acceptance criteria. The SRP is not a substitute for the regulations, and compliance is not a requirement.

(2) A complete environmental report as required by 10 CFR 51.50(b).

(b)(1) The site safety analysis report must identify physical characteristics of the proposed site, such as egress limitations from the area surrounding the site, that could pose a significant impediment to the development of emergency plans. If physical characteristics are identified that could pose a significant impediment to the development of emergency plans, the application must identify measures that would, when implemented, mitigate or eliminate the significant impediment.

(2) The site safety analysis report may also:

(i) Propose major features of the emergency plans, in accordance with the pertinent standards of 10 CFR 50.47, and the requirements of appendix E to 10 CFR part 50, such as the exact size and configuration of the emergency planning zones, for review and approval by NRC, in consultation with the Department of Homeland Security (DHS) in the absence of complete and integrated emergency plans; or

(ii) Propose complete and integrated emergency plans for review and approval by the NRC, in consultation with DHS, in accordance with the applicable standards of 10 CFR 50.47, and the requirements of appendix E to 10 CFR part 50. To the extent approval of emergency plans is sought, the application must contain the information required by §§ 50.33(g) and (j) of this chapter.

(3) Emergency plans submitted under paragraph (b)(2)(ii) of this section must include the proposed inspections, tests, and analyses that the holder of a combined license referencing the early site permit shall perform, and the acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will be operated in conformity with the emergency plans, the provisions of the Act, and the Commission's rules and regulations. Major features of an emergency plan submitted under paragraph (b)(2)(i) of this section may include proposed inspections, tests, analyses, and acceptance criteria.

(4) Under paragraphs (b)(1) and (b)(2)(i) of this section, the site safety analysis report must include a description of contacts and arrangements made with Federal, State, and local governmental agencies with emergency planning responsibilities. The site safety analysis report must contain any certifications that have been obtained. If these certifications cannot be obtained, the site safety analysis report must contain information, including a utility plan, sufficient to show that the proposed plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the site. Under the option set forth in paragraph (b)(2)(ii) of this section, the applicant shall make good faith efforts to obtain from the same governmental agencies certifications that:

(i) The proposed emergency plans are practicable;

(ii) These agencies are committed to participating in any further development of the plans, including any required field demonstrations, and

(iii) That these agencies are committed to executing their responsibilities under the plans in the event of an emergency.

(c) An applicant may request that a limited work authorization under 10 CFR 50.10 be issued in conjunction with the early site permit. The application must include the information otherwise required by 10 CFR 50.10(d)(3). Applications submitted before, and pending as of November 8, 2007, must include the information required by § 52.17(c) effective on the date of docketing.

(d) Each applicant for an early site permit under this part shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in §§ 73.21 and 73.22 of this chapter, as applicable.

[54 FR 15386, Sept. 18, 1989, as amended at 61 FR 65175, Dec. 11, 1996; 72 FR 49522, Aug. 28, 2007; 72 FR 57447, Oct. 9, 2007; 73 FR 63571, Oct. 24, 2008]

1 The fission product release assumed for this evaluation should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events. Such accidents have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products.

2 A whole body dose of 25 rem has been stated to correspond numerically to the once in a lifetime accidental or emergency dose for radiation workers which, according to NCRP recommendations at the time could be disregarded in the determination of their radiation exposure status (see NBS Handbook 69 dated June 5, 1959). However, its use is not intended to imply that this number constitutes an acceptable limit for an emergency dose to the public under accident conditions. Rather, this dose value has been set forth in this section as a reference value, which can be used in the evaluation of plant design features with respect to postulated reactor accidents, to assure that these designs provide assurance of low risk of public exposure to radiation, in the event of an accidents.

§ 52.18 Standards for review of applications.

[Top of File]

Applications filed under this subpart will be reviewed according to the applicable standards set out in 10 CFR part 50 and its appendices and 10 CFR part 100. In addition, the Commission shall prepare an environmental impact statement during review of the application, in accordance with the applicable provisions of 10 CFR part 51. The Commission shall determine, after consultation with DHS, whether the information required of the applicant by § 52.17(b)(1) shows that there is no significant impediment to the development of emergency plans that cannot be mitigated or eliminated by
measures proposed by the applicant, whether any major features of emergency plans submitted by the applicant under § 52.17(b)(2)(i) are acceptable in accordance with the applicable standards of 10 CFR 50.47 and the requirements of appendix E to 10 CFR part 50, and whether any emergency plans submitted by the applicant under § 52.17(b)(2)(ii) provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.

[72 FR 49523, Aug. 28, 2007]

§ 52.19 Permit and renewal fees.

[Top of File]

The fees charged for the review of an application for the initial issuance or renewal of an early site permit are set forth in 10 CFR 170.21 and shall be paid in accordance with 10 CFR 170.12.

[56 FR 31499, July 10, 1991]

§ 52.21 Administrative review of applications; hearings.

[Top of File]

An early site permit is subject to all procedural requirements in 10 CFR part 2, including the requirements for docketing in § 2.101(a)(1) through (4) of this chapter, and the requirements for issuance of a notice of hearing in §§ 2.104(a) and (d) of this chapter, provided that the designated sections may not be construed to require that the environmental report, or draft or final environmental impact statement include an assessment of the benefits of construction and operation of the reactor or reactors, or an analysis of alternative energy sources. The presiding officer in an early site permit hearing shall not admit contentions proffered by any party concerning an assessment of the benefits of
construction and operation of the reactor or reactors, or an analysis of alternative energy sources if those issues were not addressed by the applicant in the early site permit application. All hearings conducted on applications for early site permits filed under this part are governed by the procedures contained in subparts C, G, L, and N of 10 CFR part 2, as applicable.

[69 FR 2277, Jan. 14, 2004; 72 FR 49524, Aug. 28, 2007]

§ 52.23 Referral to the Advisory Committee on Reactor Safeguards (ACRS).

[Top of File]

The Commission shall refer a copy of the application for an early site permit to the ACRS. The ACRS shall report on those portions of the application which concern safety.

[72 FR 49524, Aug. 28, 2007]

§ 52.24 Issuance of early site permit.

[Top of File]

(a) After conducting a hearing under § 52.21 and receiving the report to be submitted by the ACRS under § 52.23, the Commission may issue an early site permit, in the form the Commission deems appropriate, if the Commission finds that:

(1) An application for an early site permit meets the applicable standards and requirements of the Act and the Commission's regulations;

(2) Notifications, if any, to other agencies or bodies have been duly made;

(3) There is reasonable assurance that the site is in conformity with the provisions of the Act, and the Commission's regulations;

(4) The applicant is technically qualified to engage in any activities authorized;

(5) The proposed inspections, tests, analyses and acceptance criteria, including any on emergency planning, are necessary and sufficient, within the scope of the early site permit, to provide reasonable assurance that the facility has been constructed and will be operated in

conformity with the license, the provisions of the Act, and the Commission's regulations;

(6) Issuance of the permit will not be inimical to the common defense and security or to the health and safety of the public;

(7) Any significant adverse environmental impact resulting from activities requested under § 52.17(c) can be redressed; and

(8) The findings required by subpart A of 10 CFR part 51 have been made.

(b) The early site permit must specify the site characteristics, design parameters, and terms and conditions of the early site permit the Commission deems appropriate. Before issuance of either a construction permit or combined license referencing an early site permit, the Commission shall find that any relevant terms and conditions of the early site permit have been met. Any terms or conditions of the early site permit that could not be met by the time of issuance of the construction permit or combined license, must be set forth as terms or conditions of the construction permit or combined license.

(c) The early site permit shall specify those 10 CFR 50.10 activities requested under § 52.17(c) that the permit holder is authorized to perform.

[72 FR 49524, Aug. 28, 2007; 72 FR 57447, Oct. 9, 2007]

§ 52.25 Extent of activities permitted.

[Top of File]

If the activities authorized by § 52.24(c) are performed and the site is not referenced in an application for a construction permit or a combined license issued under subpart C of this part while the permit remains valid, then the early site permit remains in effect solely for the purpose of site redress, and the holder of the permit shall redress the site in accordance with the terms of the site redress plan required by § 52.17(c). If, before redress is complete, a use not envisaged in the redress plan is found for the site or parts thereof, the holder of the permit shall carry out the redress plan to the greatest extent possible consistent with the alternate use.

[72 FR 49524, Aug. 28, 2007]

§ 52.26 Duration of permit.

[Top of File]

(a) Except as provided in paragraph (b) of this section, an early site permit issued under this subpart may be valid for not less than 10, nor more than 20 years from the date of issuance.

(b) An early site permit continues to be valid beyond the date of expiration in any proceeding on a construction permit application or a combined license application that references the early site permit and is docketed before the date of expiration of the early site permit, or, if a timely application for renewal of the permit has been docketed, before the Commission has determined whether to renew the permit.

(c) An applicant for a construction permit or combined license may, at its own risk, reference in its application a site for which an early site permit application has been docketed but not granted.

(d) Upon issuance of a construction permit or combined license, a referenced early site permit is subsumed, to the extent referenced, into the construction permit or combined license.

[72 FR 49524, Aug. 28, 2007; 72 FR 57447, Oct. 9, 2007]

§ 52.27 Limited work authorization after issuance of early site permit.

[Top of File]

A holder of an early site permit may request a limited work authorization in accordance with § 50.10 of this chapter.

[72 FR 57447, Oct. 9, 2007]

§ 52.28 Transfer of early site permit.

[Top of File]

An application to transfer an early site permit will be processed under 10 CFR 50.80.

[72 FR 49524, Aug. 28, 2007]

§ 52.29 Application for renewal.

[Top of File]

(a) Not less than 12, nor more than 36 months before the expiration date stated in the early site permit, or any later renewal period, the permit holder may apply for a renewal of the permit. An application for renewal must contain all information necessary to bring up to date the information and data contained in the previous application.

(b) Any person whose interests may be affected by renewal of the permit may request a hearing on the application for renewal. The request for a hearing must comply with 10 CFR 2.309. If a hearing is granted, notice of the hearing will be published in accordance with 10 CFR 2.309.

(c) An early site permit, either original or renewed, for which a timely application for renewal has been filed, remains in effect until the Commission has determined whether to renew the permit. If the permit is not renewed, it continues to be valid in certain proceedings in accordance with the provisions of § 52.27(b).

(d) The Commission shall refer a copy of the application for renewal to the ACRS. The ACRS shall report on those portions of the application which concern safety and shall apply the criteria set forth in § 52.31.

[69 FR 2277, Jan. 14, 2004; 72 FR 49524, Aug. 28, 2007]

§ 52.31 Criteria for renewal.

[Top of File]

(a) The Commission shall grant the renewal if it determines that:

(1) The site complies with the Act, the Commission's regulations, and orders applicable and in effect at the time the site permit was originally issued; and

(2) Any new requirements the Commission may wish to impose are:

(i) Necessary for adequate protection to public health and safety or common defense and security;

(ii) Necessary for compliance with the Commission's regulations, and orders applicable and in effect at the time the site permit was originally issued; or

(iii) A substantial increase in overall protection of the public health and safety or the common defense and security to be derived from the new requirements, and the direct and indirect costs of implementation of those requirements are justified in view of this increased protection.

(b) A denial of renewal for failure to comply with the provisions of § 52.31(a) does not bar the permit holder or another applicant from filing a new application for the site which proposes changes to the site or the way that it is used to correct the deficiencies cited in the denial of the renewal.

[72 FR 49525, Aug. 28, 2007]

§ 52.33 Duration of renewal.

[Top of File]

Each renewal of an early site permit may be for not less than 10, nor more than 20 years, plus any remaining years on the early site permit then in effect before renewal.

[72 FR 49525, Aug. 28, 2007]

§ 52.35 Use of site for other purposes.

[Top of File]

A site for which an early site permit has been issued under this subpart may be used for purposes other than those described in the permit, including the location of other types of energy facilities. The permit holder shall inform the Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate, (Director) of any significant uses for the site which have not been approved in the early site permit. The information about the activities must be given to the Director at least 30 days in advance of any actual construction or site modification for the activities. The information provided could be the basis for imposing new requirements on the permit, in accordance with the provisions of § 52.39. If the permit holder informs the Director that the holder no longer intends to use the

site for a nuclear power plant, the Director may terminate the permit.

[72 FR 49525, Aug. 28, 2007; 73 FR 5724, Jan. 31, 2008]

§ 52.37 Reporting of defects and noncompliance; revocation, suspension, modification of permits for cause.

[Top of File]

For purposes of part 21 and 10 CFR 50.100, an early site permit is a construction permit.

§ 52.39 Finality of early site permit determinations.

[Top of File]

(a) *Commission finality*. (1) Notwithstanding any provision in 10 CFR 50.109, while an early site permit is in effect under §§ 52.27 or 52.33, the Commission may not change or impose new site characteristics, design parameters, or terms and conditions, including emergency planning requirements, on the early site permit unless the Commission:

(i) Determines that a modification is necessary to bring the permit or the site into compliance with the Commission's regulations and orders applicable and in effect at the time the permit was issued;

(ii) Determines the modification is necessary to assure adequate protection of the public health and safety or the common defense and security;

(iii) Determines that a modification is necessary based on an update under paragraph (b) of this section; or

(iv) Issues a variance requested under paragraph (d) of this section.

(2) In making the findings required for issuance of a construction permit or combined license, or the findings required by § 52.103, or in any enforcement hearing other than one initiated by the Commission under paragraph (a)(1) of this section, if the application for the construction permit or combined license references an early site permit, the Commission shall treat as resolved those matters resolved in the proceeding on the application for issuance or renewal of the early site permit, except as provided for in paragraphs (b), (c), and (d) of this section.

(i) If the early site permit approved an emergency plan (or major features thereof) that is in use by a licensee of a nuclear power plant, the Commission shall treat as resolved changes to the early site permit emergency plan (or major features thereof) that are identical to changes made to the licensee's emergency plans in compliance with § 50.54(q) of this chapter occurring after issuance of the early site permit.

(ii) If the early site permit approved an emergency plan (or major features thereof) that is not in use by a licensee of a nuclear power plant, the Commission shall treat as resolved changes that are equivalent to those that could be made under § 50.54(q) of this chapter without prior NRC approval had the emergency plan been in use by a licensee.

(b) *Updating of early site permitemergency preparedness*. An applicant for a construction permit, operating license, or combined license who has filed an application referencing an early site permit issued under this subpart shall update the emergency preparedness information that was provided under § 52.17(b), and discuss whether the updated information materially changes the bases for compliance with applicable NRC requirements.

(c) *Hearings and petitions*. (1) In any proceeding for the issuance of a construction permit, operating license, or combined license referencing an early site permit, contentions on the following matters may be litigated in the same manner as other issues material to the proceeding:

(i) The nuclear power reactor proposed to be built does not fit within one or more of the site characteristics or design parameters included in the early site permit;

(ii) One or more of the terms and conditions of the early site permit have not been met;

(iii) A variance requested under paragraph (d) of this section is unwarranted or should be modified;

(iv) New or additional information is provided in the application that substantially alters the bases for a previous NRC conclusion or constitutes a sufficient basis for the Commission to modify or impose new terms and conditions related to emergency preparedness; or

(v) Any significant environmental issue that was not resolved in the early site permit proceeding, or any issue involving the impacts of construction and operation of the facility that was resolved in the early site permit proceeding for which significant new information has been identified.

(2) Any person may file a petition requesting that the site characteristics, design parameters, or terms and conditions of the early site

permit should be modified, or that the permit should be suspended or revoked. The petition will be considered in accordance with § 2.206 of this chapter. Before construction commences, the Commission shall consider the petition and determine whether any immediate action is required. If the petition is granted, an appropriate order will be issued. Construction under the construction permit or combined license will not be affected by the granting of
the petition unless the order is made immediately effective. Any change required by the Commission in response to the petition must meet the requirements of paragraph (a)(1) of this section.

(d) *Variances*. An applicant for a construction permit, operating license, or combined license referencing an early site permit may include in its application a request for a variance from one or more site characteristics, design parameters, or terms and conditions of the early site permit, or from the site safety analysis report. In determining whether to grant the variance, the Commission shall apply the same technically relevant criteria applicable to the application for the original or renewed early site permit. Once a construction permit or combined license referencing an early site permit is issued, variances from the early site permit will not be granted for that construction permit or combined
license.

(e) *Early site permit amendment*. The holder of an early site permit may not make changes to the early site permit, including the site safety analysis report, without prior Commission approval. The request for a change to the early site
permit must be in the form of an application for a license amendment, and must meet the requirements of 10 CFR 50.90 and 50.92.

(f) *Information requests*. Except for information requests seeking to verify compliance with the current licensing basis of the early site permit, information requests to the holder of an early site permit must be evaluated before issuance to ensure that the burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each evaluation performed by the NRC staff must be in accordance with 10 CFR 50.54(f), and must be approved by the Executive Director for Operations or his or her designee before issuance of the request.

[69 FR 2277, Jan. 14, 2004; 72 FR 49525, Aug. 28, 2007]

Subpart B--Standard Design Certifications

[Top of File]

§ 52.41 Scope of subpart.

(a) This subpart sets forth the requirements and procedures applicable to Commission issuance of rules granting standard design certifications for nuclear power facilities separate from the filing of an application for a construction permit or combined license for such a facility.

(b)(1) Any person may seek a standard design certification for an essentially complete nuclear power plant design
which is an evolutionary change from light water reactor designs of plants which have been licensed and in commercial operation before April 18, 1989.

(2) Any person may also seek a standard design certification for a nuclear power plant design which differs significantly from the light water reactor designs described in paragraph (b)(1) of this section or uses simplified, inherent, passive, or other innovative means to accomplish its safety functions.

[72 FR 49526, Aug. 28, 2007]

§ 52.43 Relationship to other subparts.

[Top of File]

(a) This subpart applies to a person that requests a standard design certification from the NRC separately from an application for a combined license filed under subpart C of this part for a nuclear power facility. An applicant for a combined license may reference a standard design certification.

(b) Subpart E of this part governs the NRC staff review and approval of a final standard design. Subpart E may be used independently of the provisions in this subpart.

(c) Subpart F of this part governs the issuance of licenses to manufacture nuclear power reactors to be installed and operated at sites not identified in the manufacturing license application. Subpart F may be used independently of the provisions in this subpart. However, an applicant for a manufacturing license under subpart F may reference a design certification.

[69 FR 2277, Jan. 14, 2004; 72 FR 49526, Aug. 28, 2007]

§ 52.45 Filing of applications.

[Top of File]

(a) An application for design certification may be filed notwithstanding the fact that an application for a construction permit, combined license, or manufacturing license for such a facility has not been filed.

(b) The application must comply with the applicable filing requirements of §§ 52.3 and §§ 2.811 through 2.819 of this chapter.

(c) The fees associated with the review of an application for the initial issuance or renewal of a standard design certification are set forth in 10 CFR part 170.

[72 FR 49526, Aug. 28, 2007]

§ 52.46 Contents of applications; general information.

[Top of File]

The application must contain all of the information required by 10 CFR 50.33(a) through (c) and (j).

[72 FR 49526, Aug. 28, 2007]

§ 52.47 Contents of applications; technical information.

[Top of File]

The application must contain a level of design information sufficient to enable the Commission to judge the applicant's proposed means of assuring that construction conforms to the design and to reach a final conclusion on all safety questions associated with the design before the certification is granted. The information submitted for a design certification must include performance requirements and design information sufficiently detailed to permit the preparation of acceptance and inspection requirements by the NRC, and procurement specifications and construction and installation specifications by an applicant. The Commission will require, before design certification, that information normally contained in certain procurement specifications and construction and installation specifications be completed and available for audit if the information is necessary for the Commission to make its safety determination.

(a) The application must contain a final safety analysis report (FSAR) that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility as a whole, and must include the following information:

(1) The site parameters postulated for the design, and an analysis and evaluation of the design in terms of those site parameters;

(2) A description and analysis of the structures, systems, and components (SSCs) of the facility, with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished. It is expected that the standard plant will reflect through its design, construction, and operation an extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products. The description shall be sufficient to permit understanding of the system designs and their relationship to the safety evaluations. Such items as the reactor core, reactor coolant system, instrumentation and control systems, electrical systems, containment system,
other engineered safety features, auxiliary and emergency systems, power conversion systems, radioactive waste handling systems, and fuel handling systems shall be discussed insofar as they are pertinent. The following power reactor design characteristics will be taken into consideration by the Commission:

(i) Intended use of the reactor including the proposed maximum power level and the nature and inventory of contained radioactive materials;

(ii) The extent to which generally accepted engineering standards are applied to the design of the reactor;

(iii) The extent to which the reactor incorporates unique, unusual or enhanced safety features having a significant bearing on the probability or consequences of accidental release of radioactive materials; and

(iv) The safety features that are to be engineered into the facility and those barriers that must be breached as a result of an accident before a release of radioactive material to the environment can occur. Special attention must be directed to plant design features intended to mitigate the radiological consequences of accidents. In performing this assessment, an applicant shall assume a fission product release [3] from the core into the containment assuming that the facility is operated at the ultimate power level contemplated. The applicant shall perform an evaluation and analysis of the postulated fission product release, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents, together with applicable
postulated site parameters, including site meteorology, to evaluate the offsite radiological consequences. The evaluation must determine that:

(A) An individual located at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem [4] total effective dose equivalent (TEDE);

(B) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a radiation dose in excess of 25 rem TEDE; (3) The design of the facility including:

(i) The principal design criteria for the facility. Appendix A to 10 CFR part 50, general design criteria (GDC), establishes minimum requirements for the principal design criteria for watercooled nuclear power plants similar in design and location to plants for which construction permits have previously been issued by the Commission and provides guidance to applicants in establishing principal design criteria for other types of nuclear power units;

(ii) The design bases and the relation of the design bases to the principal design criteria;

(iii) Information relative to materials of construction, general arrangement, and approximate dimensions, sufficient to provide reasonable assurance that the design will conform to the design bases with an adequate margin for safety;

(4) An analysis and evaluation of the design and performance of structures, systems, and components with the objective of assessing the risk to public health and safety resulting from operation of the facility and including determination of the margins of safety during normal operations and transient conditions anticipated during the life of the facility, and the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents. Analysis and evaluation of emergency core cooling system (ECCS) cooling performance and the need for high-point vents following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of §§ 50.46 and 50.46a of this chapter;

(5) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in part 20 of this chapter;

(6) The information required by § 20.1406 of this chapter;

(7) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter;

(8) The information necessary to demonstrate compliance with any technically relevant portions of the Three Mile Island requirements set forth in 10 CFR 50.34(f), except paragraphs (f)(1)(xii), (f)(2)(ix), and (f)(3)(v);

(9) For applications for light-watercooled nuclear power plants, an evaluation of the standard plant design against the Standard Review Plan (SRP) revision in effect 6 months before the docket date of the application. The evaluation required by this section shall include an identification and description of all differences in design features, analytical techniques, and procedural measures proposed for the design and those corresponding features, techniques, and measures given in the SRP acceptance criteria. Where a difference exists, the evaluation shall discuss how the proposed alternative provides an acceptable method of complying with the Commission's regulations, or portions thereof, that underlie the corresponding SRP acceptance criteria. The SRP is not a substitute for the regulations, and compliance is not a requirement.

(10) The information with respect to the design of equipment to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations described in 10 CFR 50.34a(e);

(11) Proposed technical specifications prepared in accordance with the requirements of §§ 50.36 and 50.36a of this chapter;

(12) An analysis and description of the equipment and systems for combustible gas control as required by 10 CFR 50.44;

(13) The list of electric equipment important to safety that is required by 10 CFR 50.49(d);

(14) A description of protection provided against pressurized thermal shock events, including projected values of the reference temperature for reactor vessel beltline materials as defined in 10 CFR 50.60 and 50.61;

(15) Information demonstrating how the applicant will comply with requirements for reduction of risk from anticipated transients without scram events in § 50.62;

(16) A coping analysis, and any design features necessary to address station blackout, as required by 10 CFR 50.63;

(17) Information demonstrating how the applicant will comply with requirements for criticality accidents in § 50.68(b)(2)–(b)(4);

(18) A description and analysis of the fire protection design features for the standard plant necessary to comply with 10 CFR part 50, appendix A, GDC 3, and § 50.48 of this chapter;

(19) A description of the quality assurance program applied to the design of the structures, systems, and components of the facility. Appendix B to 10 CFR part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," sets forth the requirements for quality assurance programs for nuclear power plants. The description of the quality assurance program for a nuclear power plant shall include a discussion of how the applicable requirements of appendix B to 10 CFR part 50 were satisfied;

(20) The information necessary to demonstrate that the standard plant complies with the earthquake engineering criteria in 10 CFR part 50, appendix S;

(21) Proposed technical resolutions of those Unresolved Safety Issues and medium- and high-priority generic safety issues which are identified in the version of NUREG–0933 current on the date up to 6 months before the docket date of the application and which are technically relevant to the design;

(22) The information necessary to demonstrate how operating experience insights have been incorporated into the plant design;

(23) For light-water reactor designs, a description and analysis of design features for the prevention and mitigation of severe accidents, e. g., challenges to containment integrity caused by core-concrete interaction, steam explosion, high-pressure core melt ejection, hydrogen combustion, and containment bypass;

(24) A representative conceptual design for those portions of the plant for which the application does not seek certification, to aid the NRC in its review of the FSAR and to permit assessment of the adequacy of the interface requirements in paragraph (a)(25) of this section;

(25) The interface requirements to be met by those portions of the plant for which the application does not seek certification. These requirements must be sufficiently detailed to allow completion of the FSAR;

(26) Justification that compliance with the interface requirements of paragraph (a)(25) of this section is verifiable through inspections, tests, or analyses. The method to be used for verification of interface requirements must be included as part of the proposed ITAAC required by paragraph (b)(1) of this section; and

(27) A description of the designspecific probabilistic risk assessment (PRA) and its results.

(b) The application must also contain:

(1) The proposed inspections, tests, analyses, and acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, a facility that incorporates the design certification has been constructed and will be operated in conformity with the design certification, the provisions of the Act, and the Commission's rules and regulations; and

(2) An environmental report as required by 10 CFR 51.55.

(c) This paragraph applies, according to its provisions, to particular applications:

(1) An application for certification of a nuclear power reactor design that is an evolutionary change from light-water reactor designs of plants that have been licensed and in commercial operation before April 18, 1989, must provide an essentially complete nuclear power plant design except for site-specific elements such as the service water intake structure and the ultimate heat sink;

(2) An application for certification of a nuclear power reactor design that differs significantly from the light-water reactor designs described in paragraph (c)(1) of this section or uses simplified, inherent, passive, or other innovative means to accomplish its safety functions must provide an essentially complete nuclear power reactor design except for site-specific elements such as the service water intake structure and the ultimate heat sink, and must meet the requirements of 10 CFR 50.43(e); and

(3) An application for certification of a modular nuclear power reactor design must describe and analyze the possible operating configurations of the reactor modules with common systems, interface requirements, and system interactions. The final safety analysis must also account for differences among the configurations, including any restrictions that will be necessary during the construction and startup of a given module to ensure the safe operation of any module already operating.

(d) Each applicant for a standard design certification under this part shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in §§ 73.21 and 73.22 of this chapter, as applicable.

[68 FR 54142, Sept. 16, 2003; 72 FR 49526, Aug. 28, 2007; 73 FR 63571, Oct. 24, 2008]

3 The fission product release assumed for this evaluation should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events. These accidents have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products.

4 A whole body dose of 25 rem has been stated to correspond numerically to the once in a lifetime accidental or emergency dose for radiation workers which, according to NCRP recommendations at the time could be disregarded in the determination of their radiation exposure status (see NBS Handbook 69 dated June 5, 1959). However, its use is not intended to imply that this number constitutes an acceptable limit for an emergency dose to the public under accident conditions. This dose value has been set forth in this section as a reference value, which can be used in the evaluation of plant design features with respect to postulated reactor accidents, to assure that these designs provide

assurance of low risk of public exposure to radiation, in the event of an accident.

§ 52.48 Standards for review of applications.

[Top of File]

Applications filed under this subpart will be reviewed for compliance with the standards set out in 10 CFR parts 20, 50 and its appendices, 51, 73, and 100.

[72 FR 49528, Aug. 28, 2007]

§ 52.49 Fees for review of applications.

[Top of File]

The fee charged for the review of an application for the initial issuance or renewal of a standard design certification are set forth in 10 CFR 170.21 and shall be paid in accordance with 10 CFR 170.12.

[56 FR 31499, July 10, 1991]

§ 52.51 Administrative review of applications.

[Top of File]

(a) A standard design certification is a rule that will be issued in accordance with the provisions of subpart H of 10 CFR part 2, as supplemented by the provisions of this section. The Commission shall initiate the rulemaking after an application has been filed under § 52.45 and shall specify the procedures to be used for the rulemaking. The notice of proposed rulemaking published in the **Federal Register** must provide an opportunity for the submission of comments on the proposed design certification rule. If, at the time a proposed design certification rule is published in the **Federal Register** under this paragraph (a), the Commission decides that a legislative hearing should be held, the information
required by 10 CFR 2.1502(c) must be included in the **Federal Register** document for the proposed design certification.

(b) Following the submission of comments on the proposed design certification rule, the Commission may, at its discretion, hold a legislative hearing under the procedures in subpart O of part 2 of this chapter. The Commission shall publish a document in the **Federal Register** of its decision to hold a legislative hearing. The document shall contain the information specified in paragraph (c) of this section, and specify whether the Commission or a presiding officer will
conduct the legislative hearing.

(c) Notwithstanding anything in 10 CFR 2.390 to the contrary, proprietary information will be protected in the same manner and to the same extent as proprietary information submitted in connection with applications for licenses, provided that the design certification shall be published in Chapter I of this title.

[69 FR 2277, Jan. 14, 2004; 72 FR 49528, Aug. 28, 2007]

§ 52.53 Referral to the Advisory Committeeon Reactor Safeguards (ACRS).

[Top of File]

The Commission shall refer a copy of the application to the ACRS. The ACRS shall report on those portions of the application which concern safety.

[72 FR 49528, Aug. 28, 2007]

§ 52.54 Issuance of standard design certification.

[Top of File]

(a) After conducting a rulemaking proceeding under § 52.51 on an application for a standard design certification and receiving the report to be submitted by the Advisory Committee on Reactor Safeguards under § 52.53, the Commission may issue a standard design certification in the form of a rule for the design which is the subject of the application, if the Commission determines that:

(1) The application meets the applicable standards and requirements of the Atomic Energy Act and the Commission's regulations;

(2) Notifications, if any, to other agencies or bodies have been duly made;

(3) There is reasonable assurance that the standard design conforms with the provisions of the Act, and the

Commission's regulations;

(4) The applicant is technically qualified;

(5) The proposed inspections, tests, analyses, and acceptance criteria are necessary and sufficient, within the scope of the standard design, to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will be operated in accordance with the design certification, the provisions of the Act, and the Commission's regulations; (6) Issuance of the standard design certification will not be inimical to the common defense and security or to the health and safety of the public;

(7) The findings required by subpart A of part 51 of this chapter have been made; and

(8) The applicant has implemented the quality assurance program described or referenced in the safety analysis report.

(b) The design certification rule must specify the site parameters, design characteristics, and any additional requirements and restrictions of the design certification rule.

(c) After the Commission has adopted a final design certification rule, the applicant shall not permit any individual to have access to or any facility to possess restricted data or classified National Security Information until the individual and/or facility has been approved for access under the provisions of 10 CFR parts 25 and/or 95, as applicable.

[72 FR 49528, Aug. 28, 2007]

§ 52.55 Duration of certification.

[Top of File]

(a) Except as provided in paragraph (b) of this section, a standard design certification issued under this subpart is valid for 15 years from the date of issuance.

(b) A standard design certification continues to be valid beyond the date of expiration in any proceeding on an application for a combined license or an operating license that references the standard design certification and is docketed either before the date of expiration of the certification, or, if a timely application for renewal of the certification has been filed, before the Commission has determined whether to renew the certification. A design certification also continues to be valid beyond the date of expiration in any hearing held under § 52.103 before operation begins under a combined license that references the design certification.

(c) An applicant for a construction permit or a combined license may, at its own risk, reference in its application a design for which a design certification application has been docketed but not granted.

[72 FR 49529, Aug. 28, 2007]

§ 52.57 Application for renewal.

[Top of File]

(a) Not less than 12 nor more than 36 months before the expiration of the initial 15-year period, or any later renewal period, any person may apply for renewal of the certification. An application for renewal must contain all information necessary to bring up to date the information and data contained in the previous application. The Commission will require, before renewal of certification, that information normally contained in certain procurement specifications and construction and installation specifications be completed and available for audit if this information is necessary for the Commission to make its safety determination. Notice and comment procedures must be used for a rulemaking proceeding on the application for renewal. The Commission, in its discretion, may require the use of additional procedures in individual renewal proceedings.

(b) A design certification, either original or renewed, for which a timely application for renewal has been filed remains in effect until the Commission has determined whether to renew the certification. If the certification is not renewed, it continues to be valid in certain proceedings, in accordance with the provisions of § 52.55.

(c) The Commission shall refer a copy of the application for renewal to the Advisory Committee on Reactor Safeguards (ACRS). The ACRS shall report on those portions of the application which concern safety and shall apply the criteria set forth in § 52.59.

[72 FR 49529, Aug. 28, 2007]

§ 52.59 Criteria for renewal.

[Top of File]

(a) The Commission shall issue a rule granting the renewal if the design, either as originally certified or as modified

during the rulemaking on the renewal, complies with the Atomic Energy Act and the Commission's regulations applicable and in effect at the time the certification was issued.

(b) The Commission may impose other requirements if it determines that:

(1) They are necessary for adequate protection to public health and safety or common defense and security;

(2) They are necessary for compliance with the Commission's regulations and orders applicable and in effect at the time the design certification was issued; or

(3) There is a substantial increase in overall protection of the public health and safety or the common defense and security to be derived from the new requirements, and the direct and indirect costs of implementing those requirements are justified in view of this increased protection.

(c) In addition, the applicant for renewal may request an amendment to the design certification. The Commission shall grant the amendment request if it determines that the amendment will comply with the Atomic Energy Act and the Commission's regulations in effect at the time of renewal. If the amendment request entails such an extensive change to the design certification that an essentially new standard design is being proposed, an application for a design certification must be filed in accordance with this subpart.

(d) Denial of renewal does not bar the applicant, or another applicant, from filing a new application for certification of the design, which proposes design changes that correct the deficiencies cited in the denial of the renewal.

[72 FR 49529, Aug. 28, 2007]

§ 52.61 Duration of renewal.

[Top of File]

Each renewal of certification for a standard design will be for not less than 10, nor more than 15 years.

[72 FR 49529, Aug. 28, 2007]

§ 52.63 Finality of standard design certifications.

[Top of File]

(a)(1) Notwithstanding any provision in 10 CFR 50.109, while a standard design certification rule is in effect under §§ 52.55 or 52.61, the Commission may not modify, rescind, or impose new requirements on the certification information, whether on its own motion, or in response to a petition from any person, unless the Commission determines in a rulemaking that the change:

(i) Is necessary either to bring the certification information or the referencing plants into compliance with the Commission's regulations applicable and in effect at the time the certification was issued;

(ii) Is necessary to provide adequate protection of the public health and safety or the common defense and security;

(iii) Reduces unnecessary regulatory burden and maintains protection to public health and safety and the common defense and security;

(iv) Provides the detailed design information to be verified under those inspections, tests, analyses, and acceptance criteria (ITAAC) which are directed at certification information (*i.e.*, design acceptance criteria);

(v) Is necessary to correct material errors in the certification information;

(vi) Substantially increases overall safety, reliability, or security of facility design, construction, or operation, and the direct and indirect costs of implementation of the rule change are justified in view of this increased safety, reliability, or security; or

(vii) Contributes to increased standardization of the certification information.

(2)(i) In a rulemaking under § 52.63(a)(1), except for § 52.63(a)(1)(ii), the Commission will give consideration to whether the benefits justify the costs for plants that are already licensed or for which an application for a permit or license is under consideration.

(ii) The rulemaking procedures for changes under § 52.63(a)(1) must provide for notice and opportunity for public comment.

(3) Any modification the NRC imposes on a design certification rule under paragraph (a)(1) of this section will be applied to all plants referencing the certified design, except those to which the modification has been rendered technically irrelevant by action taken under paragraphs (a)(4) or (b)(1) of this section.

(4) The Commission may not impose new requirements by plant-specific order on any part of the design of a specific plant referencing the design certification rule if that part was approved in the design certification while a design certification rule is in effect under § 52.55 or § 52.61, unless:

(i) A modification is necessary to secure compliance with the Commission's regulations applicable and in effect at the time the certification was issued, or to assure adequate protection of the public health and safety or the common defense and security; and

(ii) Special circumstances as defined in 10 CFR 52.7 are present. In addition to the factors listed in § 52.7, the Commission shall consider whether the special circumstances which § 52.7 requires to be present outweigh any decrease in safety that may result from the reduction in standardization caused by the plant-specific order.

(5) Except as provided in 10 CFR 2.335, in making the findings required for issuance of a combined license, construction permit, operating license, or manufacturing license, or for any hearing under § 52.103, the Commission shall treat as resolved those matters resolved in connection with the issuance or renewal of a design certification rule.

(b)(1) An applicant or licensee who references a design certification rule may request an exemption from one or more elements of the certification information. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of § 52.7. In addition to the factors listed in § 52.7, the Commission shall consider whether the special circumstances that § 52.7 requires to be present outweigh any decrease in safety that may result from the reduction in standardization caused by the exemption. The granting of an exemption on request of an applicant is subject to litigation in the same manner as other issues in the operating license or combined license hearing.

(2) Subject to § 50.59 of this chapter, a licensee who references a design certification rule may make departures from the design of the nuclear power facility, without prior Commission approval, unless the proposed departure involves a change to the design as described in the rule certifying the design. The licensee shall maintain records of all departures from the facility and these records must be maintained and available for audit until the date of termination of the license.

(c) The Commission will require, before granting a construction permit, combined license, operating license, or manufacturing license which references a design certification rule, that information normally contained in certain procurement specifications and construction and installation specifications be completed and available for audit if the information is necessary for the Commission to make its safety determinations, including the determination that the application is consistent with the certification information. This information may be acquired by appropriate arrangements with the design certification applicant.

[69 FR 2277, Jan. 14, 2004; 72 FR 49529, Aug. 28, 2007]

Subpart C--Combined Licenses

[Top of File]

§ 52.71 Scope of subpart.

This subpart sets out the requirements and procedures applicable to Commission issuance of combined licenses for nuclear power facilities.

§ 52.73 Relationship to other subparts.

[Top of File]

(a) An application for a combined license under this subpart may, but need not, reference a standard design certification, standard design approval, or manufacturing license issued under subparts B, E, or F of this part, respectively, or an early site permit issued under subpart A of this part. In the absence of a demonstration that an entity other than the one originally sponsoring and obtaining a design certification is qualified to supply a design, the Commission will entertain an application for a combined license that references a standard design certification issued under subpart B of this part only if the entity that sponsored and obtained the certification supplies the design for the applicant's use.

(b) The Commission will require, before granting a combined license that references a standard design certification, that information normally contained in certain procurement specifications and construction and installation specifications be completed and available for audit if the information is necessary for the Commission to make its safety determinations, including the determination that the application is consistent with the certification information.

[72 FR 49530, Aug. 28, 2007]

§ 52.75 Filing of applications.

[Top of File]

(a) Any person except one excluded by § 50.38 of this chapter may file an application for a combined license for a nuclear power facility with the Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate.

(b) The application must comply with the applicable filing requirements of §§ 52.3 and 50.30 of this chapter.

(c) The fees associated with the filing and review of the application are set forth in 10 CFR part 170.

[72 FR 49529, Aug. 28, 2007; 73 FR 5724, Jan. 31, 2008]

§ 52.77 Contents of applications; general information.

[Top of File]

The application must contain all of the information required by 10 CFR 50.33.

[54 FR 15386, Apr. 18, 1989 as amended at 70 FR 61888, Oct. 27, 2005; 72 FR 49530, Aug. 28, 2007]

§ 52.78 Contents of applications; training and qualification of nuclear power plant personnel.

[Top of File]

(a) *Applicability*. The requirements of this section apply only to the personnel associated with the operating phase of the combined licenses.

(b) The application must demonstrate compliance with the requirements for training programs established in § 50.120 of this chapter.

[58 FR 21912, Apr. 26, 1993]

§ 52.79 Contents of applications; technical information in final safety analysis report.

[Top of File]

(a) The application must contain a final safety analysis report that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components of the facility as a whole. The final safety analysis report shall include the following information, at a level of information sufficient to enable the Commission to reach a final conclusion on all safety matters that must be resolved by the Commission before issuance of a combined license:

(1)(i) The boundaries of the site;

(ii) The proposed general location of each facility on the site;

(iii) The seismic, meteorological, hydrologic, and geologic characteristics of the proposed site with appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area and with sufficient margin for the limited accuracy, quantity, and time in which the historical data have been accumulated;

(iv) The location and description of any nearby industrial, military, or transportation facilities and routes;

(v) The existing and projected future population profile of the area surrounding the site;

(vi) A description and safety assessment of the site on which the facility is to be located. The assessment must contain an analysis and evaluation of the major structures, systems, and components of the facility that bear significantly on the acceptability of the site under the radiological consequence evaluation factors identified in paragraphs (a)(1)(vi)(A) and (a)(1)(vi)(B) of this section. In performing this assessment, an applicant shall assume a fission product release [5] from the core into the containment assuming that the facility is operated at the ultimate power level contemplated. The applicant shall perform an evaluation and analysis of the postulated fission product release, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents, together with applicable site characteristics, including site meteorology, to evaluate the offsite radiological consequences. Site characteristics must comply with part 100 of this chapter. The evaluation must determine that:

(A) An individual located at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem [6] total effective dose equivalent (TEDE).

(B) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a radiation dose in excess of 25 rem TEDE; and

(2) A description and analysis of the structures, systems, and components of the facility with emphasis upon performance requirements, the bases, with technical justification therefor, upon which these requirements have been established, and the evaluations required to show that safety functions will be accomplished. It is expected that reactors will reflect through their design, construction, and operation an

extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products. The descriptions shall be sufficient to permit understanding of the system designs and their relationship to safety evaluations. Items such as the reactor core, reactor coolant system, instrumentation and control systems, electrical systems, containment system, other engineered safety features, auxiliary and emergency systems, power conversion systems, radioactive waste handling systems, and fuel handling systems shall be discussed insofar as they are pertinent. The following power reactor design characteristics and proposed operation will be taken into consideration by the Commission:

(i) Intended use of the reactor including the proposed maximum power level and the nature and inventory of contained radioactive materials;

(ii) The extent to which generally accepted engineering standards are applied to the design of the reactor;

(iii) The extent to which the reactor incorporates unique, unusual or enhanced safety features having a significant bearing on the probability or consequences of accidental release of radioactive materials;

(iv) The safety features that are to be engineered into the facility and those barriers that must be breached as a result of an accident before a release of radioactive material to the environment can occur. Special attention must be directed to plant design features intended to mitigate the radiological consequences of accidents. In performing this assessment, an applicant shall assume a fission product release [7] from the core into the containment assuming that the facility is operated at the ultimate power level contemplated;

(3) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in part 20 of this chapter;

(4) The design of the facility including:

(i) The principal design criteria for the facility. Appendix A to part 50 of this chapter, "General Design Criteria for Nuclear Power Plants," establishes minimum requirements for the principal design criteria for water-cooled nuclear power plants similar in design and location to plants for which construction permits have previously been issued by the Commission and provides guidance to applicants in establishing principal design criteria for other types of nuclear power units;

(ii) The design bases and the relation of the design bases to the principal design criteria;

(iii) Information relative to materials of construction, arrangement, and dimensions, sufficient to provide reasonable assurance that the design will conform to the design bases with adequate margin for safety.

(5) An analysis and evaluation of the design and performance of structures, systems, and components with the objective of assessing the risk to public health and safety resulting from operation of the facility and including determination of the margins of safety during normal operations and transient conditions anticipated during the life of the facility, and the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents. Analysis and evaluation of ECCS cooling performance and the need for high-point vents following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of §§ 50.46 and 50.46a of this chapter;

(6) A description and analysis of the fire protection design features for the reactor necessary to comply with 10 CFR part 50, appendix A, GDC 3, and § 50.48 of this chapter;

(7) A description of protection provided against pressurized thermal shock events, including projected values of the reference temperature for reactor vessel beltline materials as defined in §§ 50.60 and 50.61(b)(1) and (b)(2) of this chapter;

(8) An analysis and description of the equipment and systems for combustible gas control as required by § 50.44 of this chapter;

(9) The coping analyses, and any design features necessary to address station blackout, as described in § 50.63 of this chapter;

(10) A description of the program, and its implementation, required by § 50.49(a) of this chapter for the environmental qualification of electric equipment important to safety and the list of electric equipment important to safety that is required by 10 CFR 50.49(d);

(11) A description of the program(s), and their implementation, necessary to ensure that the systems and components meet the requirements of the ASME Boiler and Pressure Vessel Code and the ASME Code for Operation and Maintenance of Nuclear Power Plants in accordance with 50.55a of this chapter;

(12) A description of the primary containment leakage rate testing program, and its implementation, necessary to ensure that the containment meets the requirements of appendix J to 10 CFR part 50;

(13) A description of the reactor vessel material surveillance program required by appendix H to 10 CFR part 50 and its implementation;

(14) A description of the operator training program, and its implementation, necessary to meet the requirements of 10 CFR part 55;

(15) A description of the program, and its implementation, for monitoring the effectiveness of maintenance necessary to meet the requirements of § 50.65 of this chapter;

(16)(i) The information with respect to the design of equipment to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, as described in § 50.34a(d) of this chapter;

(ii) A description of the process and effluent monitoring and sampling program required by appendix I to 10 CFR part 50 and its implementation.

(17) The information with respect to compliance with technically relevant positions of the Three Mile Island requirements in § 50.34(f) of this chapter, with the exception of §§ 50.34(f)(1)(xii), (f)(2)(ix), and (f)(3)(v); (18) If the applicant seeks to use riskinformed treatment of SSCs in accordance with § 50.69 of this chapter, the information required by § 50.69(b)(2) of this chapter;

(19) Information necessary to demonstrate that the plant complies with the earthquake engineering criteria in 10 CFR part 50, appendix S;

(20) Proposed technical resolutions of those Unresolved Safety Issues and medium- and high-priority generic safety issues which are identified in the version of NUREG–0933 current on the date up to 6 months before the docket date of the application and which are technically relevant to the design;

(21) Emergency plans complying with the requirements of § 50.47 of this chapter, and 10 CFR part 50, appendix E;

(22)(i) All emergency plan certifications that have been obtained from the State and local governmental agencies with emergency planning responsibilities must state that:

(A) The proposed emergency plans are practicable;

(B) These agencies are committed to participating in any further development of the plans, including any required field demonstrations; and

(C) These agencies are committed to executing their responsibilities under the plans in the event of an emergency;

(ii) If certifications cannot be obtained after sustained, good faith efforts by the applicant, then the application must contain information, including a utility plan, sufficient to show that the proposed plans provide reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency at the site.

(23) [Reserved]

(24) If the application is for a nuclear power reactor design which differs significantly from light-water reactor designs that were licensed before 1997 or use simplified, inherent, passive, or other innovative means to accomplish their safety functions, the application must describe how the design meets the requirements in § 50.43(e) of this chapter;

(25) A description of the quality assurance program, applied to the design, and to be applied to the fabrication, construction, and testing, of the structures, systems, and components of the facility. Appendix B to 10 CFR part 50 sets forth the requirements for quality assurance programs for nuclear power plants. The description of the quality assurance program for a nuclear power plant must include a discussion of how the applicable requirements of appendix B to 10 CFR part 50 have been and will be satisfied, including a discussion of how the quality assurance program will be implemented;

(26) The applicant's organizational structure, allocations or responsibilities and authorities, and personnel qualifications requirements for operation;

(27) Managerial and administrative controls to be used to assure safe operation. Appendix B to 10 CFR part 50 sets forth the requirements for these controls for nuclear power plants. The information on the controls to be used for a nuclear power plant shall include a discussion of how the applicable requirements of appendix B to 10 CFR part 50 will be satisfied;

(28) Plans for preoperational testing and initial operations;

(29)(i) Plans for conduct of normal operations, including maintenance, surveillance, and periodic testing of structures, systems, and components;

(ii) Plans for coping with emergencies, other than the plans required by § 52.79(a)(21);

(30) Proposed technical specifications prepared in accordance with the requirements of §§ 50.36 and 50.36a of this chapter;

(31) For nuclear power plants to be operated on multi-unit sites, an evaluation of the potential hazards to the structures, systems, and components important to safety of operating units resulting from construction activities, as well as a description of the managerial and administrative controls to be used to provide assurance that the limiting conditions for operation are not exceeded as a result of construction activities at the multi-unit sites;

(32) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter;

(33) A description of the training program required by § 50.120 of this chapter and its implementation;

(34) A description and plans for implementation of an operator requalification program. The operator requalification program must as a minimum, meet the requirements for those programs contained in § 55.59 of this chapter;

(35)(i) A physical security plan, describing how the applicant will meet the requirements of 10 CFR part 73 (and 10 CFR part 11, if applicable, including the identification and description of jobs as required by § 11.11(a) of this chapter, at the proposed facility). The plan must list tests, inspections, audits, and other means to be used to demonstrate compliance with the requirements of 10 CFR parts 11 and 73, if applicable;

(ii) A description of the implementation of the physical security plan;

(36)(i) A safeguards contingency plan in accordance with the criteria set forth in appendix C to 10 CFR part 73. The safeguards contingency plan shall include plans for dealing with threats, thefts, and radiological sabotage, as defined in part 73 of this chapter, relating to the special nuclear material and nuclear facilities licensed under this chapter and in the applicant's possession and control. Each application for this type of license shall include the information contained in the applicant's safeguards contingency plan.[8] (Implementing procedures required for this plan need not be submitted for approval.)

(ii) A training and qualification plan in accordance with the criteria set forth in appendix B to 10 CFR part 73.

(iii) A description of the implementation of the safeguards contingency plan and the training and qualification plan;

(iv) Each applicant who prepares a physical security plan, a safeguards contingency plan, or a guard qualification and training plan, shall protect the plans and other related Safeguards Information against unauthorized disclosure in accordance with the requirements of § 73.21 of this chapter, as appropriate.

(37) The information necessary to demonstrate how operating experience insights have been incorporated into the plant design;

(38) For light-water reactor designs, a description and analysis of design features for the prevention and mitigation of severe accidents, e. g., challenges to containment integrity caused by core-concrete interaction, steam explosion, high-pressure core melt ejection, hydrogen combustion, and containment bypass;

(39) A description of the radiation protection program required by § 20.1101 of this chapter and its implementation.

(40) A description of the fire protection program required by § 50.48 of this chapter and its implementation.

(41) For applications for light-water-cooled nuclear power plant combined licenses, an evaluation of the facility against the Standard Review Plan (SRP) revision in effect 6 months before the docket date of the application. The evaluation required by this section shall include an identification and description of all differences in design features, analytical techniques, and procedural measures proposed for a facility and those corresponding features, techniques, and measures given in the SRP acceptance criteria. Where a difference exists, the evaluation shall discuss how the proposed alternative provides an acceptable method of complying with the Commission's regulations, or portions thereof, that underlie the corresponding SRP acceptance criteria. The SRP is not a substitute for the regulations, and compliance is not a requirement;

(42) Information demonstrating how the applicant will comply with requirements for reduction of risk from anticipated transients without scram (ATWS) events in § 50.62 of this chapter;

(43) Information demonstrating how the applicant will comply with requirements for criticality accidents in § 50.68 of this chapter;

(44) A description of the fitness-for-duty program required by 10 CFR part 26 and its implementation.

(45) The information required by § 20.1406 of this chapter.

(46) A description of the plantspecific probabilistic risk assessment (PRA) and its results.

(b) If the combined license application references an early site permit, then the following requirements apply:

(1) The final safety analysis report need not contain information or analyses submitted to the Commission in connection with the early site permit, *provided, however*, that the final safety analysis report must either include or incorporate by reference the early site permit site safety analysis report and must contain, in addition to the information and analyses otherwise required, information sufficient to demonstrate that the design of the facility falls within the site characteristics and design parameters specified in the early site permit.

(2) If the final safety analysis report does not demonstrate that design of the facility falls within the site characteristics and design parameters, the application shall include a request for a variance that complies with the requirements of §§ 52.39 and 52.93.

(3) The final safety analysis report must demonstrate that all terms and conditions that have been included in the early site permit, other than those imposed under § 50.36b, will be satisfied by the date of issuance of the combined license. Any terms or conditions of the early

site permit that could not be met by the time of issuance of the combined license, must be set forth as terms or conditions of the combined license.

(4) If the early site permit approves complete and integrated emergency plans, or major features of emergency plans, then the final safety analysis report must include any new or additional information that updates and corrects the information that was provided under § 52.17 (b), and discuss whether the new or additional information materially changes the bases for compliance with the applicable requirements. The application must identify changes to the emergency plans or major features of emergency plans that have been incorporated into the proposed facility emergency plans and that constitute or would constitute a decrease in effectiveness under § 50.54(q) of this chapter.

(5) If complete and integrated emergency plans are approved as part of the early site permit, new certifications meeting the requirements of paragraph (a)(22) of this section are not required.

(c) If the combined license application references a standard design approval, then the following requirements apply:

(1) The final safety analysis report need not contain information or analyses submitted to the Commission in connection with the design approval, *provided, however*, that the final safety analysis report must either include or incorporate by reference the standard design approval final safety analysis report and must contain, in addition to the information and analyses otherwise required, information sufficient to demonstrate that the characteristics of the site fall within the site parameters specified in the design approval. In addition, the plant-specific PRA information must use the PRA information for the design approval and must be updated to account for sitespecific design information and any design changes or departures.

(2) The final safety analysis report must demonstrate that all terms and conditions that have been included in the final design approval will be satisfied by the date of issuance of the combined license.

(d) If the combined license application references a standard design certification, then the following requirements apply:

(1) The final safety analysis report need not contain information or analyses submitted to the Commission in connection with the design certification, *provided, however*, that the final safety analysis report must either include or incorporate by reference the standard design certification final safety analysis report and must contain, in addition to the information and analyses otherwise required, information sufficient to demonstrate that the site characteristics fall within the site parameters specified in the design certification. In addition, the plantspecific PRA information must use the PRA information for the design certification and must be updated to account for site-specific design information and any design changes or departures.

(2) The final safety analysis report must demonstrate that the interface requirements established for the design under § 52.47 have been met.

(3) The final safety analysis report must demonstrate that all requirements and restrictions set forth in the referenced design certification rule, other than those imposed under § 50.36b, must be satisfied by the date of issuance of the combined license. Any requirements and restrictions set forth in the referenced design certification rule that could not be satisfied by the time of issuance of the combined license, must be set forth as terms or conditions of the combined license.

(e) If the combined license application references the use of one or more manufactured nuclear power reactors licensed under subpart F of this part, then the following requirements apply:

(1) The final safety analysis report need not contain information or analyses submitted to the Commission in connection with the manufacturing license, *provided, however*, that the final safety analysis report must either include or incorporate by reference the manufacturing license final safety analysis report and must contain, in addition to the information and analyses otherwise required, information sufficient to demonstrate that the site characteristics fall within the site parameters specified in the manufacturing license. In addition, the plant-specific PRA information must use the PRA information for the manufactured reactor and must be updated to account for site-specific design information and any design changes or departures.

(2) The final safety analysis report must demonstrate that the interface requirements established for the design have been met.

(3) The final safety analysis report must demonstrate that all terms and conditions that have been included in the manufacturing license, other than those imposed under § 50.36b, will be satisfied by the date of issuance of the combined license. Any terms or conditions of the manufacturing license that could not be met by the time of issuance of the combined license, must be set forth as terms or conditions of the combined license.

(f) Each applicant for a combined license under this subpart shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in §§ 73.21 and 73.22 of this chapter, as applicable.

[54 FR 15386, Apr. 18, 1989, as amended at 57 FR 60978, Dec. 23, 1992; 72 FR 49530, Aug. 28, 2007; 73 FR 63571, Oct. 24, 2008]

5 The fission product release assumed for this evaluation should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events. These accidents have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products.

6 A whole body dose of 25 rem has been stated to correspond numerically to the once in a lifetime accidental or emergency dose for

radiation workers which, according to NCRP recommendations at the time could be disregarded in the determination of their radiation exposure status (see NBS Handbook 69 dated June 5, 1959). However, its use is not intended to imply that this number constitutes an acceptable limit for an emergency dose to the public under accident conditions. Rather, this dose value has been set forth in this section as a reference value, which can be used in the evaluation of plant design features with respect to postulated reactor accidents, to assure that these designs provide assurance of low risk of public exposure to radiation, in the event of an accident.

7 The fission product release assumed for this evaluation should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events. These accidents have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products.

8 A physical security plan that contains all the information required in both § 73.55 of this chapter and appendix C to 10 CFR part 73 satisfies the requirement for a contingency plan.

§ 52.80 Contents of applications; additional technical information.

[Top of File]

The application must contain:

(a) The proposed inspections, tests, and analyses, including those applicable to emergency planning, that the licensee shall perform, and the acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met, the facility has been constructed and will be operated in conformity with the combined license, the provisions of the Act, and the Commission's rules and regulations.

(1) If the application references an early site permit with ITAAC, the early site permit ITAAC must apply to those aspects of the combined license which are approved in the early site permit.

(2) If the application references a standard design certification, the ITAAC contained in the certified design must apply to those portions of the facility design which are approved in the design certification.

(3) If the application references an early site permit with ITAAC or a standard design certification or both, the application may include a notification that a required inspection, test, or analysis in the ITAAC has been successfully completed and that the corresponding acceptance criterion has been met. The **Federal Register** notification required by § 52.85 must indicate that the application includes this notification.

(b) An environmental report, either in accordance with 10 CFR 51.50(c) if a limited work authorization under 10 CFR 50.10 is not requested in conjunction with the combined license application, or in accordance with §§ 51.49 and 51.50(c) of this chapter if a limited work authorization is requested in conjunction with the combined license application.

(c) If the applicant wishes to request that a limited work authorization under 10 CFR 50.10 be issued before issuance of the combined license, the application must include the information otherwise required by 10 CFR 50.10, in accordance with either 10 CFR 2.101(a)(1) through (a)(4), or 10 CFR 2.101(a)(9).

[72 FR 49534, Aug. 28, 2007; 72 FR 57447, Oct. 9, 2007]

§ 52.81 Standards for review of applications.

[Top of File]

Applications filed under this subpart will be reviewed according to the standards set out in 10 CFR parts 20, 50, 51, 54, 55, 73, and 100, and 140.

[72 FR 49534, Aug. 28, 2007]

§ 52.83 Finality of referenced NRC approvals; partial initial decision on site suitability.

[Top of File]

(a) If the application for a combined license under this subpart references an early site permit, design certification rule, standard design approval, or manufacturing license, the scope and nature of matters resolved for the application and any combined license issued are governed by the relevant provisions addressing finality, including §§ 52.39, 52.63, 52.98, 52.145, and 52.171.

(b) While a partial decision on site suitability is in effect under 10 CFR 2.617(b)(2), the scope and nature of matters resolved in the proceeding are governed by the finality provisions in 10 CFR 2.629.

[57 FR 60978, Dec. 23, 1992; 72 FR 49534, Aug. 28, 2007]

§ 52.85 Administrative review of applications; hearings.

[Top of File]

A proceeding on a combined license is subject to all applicable procedural requirements contained in 10 CFR part 2, including the requirements for docketing (§ 2.101 of this chapter) and issuance of a notice of hearing (§ 2.104 of this chapter). If an applicant requests a Commission finding on certain ITAAC with the issuance of the combined license, then those ITAAC will be identified in the notice of hearing. All hearings on combined licenses are governed by the procedures contained in 10 CFR part 2.

[72 FR 49534, Aug. 28, 2007]

§ 52.87 Referral to the Advisory Committee on Reactor Safeguards (ACRS).

[Top of File]

The Commission shall refer a copy of the application to the ACRS. The ACRS shall report on those portions of the application that concern safety and shall apply the standards referenced in § 52.81, in accordance with the finality provisions in § 52.83.

[72 FR 49534, Aug. 28, 2007]

§ 52.89 [Reserved].

[Top of File]

[72 FR 49534, Aug. 28, 2007]

§ 52.91 Authorization to conduct limited work authorization activities.

[Top of File]

(a) If the application does not reference an early site permit which authorizes the holder to perform the activities under 10 CFR 50.10(d), the applicant may not perform those activities without obtaining the separate authorization required by 10 CFR 50.10(d). Authorization may be granted only after the presiding officer in the proceeding on the application has made the findings and determination required by 10 CFR 50.10(e), and the Director of New Reactors or the Director of Nuclear Reactor Regulation makes the determination required by 10 CFR 50.10 (e).

(b) If, after an applicant has performed the activities permitted by paragraph (a) of this section, the application for the combined license is withdrawn or denied, then the applicant shall implement the approved site redress plan.

[72 FR 49534, Aug. 28, 2007; 72 FR 57447, Oct. 9, 2007]

§ 52.93 Exemptions and variances.

[Top of File]

(a) Applicants for a combined license under this subpart, or any amendment to a combined license, may include in the application a request for an exemption from one or more of the Commission's regulations.

(1) If the request is for an exemption from any part of a referenced design certification rule, the Commission may grant the request if it determines that the exemption complies with any exemption provisions of the referenced design certification rule, or with § 52.63 if there are no applicable exemption provisions in the referenced design certification rule.

(2) For all other requests for exemptions, the Commission may grant a request if it determines that the exemption complies with § 52.7.

(b) An applicant for a combined license who has filed an application referencing an early site permit issued under subpart A of this part may include in the application a request for a variance from one or more site characteristics, design parameters, or terms and conditions of the permit, or from the site safety analysis report. In determining whether to grant the variance, the Commission shall apply the same technically relevant criteria as were applicable to the application for the original or renewed site permit. Once a construction permit or combined license referencing an early site permit is issued, variances from the early site permit will not be granted for that construction permit or combined license.

(c) An applicant for a combined license who has filed an application referencing a nuclear power reactor manufactured under a manufacturing license issued under subpart F of this part may include in the application a request for a departure from one or more design characteristics, site parameters, terms and conditions, or approved design of the manufactured reactor. The Commission may grant a request only if it determines that the departure will comply with the requirements of 10 CFR 52.7, and that the special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the departure.

(d) Issuance of a variance under paragraph (b) or a departure under paragraph (c) of this section is subject to litigation during the combined license proceeding in the same manner as other issues material to that proceeding.

[72 FR 49534, Aug. 28, 2007]

§ 52.97 Issuance of combined licenses.

[Top of File]

(a)(1) After conducting a hearing in accordance with § 52.85 and receiving the report submitted by the ACRS, the Commission may issue a combined license if the Commission finds that:

(i) The applicable standards and requirements of the Act and the Commission's regulations have been met;

(ii) Any required notifications to other agencies or bodies have been duly made;

(iii) There is reasonable assurance that the facility will be constructed and will operate in conformity with the license, the provisions of the Act, and the Commission's regulations.

(iv) The applicant is technically and financially qualified to engage in the activities authorized; and

(v) Issuance of the license will not be inimical to the common defense and security or to the health and safety of the public; and

(vi) The findings required by subpart A of part 51 of this chapter have been made.

(2) The Commission may also find, at the time it issues the combined license, that certain acceptance criteria in one or more of the inspections, tests, analyses, and acceptance criteria (ITAAC) in a referenced early site permit or standard design certification have been met. This finding will finally resolve that those acceptance criteria have been met, those acceptance criteria will be deemed to be excluded from the combined license, and findings under § 52.103(g) with respect to those acceptance criteria are unnecessary.

The Commission shall identify within the combined license the inspections, tests, and analyses, including those applicable to emergency planning, that the licensee shall perform, and the acceptance criteria that, if met, are necessary and sufficient to provide reasonable assurance that the facility has been constructed and will be operated in conformity with the license, the provisions of the Act, and the Commission's rules and regulations.

(c) A combined license shall contain the terms and conditions, including technical specifications, as the Commission deems necessary and appropriate.

[54 FR 15386, Apr. 18, 1989, as amended at 57 FR 60978, Dec. 23, 1992; 72 FR 49535, Aug. 28, 2007]

§ 52.98 Finality of combined licenses; information requests.

[Top of File]

(a)After issuance of a combined license, the Commission may not modify, add, or delete any term or condition of the combined license, the design of the facility, the inspections, tests, analyses, and acceptance criteria contained in the license which are not derived from a referenced standard design certification or manufacturing license, except in accordance with the provisions of § 52.103 or § 50.109 of this chapter, as applicable.

(b) If the combined license does not reference a design certification or a reactor manufactured under a subpart F of this part manufacturing license, then a licensee may make changes in the facility as described in the final safety analysis report (as updated), make changes in the procedures as described in the final safety analysis report (as updated), and conduct tests or experiments not described in the final safety analysis report (as updated) under the applicable change processes in 10 CFR part 50 (e.g., §§ 50.54, 50.59, or 50.90 of this chapter).

(c) If the combined license references a certified design, then—

(1) Changes to or departures from information within the scope of the referenced design certification rule are subject to the applicable change processes in that rule; and

(2) Changes that are not within the scope of the referenced design certification rule are subject to the applicable change processes in 10 CFR part 50, unless they also involve changes to or noncompliance with information within the scope of the referenced design certification rule. In these cases, the applicable provisions of this section and the design certification rule apply.

(d) If the combined license references a reactor manufactured under a subpart F of this part manufacturing license, then—

(1) Changes to or departures from information within the scope of the manufactured reactor's design are subject to the change processes in § 52.171; and

(2) Changes that are not within the scope of the manufactured reactor's design are subject to the applicable change processes in 10 CFR part 50.

(e) The Commission may issue and make immediately effective any amendment to a combined license upon a determination by the Commission that the amendment involves no significant hazards consideration, notwithstanding the pendency before the Commission of a request for a hearing from any person. The amendment may be issued and made immediately effective in advance of the holding and completion of any required hearing. The amendment will be processed in accordance with the procedures specified in 10 CFR 50.91.

(f) Any modification to, addition to, or deletion from the terms and conditions of a combined license, including any modification to, addition to, or deletion from the inspections, tests, analyses, or related acceptance criteria contained in the license is a proposed amendment to the license. There must be an opportunity for a hearing on the amendment.

(g) Except for information sought to verify licensee compliance with the current licensing basis for that facility, information requests to the holder of a combined license must be evaluated before issuance to ensure that the burden to be imposed on the licensee is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each evaluation performed by the NRC staff must be in accordance with 10 CFR 50.54(f) and must be approved by the Executive Director for Operations or his or her designee before issuance of the request.

[72 FR 49535, Aug. 28, 2007]

§ 52.99 Inspection during construction.

[Top of File]

(a) The licensee shall submit to the NRC, no later that 1 year after issuance of the combined license or at the start of construction as defined in 10 CFR 50.10(a), whichever is later, its schedule for completing the inspections, tests, or analyses in the ITAAC. The licensee shall submit updates to the ITAAC schedules every 6 months thereafter and, within 1 year of its scheduled date for initial loading of fuel, the licensee shall submit updates to the ITAAC schedule every 30 days until the final notification is provided to the NRC under paragraph (c)(1) of this section.

(b) With respect to activities subject to an ITAAC, an applicant for a combined license may proceed at its own risk with design and procurement activities, and a licensee may proceed at its own risk with design, procurement, construction, and pre-operational activities, even though the NRC may not have found that any one of the prescribed acceptance criteria have been met.

(c)(1) The licensee shall notify the NRC that the prescribed inspections, tests, and analyses have been performed and that the prescribed acceptance criteria have been met. The notification must contain sufficient information to demonstrate that the prescribed inspections, tests, and analyses have been performed and that the prescribed acceptance criteria have been met.

(2) If the licensee has not provided, by the date 225 days before the scheduled date for initial loading of fuel, the notification required by paragraph (c)(1) of this section for all ITAAC, then the licensee shall notify the NRC that the prescribed inspections, tests, or analyses for all uncompleted ITAAC will be performed and that the prescribed acceptance criteria will be met prior to operation. The notification must be provided no later than the date 225 days before the scheduled date for initial loading of fuel, and must provide sufficient information to demonstrate that the prescribed inspections, tests, or analyses will be performed and the prescribed acceptance criteria for the uncompleted ITAAC will be met, including, but not limited to, a description of the specific procedures and analytical methods to be used for performing the prescribed inspections, tests, and analyses and determining that the prescribed acceptance criteria have been met.

(d)(1) In the event that an activity is subject to an ITAAC derived from a referenced standard design certification and the licensee has not demonstrated that the ITAAC has been met, the licensee may take corrective actions to successfully complete that ITAAC or request an exemption from the standard design certification ITAAC, as applicable. A request for an exemption must also be accompanied by a request for a license amendment under § 52.98(f).

(2) In the event that an activity is subject to an ITAAC not derived from a referenced standard design certification and the licensee has not demonstrated that the ITAAC has been met, the licensee may take corrective actions to successfully complete that ITAAC or request a license amendment under § 52.98(f).

(e) The NRC shall ensure that the prescribed inspections, tests, and analyses in the ITAAC are performed.

(1) At appropriate intervals until the last date for submission of requests for hearing under § 52.103(a), the NRC shall publish notices in the **Federal Register** of the NRC staff's determination of the successful completion of inspections, tests, and analyses.

(2) The NRC shall make publicly available the licensee notifications under paragraph (c)(1), and, no later than the date of publication of the notice of intended operation required by § 52.103(a), make available all licensee notifications under paragraphs (c)(1) and (c)(2) of this

section.

[57 FR 60978, Dec. 23, 1992; 72 FR 49536, Aug. 28, 2007; 72 FR 57447, Oct. 9, 2007]

§ 52.103 Operation under a combined license.

[Top of File]

(a) The licensee shall notify the NRC of its scheduled date for initial loading of fuel no later than 270 days before the scheduled date and shall notify the NRC of updates to its schedule every 30 days thereafter. Not less than 180 days before the date scheduled for initial loading of fuel into a plant by a licensee that has been issued a combined license under this part, the Commission shall publish notice of intended operation in the **Federal Register**. The notice must provide that any person whose interest may be affected by operation of the plant may, within 60 days, request that the Commission hold a hearing on whether the facility as constructed complies, or on completion will comply, with the acceptance criteria in the combined license, except that a hearing shall not be granted for those ITAAC which the Commission found were met under § 52.97(a)(2).

(b) A request for hearing under paragraph (a) of this section must show, prima facie, that—

(1) One or more of the acceptance criteria of the ITAAC in the combined license have not been, or will not be, met; and

(2) The specific operational consequences of nonconformance that would be contrary to providing reasonable assurance of adequate protection of the public health and safety.

(c) The Commission, acting as the presiding officer, shall determine whether to grant or deny the request for hearing in accordance with the applicable requirements of 10 CFR 2.309. If the Commission grants the request, the Commission, acting as the presiding officer, shall determine whether during a period of interim operation there will be reasonable assurance of adequate protection to the public health and safety. The Commission's determination must consider the petitioner's *prima facie* showing and any answers thereto. If the Commission determines there is such reasonable assurance, it shall allow operation during an interim period under the combined license.

(d) The Commission, in its discretion, shall determine appropriate hearing procedures, whether informal or formal adjudicatory, for any hearing under paragraph (a) of this section, and shall state its reasons therefore.

(e) The Commission shall, to the maximum possible extent, render a decision on issues raised by the hearing request within 180 days of the publication of the notice provided by paragraph (a) of this section or by the anticipated date for initial loading of fuel into the reactor, whichever is later.

(f) A petition to modify the terms and conditions of the combined license will be processed as a request for action in accordance with 10 CFR 2.206. The petitioner shall file the petition with the Secretary of the Commission. Before the licensed activity allegedly affected by the petition (fuel loading, low power testing, etc.) commences, the Commission shall determine whether any immediate action is required. If the petition is granted, then an appropriate order will be issued. Fuel loading and operation under the combined license will not be affected by the granting of the petition unless the order is made immediately effective.

(g) The licensee shall not operate the facility until the Commission makes a finding that the acceptance criteria in the combined license are met, except for those acceptance criteria that the Commission found were met under § 52.97(a)(2). If the combined license is for a modular design, each reactor module may require a separate finding as construction proceeds.

(h) After the Commission has made the finding in paragraph (g) of this section, the ITAAC do not, by virtue of their inclusion in the combined license, constitute regulatory requirements either for licensees or for renewal of the license; except for the specific ITAAC for which the Commission has granted a hearing under paragraph (a) of this section, all ITAAC expire upon final Commission action in the proceeding. However, subsequent changes to the facility or procedures described in the final safety analysis report (as updated) must comply with the requirements in §§ 52.98(e) or (f), as applicable.

[57 FR 60978, Dec. 23, 1992; 72 FR 49536, Aug. 28, 2007]

§ 52.104 Duration of combined license.

[Top of File]

A combined license is issued for a specified period not to exceed 40 years from the date on which the Commission makes a finding that acceptance criteria are met under § 52.103(g) or allowing operation during an interim period under the combined license under § 52.103(c).

[72 FR 49537, Aug. 28, 2007]

§ 52.105 Transfer of combined license.

[Top of File]

A combined license may be transferred in accordance with § 50.80 of this chapter.

[72 FR 49537, Aug. 28, 2007]

§ 52.107 Application for renewal.

[Top of File]

The filing of an application for a renewed license must be in accordance with 10 CFR part 54.

[72 FR 49537, Aug. 28, 2007]

§ 52.109 Continuation of combined license.

[Top of File]

Each combined license for a facility that has permanently ceased operations, continues in effect beyond the expiration date to authorize ownership and possession of the production or utilization facility, until the Commission notifies the licensee in writing that the license is terminated. During this period of continued effectiveness the licensee shall—

(1) Take actions necessary to decommission and decontaminate the facility and continue to maintain the facility, including, where applicable, the storage, control and maintenance of the spent fuel, in a safe condition; and

(2) Conduct activities in accordance with all other restrictions applicable to the facility in accordance with the NRC's regulations and the provisions of the combined license for the facility.

[72 FR 49537, Aug. 28, 2007]

§ 52.110 Termination of license.

[Top of File]

(a)(1) When a licensee has determined to permanently cease operations the licensee shall, within 30 days, submit a written certification to the NRC, consistent with the requirements of § 52.3(b)(8);

(2) Once fuel has been permanently removed from the reactor vessel, the licensee shall submit a written certification to the NRC that meets the requirements of § 52.3(b)(9); and

(3) For licensees whose licenses have been permanently modified to allow possession but not operation of the facility, before September 27, 2007, the certification required in paragraph (a)(1) of this section shall be deemed to have been submitted.

(b) Upon docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel, or when a final legally effective order to permanently cease operations has come into effect, the 10 CFR part 52 license no longer authorizes operation of the reactor or emplacement or retention of fuel into the reactor vessel.

(c) Decommissioning will be completed within 60 years of permanent cessation of operations. Completion of decommissioning beyond 60 years will be approved by the Commission only when necessary to protect public health and safety. Factors that will be considered by the Commission in evaluating an alternative that provides for completion of decommissioning beyond 60 years of permanent cessation of operations include unavailability of waste disposal capacity and other sitespecific factors affecting the licensee's capability to carry out decommissioning, including presence of other nuclear facilities at the site.

(d)(1) Before or within 2 years following permanent cessation of operations, the licensee shall submit a post-shutdown decommissioning activities report (PSDAR) to the NRC, and a copy to the affected State(s). The report must include a description of the planned decommissioning activities along with a schedule for their accomplishment, an estimate of expected costs, and a discussion that provides the reasons for concluding that the environmental impacts associated with site-specific decommissioning activities will be bounded by appropriate previously issued environmental impact statements.

(2) The NRC shall notice receipt of the PSDAR and make the PSDAR available for public comment. The NRC shall also schedule a public meeting in the vicinity of the licensee's facility upon receipt of the PSDAR. The NRC shall publish a document in the **Federal Register** and in a forum, such as local newspapers, that is readily accessible to individuals in the vicinity of the site, announcing the date, time and location of the meeting, along with a brief description of the purpose of the meeting.

(e) Licensees shall not perform any major decommissioning activities, as defined in § 50.2 of this chapter, until 90 days after the NRC has received the licensee's PSDAR submittal and until certifications of permanent cessation of operations and permanent removal of fuel from the reactor vessel, as required under § 52.110(a)(1), have been submitted.

(f) Licensees shall not perform any decommissioning activities, as defined in § 52.1, that—

(1) Foreclose release of the site for possible unrestricted use;

(2) Result in significant environmental impacts not previously reviewed; or

(3) Result in there no longer being reasonable assurance that adequate funds will be available for decommissioning.

(g) In taking actions permitted under § 50.59 of this chapter following submittal of the PSDAR, the licensee shall notify the NRC in writing and send a copy to the affected State(s), before performing any decommissioning activity inconsistent with, or making any significant schedule change from, those actions and schedules described in the PSDAR, including changes that significantly increase the decommissioning cost.

(h)(1) Decommissioning trust funds may be used by licensees if—

(i) The withdrawals are for expenses for legitimate decommissioning activities consistent with the definition of decommissioning in § 52.1;

(ii) The expenditure would not reduce the value of the decommissioning trust below an amount necessary to place and maintain the reactor in a safe storage condition if unforeseen conditions or expenses arise and;

(iii) The withdrawals would not inhibit the ability of the licensee to complete funding of any shortfalls in the decommissioning trust needed to ensure the availability of funds to ultimately release the site and terminate the license.

(2) Initially, 3 percent of the generic amount specified in § 50.75 of this chapter may be used for decommissioning planning. For licensees that have submitted the certifications required under § 52.110(a) and commencing 90 days after the NRC has received the PSDAR, an additional 20 percent may be used. A site-specific decommissioning cost estimate must be submitted to the NRC before the licensee may use any funding in excess of these amounts.

(3) Within 2 years following permanent cessation of operations, if not already submitted, the licensee shall submit a site-specific decommissioning cost estimate.

(4) For decommissioning activities that delay completion of decommissioning by including a period of storage or surveillance, the licensee shall provide a means of adjusting cost estimates and associated funding levels over the storage or surveillance period.

(i) All power reactor licensees must submit an application for termination of license. The application for termination of license must be accompanied or preceded by a license termination plan to be submitted for NRC approval.

(1) The license termination plan must be a supplement to the FSAR or equivalent and must be submitted at least 2 years before termination of the license date.

(2) The license termination plan must include—

(i) A site characterization;

(ii) Identification of remaining dismantlement activities;

(iii) Plans for site remediation;

(iv) Detailed plans for the final radiation survey;

(v) A description of the end use of the site, if restricted;

(vi) An updated site-specific estimate of remaining decommissioning costs;

(vii) A supplement to the environmental report, under § 51.53 of this chapter, describing any new information or significant environmental change associated with the licensee's proposed termination activities; and

(viii) Identification of parts, if any, of the facility or site that were released for use before approval of the license termination plan.

(3) The NRC shall notice receipt of the license termination plan and make the license termination plan available for public comment. The NRC shall also schedule a public meeting in the vicinity of the licensee's facility upon receipt of the license termination plan. The NRC shall publish a document in the **Federal Register** and in a forum, such as local newspapers, which is readily accessible to individuals in the vicinity of the site, announcing the date, time and location of the meeting, along with a brief description of the purpose of the meeting.

(j) If the license termination plan demonstrates that the remainder of decommissioning activities will be performed in accordance with the

regulations in this chapter, will not be inimical to the common defense and security or to the health and safety of the public, and will not have a significant effect on the quality of the environment and after notice to interested persons, the Commission shall approve the plan, by license amendment, subject to terms and conditions as it deems appropriate and necessary and authorize implementation of the license termination plan.

(k) The Commission shall terminate the license if it determines that—

(1) The remaining dismantlement has been performed in accordance with the approved license termination plan; and

(2) The final radiation survey and associated documentation, including an assessment of dose contributions associated with parts released for use before approval of the license termination plan, demonstrate that the facility and site have met the criteria for decommissioning in subpart E to 10 CFR part 20.

(l) For a facility that has permanently ceased operation before the expiration of its license, the collection period for any shortfall of funds will be determined, upon application by the licensee, on a case-by-case basis taking into account the specific financial situation of each licensee.

[72 FR 49537, Aug. 28, 2007]

Subpart D--Violations

[Top of File]

§ 52.111 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Section 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55075, Nov. 24, 1992]

§ 52.113 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 52 are issued under one or more of sections 161b, 161i, or 160o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 52 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 52.1, 52.3, 52.5, 52.8, 52.11, 52.13, 52.15, 52.17, 52.18, 52.19, 52.21, 52.23, 52.24, 52.27, 52.29, 52.31, 52.33, 52.37, 52.39, 52.41, 52.43, 52.45, 52.47, 52.48, 52.49, 52.51, 52.53, 52.54, 52.55, 52.57, 52.59, 52.61, 52.71, 52.73, 52.75, 52.77, 52.78, 52.79, 52.81, 52.83, 52.85, 52.87, 52.89, 52.93, 52.97, 52.103, 52.111, and 52.113.

[57 FR 55075, Nov. 24, 1992, as amended at 58 FR 21912, Apr. 26, 1993]

Subpart E—Standard Design Approvals

[Top of File]

§ 52.131 Scope of subpart.

This subpart sets out procedures for the filing, NRC staff review, and referral to the Advisory Committee on Reactor Safeguards of standard designs for a nuclear power reactor of the type described in § 50.22 of this chapter or major portions thereof.

[72 FR 49538, Aug. 28, 2007]

§ 52.133 Relationship to other subparts.

[Top of File]

(a) This subpart applies to a person that requests a standard design approval from the NRC staff separately from an application for a construction permit filed under 10 CFR part 50 or a combined license filed under subpart C of this part. An applicant for a construction permit or combined license may reference a standard design approval.

(b) Subpart B of this part governs the certification by rulemaking of the design of a nuclear power plant. Subpart B may be used independently of the provisions in this subpart.

(c) Subpart F of this part governs the issuance of licenses to manufacture nuclear power reactors to be installed and operated at sites not identified in the manufacturing license application. Subpart F of this part may be used independently of the provisions in this subpart.

[72 FR 49538, Aug. 28, 2007]

§ 52.135 Filing of applications.

[Top of File]

(a) Any person may submit a proposed standard design for a nuclear power reactor of the type described in 10 CFR 50.22 to the NRC staff for its review. The submittal may consist of either the final design for the entire facility or the final design of major portions thereof.

(b) The submittal for review of the proposed standard design must be made in the same manner and in the same number of copies as provided in 10 CFR 50.30 and 52.3 for license applications.

(c) The fees associated with the filing and review of the application are set forth in 10 CFR part 170.

[72 FR 49538, Aug. 28, 2007]

§ 52.136 Contents of applications; general information.

[Top of File]

The application must contain all of the information required by 10 CFR 50.33(a) through (d) and (j).

[72 FR 49538, Aug. 28, 2007]

§ 52.137 Contents of applications; technical information.

[Top of File]

If the applicant seeks review of a major portion of a standard design, the application need only contain the information required by this section to the extent the requirements are applicable to the major portion of the standard design for which NRC staff approval is sought.

(a) The application must contain a final safety analysis report that describes the facility, presents the design bases and the limits on its operation, and presents a safety analysis of the structures, systems, and components and of the facility, or major portion thereof, and must include the following information:

(1) The site parameters postulated for the design, and an analysis and evaluation of the design in terms of those site parameters;

(2) A description and analysis of the SSCs of the facility, with emphasis upon performance requirements, the bases, with technical justification, upon which the requirements have been established, and the evaluations required to show that safety functions will be accomplished. It is expected that the standard plant will reflect through its design, construction, and operation an extremely low probability for accidents that could result in the release of significant quantities of radioactive fission products. The

description shall be sufficient to permit understanding of the system designs and their relationship to the safety evaluations. Items such as the reactor core, reactor coolant system, instrumentation and control systems, electrical systems, containment system, other engineered safety features, auxiliary and emergency systems, power conversion systems, radioactive waste handling systems, and fuel handling systems shall be discussed insofar as they are pertinent. The following power reactor design characteristics will be taken into consideration by the Commission:

(i) Intended use of the reactor including the proposed maximum power level and the nature and inventory of contained radioactive materials;

(ii) The extent to which generally accepted engineering standards are applied to the design of the reactor;

(iii) The extent to which the reactor incorporates unique, unusual or enhanced safety features having a significant bearing on the probability or consequences of accidental release of radioactive materials; and

(iv) The safety features that are to be engineered into the facility and those barriers that must be breached as a result of an accident before a release of radioactive material to the environment can occur. Special attention must be directed to plant design features intended to mitigate the radiological consequences of accidents. In performing this assessment, an applicant shall assume a fission product release [9] from the core into the containment assuming that the facility is operated at the ultimate power level contemplated. The applicant shall perform an evaluation and analysis of the postulated fission product release, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents, together with applicable postulated site parameters, including site meteorology, to evaluate the offsite radiological consequences. The evaluation must determine that:

(A) An individual located at any point on the boundary of the exclusion area for any 2-hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem [10] total effective dose equivalent (TEDE); and

(B) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a radiation dose in excess of 25 rem TEDE;

(3) The design of the facility including:

(i) The principal design criteria for the facility. Appendix A to 10 CFR part 50, general design criteria (GDC), establishes minimum requirements for the principal design criteria for watercooled nuclear power plants similar in design and location to plants for which construction permits have previously been issued by the Commission and provides guidance to applicants in establishing principal design criteria for other types of nuclear power units;

(ii) The design bases and the relation of the design bases to the principal design criteria; and

(iii) Information relative to materials of construction, general arrangement, and approximate dimensions, sufficient to provide reasonable assurance that the design will conform to the design bases with adequate margin for safety;

(4) An analysis and evaluation of the design and performance of SSC with the objective of assessing the risk to public health and safety resulting from operation of the facility and including determination of the margins of safety during normal operations and transient conditions anticipated during the life of the facility, and the adequacy of SSCs provided for the prevention of accidents and the mitigation of the consequences of accidents. Analysis and evaluation of ECCS cooling performance and the need for high-point vents following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of 10 CFR 50.46 and 50.46a;

(5) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in part 20 of this chapter;

(6) The information required by § 20.1406 of this chapter;

(7) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter;

(8) The information necessary to demonstrate compliance with any technically relevant portions of the Three Mile Island requirements set forth in 10 CFR 50.34(f), except paragraphs (f)(1)(xii), (f)(2)(ix), and (f)(3)(v) of 10 CFR 50.34(f);

(9) For applications for light-watercooled nuclear power plants, an evaluation of the standard plant design against the Standard Review Plan (SRP) revision in effect 6 months before the docket date of the application. The evaluation required by this section shall include an identification and description of all differences in design features, analytical techniques, and procedural measures proposed for the design and those corresponding features, techniques, and measures given in the SRP acceptance criteria. Where a difference exists, the evaluation shall discuss how the proposed alternative provides an acceptable method of complying with the Commission's regulations, or portions thereof, that underlie the corresponding SRP acceptance criteria. The SRP is not a substitute for the regulations, and compliance is not a requirement;

(10) The information with respect to the design of equipment to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations described in 10 CFR 50.34a(e);

(11) The information pertaining to design features that affect plans for coping with emergencies in the operation of the reactor facility or a major portion thereof;

(12) An analysis and description of the equipment and systems for combustible gas control as required by § 50.44 of this chapter;

(13) The list of electric equipment important to safety that is required by 10 CFR 50.49(d);

(14) A description of protection provided against pressurized thermal shock events, including projected values of the reference temperature for reactor vessel beltline materials as defined in 10 CFR 50.60 and 50.61;

(15) Information demonstrating how the applicant will comply with requirements for reduction of risk from anticipated transients without scram (ATWS) events in § 50.62; (16) The coping analysis, and any design features necessary to address station blackout, as described in § 50.63 of this chapter;

(17) Information demonstrating how the applicant will comply with requirements for criticality accidents in § 50.68(b)(2)–(b)(4);

(18) A description and analysis of the fire protection design features for the standard plant necessary to comply with part 50, appendix A, GDC 3, and § 50.48 of this chapter;

(19) A description of the quality assurance program applied to the design of the SSCs of the facility. Appendix B to 10 CFR part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," sets forth the requirements for quality assurance programs for nuclear power plants. The description of the quality assurance program for a nuclear power plant shall include a discussion of how the applicable requirements of appendix B to 10 CFR part 50 were satisfied;

(20) The information necessary to demonstrate that the standard plant complies with the earthquake engineering criteria in 10 CFR part 50, appendix S;

(21) Proposed technical resolutions of those Unresolved Safety Issues and medium- and high-priority generic safety issues which are identified in the version of NUREG–0933 current on the date up to 6 months before the docket date of the application and which are technically relevant to the design;

(22) The information necessary to demonstrate how operating experience insights have been incorporated into the plant design;

(23) For light-water reactor designs, a description and analysis of design features for the prevention and mitigation of severe accidents, e. g., challenges to containment integrity caused by core-concrete interaction, steam explosion, high-pressure core melt ejection, hydrogen combustion, and containment bypass;

(24) A description, analysis, and evaluation of the interfaces between the standard design and the balance of the nuclear power plant; and

(25) A description of the design-specific probabilistic risk assessment and its results.

(b) An application for approval of a standard design, which differs significantly from the light-water reactor designs of plants that have been licensed and in commercial operation before April 18, 1989, or uses simplified, inherent, passive, or other innovative means to accomplish its safety functions, must meet the requirements of 10 CFR 50.43(e).

[72 FR 49538, Aug. 28, 2007]

9 The fission product release assumed for this evaluation should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events. These accidents have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products.

10 A whole body dose of 25 rem has been stated to correspond numerically to the once in a lifetime accidental or emergency dose for radiation workers which, according to NCRP recommendations at the time could be disregarded in the determination of their radiation exposure status (see NBS Handbook 69 dated June 5, 1959). However, its use is not intended to imply that this number constitutes an acceptable limit for an emergency dose to the public under accident conditions. Rather, this dose value has been set forth in this section as a reference value, which can be used in the evaluation of plant design features with respect to postulated reactor accidents, to assure that these designs provide assurance of low risk of public exposure to radiation, in the event of an accident.

§ 52.139 Standards for review of applications.

[Top of File]

Applications filed under this subpart will be reviewed for compliance with the standards set out in 10 CFR parts 20, 50 and its appendices, and 10 CFR parts 73 and 100.

[72 FR 49540, Aug. 28, 2007]

§ 52.141 Referral to the Advisory Committee on Reactor Safeguards (ACRS).

[Top of File]

The Commission shall refer a copy of the application to the ACRS. The ACRS shall report on those portions of the application which concern safety.

[72 FR 49540, Aug. 28, 2007]

§ 52.143 Staff approval of design.

[Top of File]

Upon completion of its review of a submittal under this subpart and receipt of a report by the Advisory Committee on Reactor Safeguards under § 52.141 of this subpart, the NRC staff shall publish a determination in the **Federal Register** as to whether or not the design is acceptable, subject to appropriate terms and conditions, and make an analysis of the design in the form of a report available at the NRC Web site, *http://www.nrc.gov*.

[72 FR 49540, Aug. 28, 2007]

§ 52.145 Finality of standard design approvals; information requests.

[Top of File]

(a) An approved design must be used by and relied upon by the NRC staff and the ACRS in their review of any individual facility license application that incorporates by reference a standard design approved in accordance with this paragraph unless there exists significant new information that substantially affects the earlier determination or other good cause.

(b) The determination and report by the NRC staff do not constitute a commitment to issue a permit or license, or in any way affect the authority of the Commission, Atomic Safety and Licensing Board Panel, or presiding officers in any proceeding under part 2 of this chapter.

(c) Except for information requests seeking to verify compliance with the current licensing basis of the standard design approval, information requests to the holder of a standard design approval must be evaluated before issuance to ensure that the burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each evaluation performed by the NRC staff must be in accordance with 10 CFR 50.54(f) and must be approved by the Executive Director for Operations or his or her designee before issuance of the request.

[72 FR 49540, Aug. 28, 2007]

§ 52.147 Duration of design approval.

[Top of File]

A standard design approval issued under this subpart is valid for 15 years from the date of issuance and may not be renewed. A design approval continues to be valid beyond the date of expiration in any proceeding on an application for a construction permit or an operating license under part 50 or a combined license or manufacturing license under part 52 that references the final design approval and is docketed before the date of expiration of the design approval.

[72 FR 49540, Aug. 28, 2007]

Subpart F—Manufacturing Licenses

[Top of File]

§ 52.151 Scope of subpart.

This subpart sets out the requirements and procedures applicable to Commission issuance of a license authorizing manufacture of nuclear power reactors to be installed at sites not identified in the manufacturing license application.

[72 FR 49540, Aug. 28, 2007]

§ 52.153 Relationship to other subparts.

[Top of File]

(a) A nuclear power reactor manufactured under a manufacturing license issued under this subpart may only be transported to and installed at a site for which either a construction permit under part 50 of this chapter or a combined license under subpart C of this part has been issued.

(b) Subpart B of this part governs the certification by rulemaking of the design of standard nuclear power facilities. Subpart E of this part governs the NRC staff review and approval of standard designs for a nuclear power facility. A manufacturing license applicant may reference a standard design certification or a standard design approval in its application. These subparts may also be used independently of the provisions in this subpart.

[72 FR 49540, Aug. 28, 2007]

§ 52.155 Filing of applications.

[Top of File]

(a) Any person, except one excluded by 10 CFR 50.38, may file an application for a manufacturing license under this subpart with the Director of New Reactors or the Director of Nuclear Reactor Regulation, as appropriate.

(b) The application must comply with the applicable filing requirements of§§ 52.3 and 50.30 of this chapter.

(c) The fees associated with the filing and review of the application are set forth in 10 CFR part 170.

[72 FR 49540, Aug. 28, 2007]

§ 52.156 Contents of applications; general information.

[Top of File]

The application must contain all of the information required by 10 CFR 50.33(a) through (d), and (j).

[72 FR 49540, Aug. 28, 2007]

§ 52.157 Contents of applications; technical information in final safety analysis report.

[Top of File]

The application must contain a final safety analysis report containing the information set forth below, with a level of design information sufficient to enable the Commission to judge the applicant's proposed means of assuring that the manufacturing conforms to the design and to reach a final conclusion on all safety questions associated with the design, permit the preparation of construction and installation specifications by an applicant who seeks to use the manufactured reactor, and permit the preparation of acceptance and inspection requirements by the NRC:

(a) The principal design criteria for the reactor to be manufactured. Appendix A of 10 CFR part 50, "General Design Criteria for Nuclear Power Plants," establishes minimum requirements for the principal design criteria for water-cooled nuclear power plants similar in design and location to plants for which construction permits have previously been issued by the Commission and provides guidance to applicants in establishing principal design criteria for other types of nuclear power units;

(b) The design bases and the relation of the design bases to the principal design criteria;

(c) A description and analysis of the structures, systems, and components of the reactor to be manufactured, with emphasis upon the materials of manufacture, performance requirements, the bases, with technical justification therefor, upon which the performance requirements have been established, and the evaluations required to show that safety functions will be accomplished. The description shall be sufficient to permit understanding of the system designs and their relationship to safety evaluations. Items such as the reactor core, reactor coolant system, instrumentation and control systems, electrical systems, containment system, other engineered safety features, auxiliary and emergency systems, power conversion systems, radioactive waste handling systems, and fuel handling systems shall be discussed insofar as they are pertinent. The following power reactor design characteristics will be taken into consideration by the Commission:

(1) Intended use of the manufactured reactor including the proposed maximum power level and the nature and inventory of contained radioactive materials;

(2) The extent to which generally accepted engineering standards are applied to the design of the reactor; and

(3) The extent to which the reactor incorporates unique, unusual or enhanced safety features having a significant bearing on the probability or consequences of accidental release of radioactive materials;

(d) The safety features that are engineered into the reactor and those barriers that must be breached as a result of an accident before a release of radioactive material to the environment can occur. Special attention must be directed to reactor design features intended to mitigate the radiological consequences of accidents. In performing this assessment, an applicant shall assume a fission product release [11] from the core into the containment assuming that the facility is operated at the ultimate power level contemplated. The applicant shall perform an evaluation and analysis of the postulated fission product release, using the expected demonstrable containment leak rate and any fission product cleanup systems intended to mitigate the consequences of the accidents, together with applicable postulated site parameters, including site meteorology, to evaluate the offsite radiological consequences. The evaluation must determine that:

(1) An individual located at any point on the boundary of the exclusion area for any 2 hour period following the onset of the postulated fission product release, would not receive a radiation dose in excess of 25 rem [12] total effective dose equivalent (TEDE);

(2) An individual located at any point on the outer boundary of the low population zone, who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a radiation dose in excess of 25 rem TEDE; and

(e) The kinds and quantities of radioactive materials expected to be produced in the operation and the means for controlling and limiting radioactive effluents and radiation exposures within the limits set forth in part 20 of this chapter.

(f) Information necessary to establish that the design of the reactor to be manufactured complies with the technical requirements in 10 CFR Chapter I, including:

(1) An analysis and evaluation of the design and performance of structures, systems, and components with the objective of assessing the risk to public health and safety resulting from operation of the facility and including determination of the margins of safety during normal operations and transient conditions anticipated during the life of the facility, and the adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents. Analysis and evaluation of ECCS cooling performance and the need for high-point vents following postulated loss-of-coolant accidents shall be performed in accordance with the requirements of §§ 50.46 and 50.46a of this chapter;

(2) A description and analysis of the fire protection design features for the reactor necessary to comply with 10 CFR part 50, appendix A, GDC 3 and § 50.48 of this chapter;

(3) A description of protection provided against pressurized thermal shock events, including projected values of the reference temperature for reactor vessel beltline materials as defined in §§ 50.60 and 50.61 of this chapter;

(4) An analysis and description of the equipment and systems for combustible gas control as required by § 50.44 of this chapter;

(5) The coping analysis, and any design features necessary to address station blackout, as described in § 50.63 of this chapter;

(6) The list of electric equipment important to safety that is required by 10 CFR 50.49(d);

(7) Information demonstrating how the applicant will comply with requirements for reduction of risk from anticipated transients without scram (ATWS) events in § 50.62;

(8) Information demonstrating how the applicant will comply with requirements for criticality accidents in § 50.68(b)(2)–(b)(4);

(9) The information required by § 20.1406 of this chapter;

(10) [Reserved];

(11) The information with respect to the design of equipment to maintain control over radioactive materials in gaseous and liquid effluents produced during normal reactor operations, as described in § 50.34a(e) of this chapter;

(12) The information necessary to demonstrate compliance with any technically relevant portions of the Three Mile Island requirements set forth in § 50.34(f) of this chapter, except paragraphs (f)(1)(xii), (f)(2)(ix), and (f)(3)(v);

(13) If the applicant seeks to use risk-informed treatment of SSCs in accordance with § 50.69 of this chapter, the information required by § 50.69(b)(2) of this chapter;

(14) The information necessary to demonstrate that the manufactured reactor complies with the earthquake engineering criteria in appendix S to 10 CFR part 50;

(15) Information sufficient to demonstrate compliance with the applicable requirements regarding testing, analysis, and prototypes as set forth in § 50.43(e) of this chapter;

(16) The technical qualifications of the applicant to engage in the proposed activities in accordance with the regulations in this chapter;

(17) A description of the quality assurance program applied to the design, and to be applied to the manufacture of, the structures, systems, and components of the reactor. Appendix B to 10 CFR part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," sets forth the requirements for quality assurance programs for nuclear power plants. The description of the quality assurance program must include a discussion of how the applicable requirements of appendix B to 10 CFR part 50 have been and will be satisfied; and

(18) Proposed technical specifications applicable to the reactor being manufactured, prepared in accordance with the requirements of §§ 50.36 and 50.36a of this chapter;

(19) The site parameters postulated for the design, and an analysis and evaluation of the reactor design in terms of those site parameters;

(20) The interface requirements between the manufactured reactor and the remaining portions of the nuclear power plant. These requirements must be sufficiently detailed to allow for completion of the final safety analysis;

(21) Justification that compliance with the interface requirements of paragraph (f)(20) of this section is verifiable through inspections, testing, or analysis. The method to be used for verification of interface requirements must be included as part of the proposed ITAAC required by § 52.158(a);

(22) A representative conceptual design for a nuclear power facility using the manufactured reactor, to aid the NRC in its review of the final safety analysis required by this section and to permit assessment of the adequacy of the interface requirements in paragraph (f)(20) of this section;

(23) For light-water reactor designs, a description and analysis of design features for the prevention and mitigation of severe accidents, e. g., challenges to containment integrity caused by core-concrete interaction, steam explosion, high-pressure core melt ejection, hydrogen combustion, and containment bypass;

(24) [Reserved];

(25) If the reactor is to be used in modular plant design, a description of the possible operating configurations of the reactor modules with common systems, interface requirements, and system interactions. The final safety analysis must also account for differences among the configurations, including any restrictions that will be necessary during the construction and startup of a given module to ensure the safe operation of any module already operating;

(26) A description of the management plan for design and manufacturing activities, including:

(i) The organizational and management structure singularly responsible for direction of design and manufacture of the reactor;

(ii) Technical resources directed by the applicant, and the qualifications requirements;

(iii) Details of the interaction of design and manufacture within the applicant's organization and the manner by which the applicant will ensure close integration of the architect engineer and the nuclear steam supply vendor, as applicable;

(iv) Proposed procedures governing the preparation of the manufactured reactor for shipping to the site where it is to be operated, the conduct of shipping, and verifying the condition of the manufactured reactor upon receipt at the site; and

(v) The degree of top level management oversight and technical control to be exercised by the applicant during design and manufacture, including the preparation and implementation of procedures necessary to guide the effort;

(27) Necessary parameters to be used in developing plans for preoperational testing and initial operation;

(28) Proposed technical resolutions of those Unresolved Safety Issues and medium- and high-priority generic safety issues which are identified in the version of NUREG–0933 current on the date up to 6 months before the docket date of the application and which are technically relevant to the design;

(29) The information necessary to demonstrate how operating experience insights have been incorporated into the manufactured reactor design;

(30) For applications for light-water-cooled nuclear power plants, an evaluation of the design to be manufactured against the Standard Review Plan (SRP) revision in effect 6 months before the docket date of the application. The evaluation required by this section shall include an identification and description of all differences in design features, analytical techniques, and procedural measures proposed for the design and those corresponding features, techniques, and measures given in the SRP acceptance criteria. Where a difference exists, the evaluation shall discuss how the proposed alternative provides an acceptable method of complying with the Commission's regulations, or portions thereof, that underlie the corresponding SRP acceptance criteria. The SRP is not a substitute for the regulations, and compliance is not a requirement; and

(31) A description of the design-specific probabilistic risk assessment and its results.

[72 FR 49540, Aug. 28, 2007]

11 The fission product release assumed for this evaluation should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events. These accidents have generally been assumed to result in substantial meltdown of the core with subsequent release into the containment of appreciable quantities of fission products.

12 A whole body dose of 25 rem has been stated to correspond numerically to the once in a lifetime accidental or emergency dose for radiation workers which, according to NCRP recommendations at the time could be disregarded in the determination of their radiation exposure status (see NBS Handbook 69 dated June 5, 1959). However, its use is not intended to imply that this number constitutes an acceptable limit for an emergency dose to the public under accident conditions. Rather, this dose value has been set forth in this section as a reference value, which can be used in the evaluation of plant design features with respect to postulated reactor accidents, to assure that these designs provide assurance of low risk of public exposure to radiation, in the event of an accident.

§ 52.158 Contents of application; additional technical information.

[Top of File]

The application must contain:

(a)(1) *Inspections, tests, analyses, and acceptance criteria (ITAAC)*. The proposed inspections, tests, and analyses that the licensee who will be operating the reactor shall perform, and the acceptance criteria that are necessary and sufficient to provide reasonable assurance that, if the inspections, tests, and analyses are performed and the acceptance criteria met:

(i) The reactor has been manufactured in conformity with the manufacturing license; the provisions of the Act, and the Commission's rules and regulations; and

(ii) The manufactured reactor will be operated in conformity with the approved design and any license authorizing operation of the manufactured reactor.

(2) If the application references a standard design certification, the ITAAC contained in the certified design must apply to those portions of the facility design which are covered by the design certification.

(3) If the application references a standard design certification, the application may include a notification that a required inspection, test, or analysis in the design certification ITAAC has been successfully completed and that the corresponding acceptance criterion has been met. The **Federal Register** notification required by § 52.163 must indicate that the application includes this notification.

(b)(1) An environmental report as required by 10 CFR 51.54.

(2) If the manufacturing license application references a standard design certification, the environmental report need not contain a discussion of severe accident mitigation design alternatives for the reactor.

[72 FR 49542, Aug. 28, 2007]

§ 52.159 Standards for review of application.

[Top of File]

Applications filed under this subpart will be reviewed according to the applicable standards set out in 10 CFR parts 20, 50 and its appendices, 51, 73, and 100 and its appendices.

[72 FR 49543, Aug. 28, 2007]

§ 52.161 Reserved.

[Top of File]

[72 FR 49543, Aug. 28, 2007]

§ 52.163 Administrative review of applications; hearings.

[Top of File]

A proceeding on a manufacturing license is subject to all applicable procedural requirements contained in 10 CFR part 2, including the requirements for docketing in § 2.101(a)(1) through (4) of this chapter, and the requirements for issuance of a notice of proposed action in § 2.105 of this chapter, *provided, however*, that the designated sections may not be construed to require that the environmental report or draft or final environmental impact statement include
an assessment of the benefits of constructing and/or operating the manufactured reactor or an evaluation of alternative energy sources. All hearings on manufacturing licenses are governed by the hearing procedures contained in 10 CFR part 2, subparts C, G, L, and N.

[72 FR 49543, Aug. 28, 2007]

§ 52.165 Referral to the Advisory Committee on Reactor Safeguards (ACRS).

[Top of File]

The Commission shall refer a copy of the application to the ACRS. The ACRS shall report on those portions of the application which concern safety.

[72 FR 49543, Aug. 28, 2007]

§ 52.167 Issuance of manufacturing license.

[Top of File]

(a) After completing any hearing under § 52.163, and receiving the report submitted by the ACRS, the Commission may issue a manufacturing license if the Commission finds that:

(1) Applicable standards and requirements of the Act and the Commission's regulations have been met;

(2) There is reasonable assurance that the reactor(s) will be manufactured, and can be transported, incorporated into a nuclear power plant, and operated in conformity with the manufacturing license, the provision of the Act, and the Commission's regulations;

(3) The proposed reactor(s) can be incorporated into a nuclear power plant and operated at sites having characteristics that fall within the site parameters postulated for the design of the manufactured reactor(s) without undue risk to the health and safety of the public;

(4) The applicant is technically qualified to design and manufacture the proposed nuclear power reactor(s);

(5) The proposed inspections, tests, analyses and acceptance criteria are necessary and sufficient, within the scope of the manufacturing license, to provide reasonable assurance that the manufactured reactor has been manufactured and will be operated in conformity with the license, the provisions of the Act, and the Commission's regulations;

(6) The issuance of a license to the applicant will not be inimical to the common defense and security or to the health and safety of the public; and

(7) The findings required by subpart A of part 51 of this chapter have been made.

(b) Each manufacturing license issued under this subpart shall specify:

(1) Terms and conditions as the Commission deems necessary and appropriate;

(2) Technical specifications for operation of the manufactured reactor, as the Commission deems necessary and appropriate;

(3) Site parameters and design characteristics for the manufactured reactor; and

(4) The interface requirements to be met by the site-specific elements of the facility, such as the service water intake structure and the ultimate heat sink, not within the scope of the manufactured reactor.

(c)(1) A holder of a manufacturing license may not transport or allow to be removed from the place of manufacture the manufactured reactor except to the site of a licensee with either a construction permit under part 50 of this chapter or a combined license under subpart C of this part. The construction permit or combined license must authorize the construction of a nuclear power facility using the manufactured reactor(s).

(2) A holder of a manufacturing license shall include, in any contract governing the transport of a manufactured reactor from the place of manufacture to any other location, a provision requiring that the person or entity transporting the manufactured reactor to comply with all NRC-approved shipping requirements in the manufacturing license.

[72 FR 49543, Aug. 28, 2007]

§ 52.169 [Reserved].

[Top of File]

[72 FR 49543, Aug. 28, 2007]

§ 52.171 Finality of manufacturing licenses; information requests.

[Top of File]

(a)(1) Notwithstanding any provision in 10 CFR 50.109, during the term of a manufacturing license the Commission may not modify, rescind, or impose new requirements on the design of the nuclear power reactor being manufactured, or the requirements for the manufacture of the nuclear power reactor, unless the Commission determines that a modification is necessary to bring the design of the reactor or its manufacture into compliance with the Commission's requirements applicable and in effect at the time the manufacturing license was issued, or to provide reasonable assurance of adequate protection to public health and safety or common defense and security.

(2) Any modification to the design of a manufactured nuclear power reactor which is imposed by the Commission under paragraph (a)(1) of this section will be applied to all reactors manufactured under the license, including those that have already been transported and sited, except those reactors to which the modification has been rendered technically irrelevant by action taken under paragraph (b) of this section.

(3) In making the findings required for issuance of a construction permit, operating license, combined license, in any hearing under § 52.103, or in any enforcement hearing other than one initiated by the Commission under paragraph (a)(1) of this section, for which a nuclear power reactor manufactured under this subpart is referenced or used, the Commission shall treat as resolved those matters resolved in the proceeding on the application for issuance or renewal of the manufacturing license, including the adequacy of design of the manufactured reactor, the costs and benefits of severe accident mitigation design alternatives, and the bases for not incorporating severe accident mitigation design alternatives into the design of the reactor to be manufactured.

(b)(1) The holder of a manufacturing license may not make changes to the design of the nuclear power reactor authorized to be manufactured without prior Commission approval. The request for a change to the design must be in the form of an application for a license amendment, and must meet the requirements of 10 CFR 50.90 and 50.92.

(2) An applicant or licensee who references or uses a nuclear power reactor manufactured under a manufacturing license under this subpart may request a departure from the design characteristics, site parameters, terms and conditions, or approved design of the manufactured reactor. The Commission may grant a request only if it determines that the departure will comply with the requirements of 10 CFR 52.7, and that the special circumstances outweigh any decrease in safety that may result from the reduction in standardization caused by the departure. The granting of a departure on request of an applicant is subject to litigation in the same manner as other issues in the construction permit or combined license hearing.

(c) Except for information requests seeking to verify compliance with the current licensing basis of either the manufacturing license or the manufactured reactor, information requests to the holder of a manufacturing license or an applicant or licensee using a manufactured reactor must be evaluated before issuance to ensure that the burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each evaluation performed by the NRC staff must be in accordance with 10 CFR 50.54(f) and must be approved by the Executive Director for Operations or his or her designee before issuance of the request.

[72 FR 49543, Aug. 28, 2007]

§ 52.173 Duration of manufacturing license.

[Top of File]

A manufacturing license issued under this subpart may be valid for not less than 5, nor more than 15 years from the date of issuance. A holder of a manufacturing license may not initiate the manufacture of a reactor less than 3 years before the expiration of the license even though a timely application for renewal has been docketed with the NRC. Upon expiration of the manufacturing license, the manufacture of any uncompleted reactors must cease unless a timely application for renewal has been docketed with the NRC.

[72 FR 49544, Aug. 28, 2007]

§ 52.175 Transfer of manufacturing license.

[Top of File]

A manufacturing license may be transferred in accordance with § 50.80 of this chapter.

[72 FR 49544, Aug. 28, 2007]

§ 52.177 Application for renewal.

[Top of File]

(a) Not less than 12 months, nor more than 5 years before the expiration of the manufacturing license, or any later renewal period, the holder of the manufacturing license may apply for a renewal of the license. An application for renewal must contain all information necessary to bring up to date the information and data contained in the previous application.

(b) The filing of an application for a renewed license must be in accordance with subpart A of 10 CFR part 2 and 10 CFR 52.3 and 50.30.

(c) A manufacturing license, either original or renewed, for which a timely application for renewal has been filed, remains in effect until the Commission has made a final determination on the renewal application, *provided, however*, that in accordance with § 52.173, the holder of a manufacturing license may not begin manufacture of a reactor less than 3 years before the expiration of the license.

(d) Any person whose interest may be affected by renewal of the permit may request a hearing on the application for renewal. The request for a hearing must comply with 10 CFR 2.309. If a hearing is granted, notice of the hearing will be published in accordance with 10 CFR 2.104.

(e) The Commission shall refer a copy of the application for renewal to the Advisory Committee on Reactor Safeguards (ACRS). The ACRS shall report on those portions of the application which concern safety and shall apply the criteria set forth in§ 52.159.

[72 FR 49544, Aug. 28, 2007]

§ 52.179 Criteria for renewal.

[Top of File]

The Commission may grant the renewal if the Commission determines:

(a) The manufacturing license complies with the Atomic Energy Act and the Commission's regulations and orders applicable and in effect at the time the manufacturing license was originally issued; and

(b) Any new requirements the Commission may wish to impose are:

(1) Necessary for adequate protection to public health and safety or common defense and security;

(2) Necessary for compliance with the Commission's regulations and orders applicable and in effect at the time the manufacturing license was originally issued; or

(3) A substantial increase in overall protection of the public health and safety or the common defense and security to be derived from the new requirements, and the direct and indirect costs of implementation of those requirements are justified in view of this increased protection.

[72 FR 49544, Aug. 28, 2007]

§ 52.181 Duration of renewal.

[Top of File]

A renewed manufacturing license may be issued for a term of not less than 5, nor more than 15 years, plus any remaining years on the manufacturing license then in effect before renewal. The renewed license shall be subject to the requirements of §§ 52.171 and 52.175.

[72 FR 49544, Aug. 28, 2007]

Subpart H—Enforcement

[Top of File]

§ 52.301 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of—

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued under those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under Section 234 of the Atomic Energy Act:

(1) For violations of—

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any regulation, or order issued under the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

[72 FR 49544, Aug. 28, 2007]

§ 52.303 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under Sections 161b, 161i, or 161o of the Act.
For purposes of Section 223, all the regulations in part 52 are issued under one or more of Sections 161b, 161i, or 160o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 52 that are not issued under Sections 161b, 161i, or 161o for the purposes of Section 223 are as follows: §§ 52.0, 52.1, 52.2, 52.3, 52.7, 52.8, 52.9, 52.10, 52.11, 52.12, 52.13, 52.15, 52.16, 52.17, 52.18, 52.21, 52.23, 52.24, 52.27, 52.28, 52.29, 52.31, 52.33, 52.39, 52.41, 52.43, 52.45, 52.46, 52.47, 52.48, 52.51, 52.53, 52.54, 52.55, 52.57, 52.59, 52.61, 52.63, 52.71, 52.73, 52.75, 52.77, 52.79, 52.80, 52.81, 52.83, 52.85, 52.87, 52.93, 52.97, 52.98, 52.103, 52.104, 52.105, 52.107, 52.109, 52.131, 52.133, 52.135, 52.136, 52.137, 52.139, 52.141, 52.143, 52.145, 52.147, 52.151, 52.153, 52.155, 52.156, 52.157, 52.158, 52.159, 52.161, 52.163, 52.165, 52.167,
52.171, 52.173, 52.175, 52.177, 52.179, 52.181, 52.301, and 52.303.

[72 FR 49544, Aug. 28, 2007]

Appendix A To Part 52--Design Certification Rule for the U.S. Advanced Boiling Water Reactor

[Top of File]

I. Introduction

Appendix A constitutes the standard design certification for the U.S. Advanced Boiling Water Reactor (ABWR) design, in accordance with 10 CFR part 52, subpart B. The applicant for certification of the U.S. ABWR design was GE Nuclear Energy.

II. Definitions

A. Generic design control document (generic DCD) means the document containing the Tier 1 and Tier 2 information and generic technical specifications that is incorporated by reference into this appendix.

B. Generic technical specifications means the information, required by 10 CFR 50.36 and 50.36a, for the portion of the plant that is within the scope of this appendix.

C. Plant-specific DCD means the document, maintained by an applicant or licensee who references this appendix, consisting of the information in the generic DCD, as modified and supplemented by the plant-specific departures and exemptions made under Section VIII of this appendix.

D. *Tier 1* means the portion of the designrelated information contained in the generic DCD that is approved and certified by this appendix (hereinafter Tier 1 information). The design descriptions, interface requirements, and site parameters are derived from Tier 2 information. Tier 1 information includes:

1. Definitions and general provisions;

2. Design descriptions;

3. Inspections, tests, analyses, and acceptance criteria (ITAAC);

4. Significant site parameters; and

5. Significant interface requirements.

E. *Tier 2* means the portion of the design-related information contained in the generic DCD that is approved but not certified by this appendix (Tier 2 information). Compliance with Tier 2 is required, but generic changes to and plant-specific departures from Tier 2 are governed by Section VIII of this appendix. Compliance with Tier 2 provides a sufficient, but not the only acceptable, method for complying with Tier 1. Compliance methods differing from Tier 2 must satisfy the change process in Section VIII of this appendix. Regardless of these differences, an applicant or licensee must meet the requirement in Section III.B of this appendix to reference Tier 2 when referencing Tier 1. Tier 2 information includes:

1. Information required by §§ 52.47(a) and 52.47(c), with the exception of generic technical specifications and conceptual design information;

2. Supporting information on the inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met; and

3. Combined license (COL) action items (COL license information), which identify certain matters that must be addressed in the site-specific portion of the final safety analysis report (FSAR) by an applicant who references this appendix. These items constitute information requirements but are not the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a construction permit or COL, these items are not requirements for the licensee unless such items are restated in the FSAR.

F. *Tier 2** means the portion of the Tier 2 information, designated as such in the generic DCD, which is subject to the change process in Section VIII.B.6 of this appendix. This designation expires for some Tier 2* information under Section VIII.B.6.

G. Departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses means:

(1) Changing any of the elements of the method described in the plant-specific DCD unless the results of the analysis are conservative or essentially the same; or

(2) Changing from a method described in the plant-specific DCD to another method unless that method has been approved by NRC for the intended application.

H. All other terms in this appendix have the meaning set out in 10 CFR 50.2 or 52.1, or Section 11 of the Atomic Energy Act of 1954, as amended, as applicable.

III. Scope and Contents

A. Tier 1, Tier 2, and the generic technical specifications in the U.S. ABWR Design Control Document, GE Nuclear Energy, Revision 4 dated March 1997, are approved for incorporation by reference by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the generic DCD may be obtained from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. A copy is available for examination and copying at the NRC Public Document Room located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852. Copies are also available for examination at the NRC Library located at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland 20582 and the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

B. An applicant or licensee referencing this appendix, in accordance with Section IV of this appendix, shall incorporate by reference and comply with the requirements of this appendix, including Tier 1, Tier 2, and the generic technical specifications except as otherwise provided in this appendix. Conceptual design information, as set forth in the generic DCD, and the "Technical Support Document for the ABWR" are not part of this appendix. Tier 2 references to the probabilistic risk assessment (PRA) in the ABWR standard safety analysis report do not incorporate the PRA into Tier 2.

C. If there is a conflict between Tier 1 and Tier 2 of the DCD, then Tier 1 controls.

D. If there is a conflict between the generic DCD and either the application for design certification of the U.S. ABWR design or NUREG–1503, "Final Safety Evaluation Report related to the Certification of the Advanced Boiling Water Reactor Design" (FSER), and Supplement No. 1, then the generic DCD controls.

E. Design activities for structures, systems, and components that are wholly outside the scope of this appendix may be performed using site characteristics, provided the design activities do not affect the DCD or conflict with the interface requirements.

IV. Additional Requirements and Restrictions

A. An applicant for a combined license that wishes to reference this appendix shall, in addition to complying with the requirements of 10 CFR 52.77, 52.79, and 52.80, comply with the following requirements:

1. Incorporate by reference, as part of its application, this appendix;

2. Include, as part of its application:

a. A plant-specific DCD containing the same type of information and using the same organization and numbering as the generic DCD for the U.S. ABWR design, as modified and supplemented by the applicant's exemptions and departures;

b. The reports on departures from and updates to the plant-specific DCD required by paragraph X.B of this appendix;

c. Plant-specific technical specifications, consisting of the generic and site-specific technical specifications, that are required by 10 CFR 50.36 and 50.36a;

d. Information demonstrating compliance with the site parameters and interface requirements;

e. Information that addresses the COL action items; and

f. Information required by 10 CFR 52.47 that is not within the scope of this appendix.

3. Include, in the plant-specific DCD, the proprietary information and safeguards information referenced in the U.S. ABWR DCD.

B. The Commission reserves the right to determine in what manner this appendix may be referenced by an applicant for a construction permit or operating license under 10 CFR part 50.

V. Applicable Regulations

A. Except as indicated in paragraph B of this section, the regulations that apply to the U.S. ABWR design are in 10 CFR parts 20, 50, 73, and 100, codified as of May 2, 1997, that are applicable and technically relevant, as described in the FSER (NUREG–1503) and Supplement No. 1.

B. The U.S. ABWR design is exempt from portions of the following regulations:

1. Paragraph (f)(2)(iv) of 10 CFR 50.34—Separate Plant Safety Parameter Display Console;

2. Paragraph (f)(2)(viii) of 10 CFR 50.34—Post-Accident Sampling for Boron, Chloride, and Dissolved Gases; and

3. Paragraph (f)(3)(iv) of 10 CFR 50.34—Dedicated Containment Penetration.

VI. Issue Resolution

A. The Commission has determined that the structures, systems, components, and design features of the U.S. ABWR design comply with the provisions of the Atomic Energy Act of 1954, as amended, and the applicable regulations identified in Section V of this appendix; and therefore, provide adequate protection to the health and safety of the public. A conclusion that a matter is resolved includes the finding that additional or alternative structures, systems,
components, design features, design criteria, testing, analyses, acceptance criteria, or justifications are not necessary for the U.S. ABWR design.

B. The Commission considers the following matters resolved within the meaning of 10 CFR 52.63(a)(5) in subsequent proceedings for issuance of a combined license, amendment of a combined license, or renewal of a combined license, proceedings held under 10 CFR 52.103, and enforcement proceedings involving plants referencing this appendix:

1. All nuclear safety issues, except for the generic technical specifications and other operational requirements, associated with the information in the FSER and Supplement No. 1, Tier 1, Tier 2 (including referenced information which the context indicates is intended as requirements), and the rulemaking record for certification of the U.S. ABWR design;

2. All nuclear safety and safeguards issues associated with the information in proprietary and safeguards documents, referenced and in context, are intended as requirements in the generic DCD for the U.S. ABWR design;

3. All generic changes to the DCD under and in compliance with the change processes in Sections VIII.A.1 and VIII.B.1 of this appendix;

4. All exemptions from the DCD under and in compliance with the change processes in Sections VIII.A.4 and VIII.B.4 of this appendix, but only for that plant;

5. All departures from the DCD that are approved by license amendment, but only for that plant;

6. Except as provided in paragraph VIII.B.5.f of this appendix, all departures from Tier 2 pursuant to and in compliance with the change processes in paragraph VIII.B.5 of this appendix that do not require prior NRC approval, but only for that plant;

7. All environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's final environmental assessment for the U.S. ABWR design and Revision 1 of the technical support document for the U.S. ABWR, dated December 1994, for plants referencing this appendix whose site parameters are within those specified in the technical support document.

C. The Commission does not consider operational requirements for an applicant or licensee who references this appendix to be matters resolved within the meaning of 10 CFR 52.63(a)(5). The Commission reserves the right to require operational requirements for an applicant or licensee who references this appendix by rule, regulation, order, or license condition.

D. Except in accordance with the change processes in Section VIII of this appendix, the Commission may not require an applicant or licensee who references this appendix to:

1. Modify structures, systems, components, or design features as described in the generic DCD;

2. Provide additional or alternative structures, systems, components, or design features not discussed in the generic DCD; or

3. Provide additional or alternative design criteria, testing, analyses, acceptance criteria, or justification for structures, systems, components, or design features discussed in the generic DCD.

E.1. Persons who wish to review proprietary and safeguards information or other secondary references in the DCD for the U.S. ABWR design, in order to request or participate in the hearing required by 10 CFR 52.85 or the hearing provided under 10 CFR 52.103, or to request or participate in any other hearing relating to this appendix in which interested persons have adjudicatory hearing rights, shall first request access to such information from GE Nuclear Energy. The request must state with particularity:

a. The nature of the proprietary or other information sought;

b. The reason why the information currently available to the public at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room, is insufficient;

c. The relevance of the requested information to the hearing issue(s) which the person proposes to raise; and

d. A showing that the requesting person has the capability to understand and utilize the requested information.

2. If a person claims that the information is necessary to prepare a request for hearing, the request must be filed no later than 15 days after publication in the **Federal Register** of the notice required either by 10 CFR 52.85 or 10 CFR 52.103. If GE Nuclear Energy declines to provide the information sought, GE Nuclear Energy shall send a written response within 10 days of receiving the request to the requesting person setting forth with particularity the reasons for its refusal. The person may then request the Commission (or presiding officer, if a proceeding has been established) to order disclosure. The person shall include copies of the original request (and any subsequent clarifying information provided by the requesting party to the applicant) and the applicant's response. The Commission and presiding officer shall base their decisions solely on the person's original request (including any clarifying information provided by the requesting person to GE Nuclear Energy), and GE Nuclear Energy's response. The Commission and presiding officer may order GE Nuclear Energy to provide access to some or all of the requested information, subject to an appropriate nondisclosure agreement.

VII. Duration of This Appendix

This appendix may be referenced for a period of 15 years from June 11, 1997 except as provided for in 10 CFR 52.55(b) and 52.57(b). This appendix remains valid for an applicant or licensee who references this appendix until the application is withdrawn or the license expires, including any period of extended operation under a renewed license.

VIII. Processes for Changes and Departures

A. Tier 1 information.

1. Generic changes to Tier 1 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 1 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs A.3 or A.4 of this section.

3. Departures from Tier 1 information that are required by the Commission through plant-specific orders are governed by the requirements in 10 CFR 52.63(a)(4).

4. Exemptions from Tier 1 information are governed by the requirements in 10 CFR 52.63(b)(1) and 52.98(f). The Commission will deny a request for an exemption from Tier 1, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design.

B. Tier 2 information.

1. Generic changes to Tier 2 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 2 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs B.3, B.4, B.5, or B.6 of this section.

3. The Commission may not require new requirements on Tier 2 information by plant-specific order while this appendix is in effect under §§ 52.55 or 52.61, unless:

a. A modification is necessary to secure compliance with the Commission's regulations applicable and in effect at the time this appendix was approved, as set forth in Section V of this appendix, or to assure adequate protection of the public health and safety or the common defense and security; and

b. Special circumstances as defined in 10 CFR 52.7 are present.

4. An applicant or licensee who references this appendix may request an exemption from Tier 2 information. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 52.7. The Commission will deny a request for an exemption from Tier 2, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design. The grant of an exemption to an applicant must be subject to litigation in the same manner as other issues material to the license hearing. The grant of an exemption to a licensee must be subject to an opportunity for a hearing in the same manner as license amendments.

5.a. An applicant or licensee who references this appendix may depart from Tier 2 information, without prior NRC approval, unless the proposed departure involves a change to or departure from Tier 1 information, Tier 2* information, or the technical specifications, or requires a license amendment under paragraphs B.5.b or B.5.c of this section. When evaluating the proposed departure, an applicant or licensee shall consider all matters described in the plant-specific DCD.

b. A proposed departure from Tier 2, other than one affecting resolution of a severe accident issue identified in the plant-specific DCD, requires a license amendment if it would:

(1) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD;

(2) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the plant-specific DCD;

(3) Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD;

(4) Result in more than a minimal increase in the consequences of a malfunction of a SSC important to safety previously evaluated in the plant-specific DCD;

(5) Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD;

(6) Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD;

(7) Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered; or

(8) Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

c. A proposed departure from Tier 2 affecting resolution of an ex-vessel severe accident design feature identified in the plant-specific DCD, requires a license amendment if:

(1) There is a substantial increase in the probability of an ex-vessel severe accident such that a particular ex-vessel severe accident previously reviewed and determined to be not credible could become credible; or

(2) There is a substantial increase in the consequences to the public of a particular ex-vessel severe accident previously reviewed.

d. If a departure requires a license amendment pursuant to paragraphs B.5.b or B.5.c of this section, it is governed by 10 CFR 50.90.

e. A departure from Tier 2 information that is made under paragraph B.5 of this section does not require an exemption from this appendix.

f. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license or for operation under 10 CFR 52.103 (a), who believes that an applicant or licensee who references this appendix has not complied with paragraph VIII.B.5 of this appendix when departing from Tier 2 information, may petition the NRC to admit into the proceeding such a contention. In addition to compliance with the general requirements of 10 CFR 2.309, the petition must demonstrate that the departure does not comply with paragraph VIII.B.5 of this appendix. Further, the petition must demonstrate that the change bears on an asserted noncompliance with an ITAAC acceptance criterion in the case of a 10 CFR 52.103 preoperational hearing, or that the change bears directly on the amendment request in the case of a hearing on a license amendment. Any other party may file a response. If, on the basis of the petition and any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. The Commission may admit such a contention if it determines the petition raises a genuine issue of material fact regarding compliance with paragraph VIII.B.5 of this appendix.

6.a. An applicant who references this appendix may not depart from Tier 2* information, which is designated with italicized text or brackets and an asterisk in the generic DCD, without NRC approval. The departure will not be considered a resolved issue, within the meaning of Section VI of this appendix and 10 CFR 52.63(a)(5).

b. A licensee who references this appendix may not depart from the following Tier 2* matters without prior NRC approval. A request for a departure will be treated as a request for a license amendment under 10 CFR 50.90.

(1) Fuel burnup limit (4.2).

(2) Fuel design evaluation (4.2.3).

(3) Fuel licensing acceptance criteria (appendix 4B).

c. A licensee who references this appendix may not, before the plant first achieves full power following the finding required by 10 CFR 52.103(g), depart from the following Tier 2* matters except in accordance with paragraph B.6.b of this section. After the plant first achieves full power, the following Tier 2* matters revert to Tier 2 status and are thereafter subject to the departure provisions in paragraph B.5 of this section.

(1) ASME Boiler & Pressure Vessel Code, Section III.

(2) ACI 349 and ANSI/AISC–690.

(3) Motor-operated valves.

(4) Equipment seismic qualification methods.

(5) Piping design acceptance criteria.

(6) Fuel system and assembly design (4.2), except burnup limit.

(7) Nuclear design (4.3).

(8) Equilibrium cycle and control rod patterns (App. 4A).

(9) Control rod licensing acceptance criteria (App. 4C).

(10) Instrument setpoint methodology.

(11) EMS performance specifications and architecture.

(12) SSLC hardware and software qualification.

(13) Self-test system design testing features and commitments.

(14) Human factors engineering design and implementation process.

d. Departures from Tier 2* information that are made under paragraph B.6 of this section do not require an exemption from this appendix.

C. Operational requirements.

1. Generic changes to generic technical specifications and other operational requirements that were completely reviewed and approved in the design certification rulemaking and do not require a change to a design feature in the generic DCD are governed by the requirements in 10 CFR 50.109. Generic changes that do require a change to a design feature in the generic DCD are governed by the requirements in paragraphs A or B of this section.

2. Generic changes to generic TS and other operational requirements are applicable to all applicants who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs C.3 or C.4 of this section.

3. The Commission may require plant-specific departures on generic technical specifications and other operational requirements that were completely reviewed and approved, provided a change to a design feature in the generic DCD is not required and special circumstances as defined in 10 CFR 2.335 are present. The Commission may modify or supplement generic technical specifications and other operational requirements that were not completely reviewed and approved or require additional technical specifications and other operational requirements on a plant-specific basis, provided a change to a design feature in the generic DCD is not required.

4. An applicant who references this appendix may request an exemption from the generic technical specifications or other operational requirements. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10

CFR 52.7. The grant of an exemption must be subject to litigation in the same manner as other issues material to the license hearing.

5. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license or for operation under 10 CFR 52.103 (a), who believes that an operational requirement approved in the DCD or a technical specification derived from the generic technical specifications must be changed may petition to admit into the proceeding such a contention. Such petition must comply with the general requirements of 10 CFR 2.309 and must demonstrate why special circumstances as defined in 10 CFR 2.335 are present, or for compliance with the Commission's regulations in effect at the time this appendix was approved, as set forth in Section V of this appendix. Any other party may file a response thereto. If, on the basis of the petition and any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. All other issues with respect to the plant-specific technical specifications or other operational requirements are subject to a hearing as part of the license proceeding.

6. After issuance of a license, the generic technical specifications have no further effect on the plant-specific technical specifications and changes to the plant-specific technical specifications will be treated as license amendments under 10 CFR 50.90.

IX. Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

A.1. An applicant or licensee who references this appendix shall perform and demonstrate conformance with the ITAAC before fuel load. With respect to activities subject to an ITAAC, an applicant for a license may proceed at its own risk with design and procurement activities, and a licensee may proceed at its own risk with design, procurement, construction, and preoperational activities, even though the NRC may not have found that any particular ITAAC has been met.

2. The licensee who references this appendix shall notify the NRC that the required inspections, tests, and analyses in the ITAAC have been successfully completed and that the corresponding acceptance criteria have been met.

3. In the event that an activity is subject to an ITAAC, and the applicant or licensee who references this appendix has not demonstrated that the ITAAC has been met, the applicant or licensee may either take corrective actions to successfully complete that ITAAC, request an exemption from the ITAAC in accordance with Section VIII of this appendix and 10 CFR 52.97(b), or petition for rulemaking to amend this appendix by changing the requirements of the ITAAC, under 10 CFR 2.802 and 52.97(b). Such rulemaking changes to the ITAAC must meet the requirements of paragraph VIII.A.1 of this appendix.

B.1. The NRC shall ensure that the required inspections, tests, and analyses in the ITAAC are performed. The NRC shall verify that the inspections, tests, and analyses referenced by the licensee have been successfully completed and, based solely thereon, find the prescribed acceptance criteria have been met. At appropriate intervals during construction, the NRC shall publish notices of the successful completion of ITAAC in the **Federal Register**.

2. In accordance with 10 CFR 52.103(g), the Commission shall find that the acceptance criteria in the ITAAC for the license are met before fuel load.

3. After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not, by virtue of their inclusion within the DCD, constitute regulatory requirements either for licensees or for renewal of the license; except for specific ITAAC, which are the subject of a § 52.103(a) hearing, their expiration will occur upon final Commission action in such proceeding. However, subsequent modifications must comply with the Tier 1 and Tier 2 design descriptions in the plant-specific DCD unless the licensee has complied with the applicable requirements of 10 CFR 52.98 and Section VIII of this appendix.

X. Records and Reporting

A. Records.

1. The applicant for this appendix shall maintain a copy of the generic DCD that includes all generic changes to Tier 1, Tier 2, and the generic TS and other operational requirements. The applicant shall maintain the proprietary and safeguards information referenced in the generic DCD for the period that this appendix may be referenced, as specified in Section VII of this appendix.

2. An applicant or licensee who references this appendix shall maintain the plant-specific DCD to accurately reflect both generic changes to the generic DCD and plant-specific departures made under Section VIII of this appendix throughout the period of application and for the term of the license (including any period of renewal).

3. An applicant or licensee who references this appendix shall prepare and maintain written evaluations which provide the bases for the determinations required by Section VIII of this appendix. These evaluations must be retained throughout the period of application and for the term of the license (including any period of renewal).

B. Reporting.

1. An applicant or licensee who references this appendix shall submit a report to the NRC containing a brief description of any plant-specific departures from the DCD, including a summary of the evaluation of each. This report must be filed in accordance with the filing requirements applicable to reports in 10 CFR 52.3.

2. An applicant or licensee who references this appendix shall submit updates to its DCD, which reflect the generic changes and the plant-

specific departures from the generic DCD made under Section VIII of this appendix. These updates must be filed under the filing requirements applicable to final safety analysis report updates in 10 CFR 52.3 and 50.71(e).

3. The reports and updates required by paragraphs X.B.1 and X.B.2 must be submitted as follows:

a. On the date that an application for a license referencing this appendix is submitted, the application must include the report and any updates to the generic DCD.

b. During the interval from the date of application for a license to the date the Commission makes the finding required by 10 CFR 52.103 (g), the report must be submitted semiannually. Updates to the plant-specific DCD must be submitted annually and may be submitted along with amendments to the application.

c. After the Commission makes the finding required by 10 CFR 52.103(g), reports and updates to the plant-specific DCD must be submitted, along with updates to the site-specific portion of the final safety analysis report for the facility, at the intervals required by 10 CFR 50.59(d)(2) and 10 CFR 50.71(e)(4), respectively, or at shorter intervals as specified in the license.

[62 FR 25827, May 12, 1997; 62 FR 27293, May 19, 1997, as amended at 64 FR 48953, Sept. 9, 1999; 68 FR 58812, Oct. 10, 2003; 69 FR 2277, Jan. 14, 2004; 69 FR 18803, Apr. 9, 2004; 72 FR 49545, Aug. 28, 2007]

Appendix B To Part 52--Design Certification Rule for the System 80+ Design

[Top of File]

I. Introduction

Appendix B constitutes design certification for the System 80+[1] standard plant design, in accordance with 10 CFR part 52, subpart B. The applicant for certification of the System 80+ design was Combustion Engineering, Inc. (ABB-CE), which is now Westinghouse Electric Company LLC.

II. Definitions

A. Generic design control document (generic DCD) means the document containing the Tier 1 and Tier 2 information and generic technical specifications that is incorporated by reference into this appendix.

B. Generic technical specifications means the information, required by 10 CFR 50.36 and 50.36a, for the portion of the plant that is within the scope of this appendix.

C. Plant-specific DCD means the document, maintained by an applicant or licensee who references this appendix, consisting of the information in the generic DCD, as modified and supplemented by the plant-specific departures and exemptions made under Section VIII of this appendix.

D. *Tier 1* means the portion of the design-related information contained in the generic DCD that is approved and certified by this appendix (hereinafter Tier 1 information). The design descriptions, interface requirements, and site parameters are derived from Tier 2 information. Tier 1 information includes:

1. Definitions and general provisions;
2. Design descriptions;
3. Inspections, tests, analyses, and acceptance criteria (ITAAC);
4. Significant site parameters; and
5. Significant interface requirements.

E. *Tier 2* means the portion of the design-related information contained in the generic DCD that is approved but not certified by this appendix (Tier 2 information). Compliance with Tier 2 is required, but generic changes to and plant-specific departures from Tier 2 are governed by Section VIII of this appendix. Compliance with Tier 2 provides a sufficient, but not the only acceptable, method for complying with Tier 1. Compliance methods differing from Tier 2 must satisfy the change process in Section VIII of this appendix. Regardless of these differences, an applicant or licensee must meet the requirement in Section III.B of this appendix to reference Tier 2 when referencing Tier 1. Tier 2 information includes:

1. Information required by §§ 52.47(a) and 52.47(c), with the exception of generic technical specifications and conceptual design information;

2. Supporting information on the inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met; and

3. Combined license (COL) action items (COL license information), which identify certain matters that must be addressed in the site-specific portion of the final safety analysis report (FSAR) by an applicant who references this appendix. These items constitute information requirements but are not the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a construction permit or COL, these items are not requirements for the licensee unless such items are restated in the FSAR.

F. *Tier 2** means the portion of the Tier 2 information, designated as such in the generic DCD, which is subject to the change process in Section VIII.B.6 of this appendix. This designation expires for some Tier 2* information under Section VIII.B.6 of this appendix.

G. Departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses means:

(1) Changing any of the elements of the method described in the plant-specific DCD unless the results of the analysis are conservative or essentially the same; or

(2) Changing from a method described in the plant-specific DCD to another method unless that method has been approved by NRC for the intended application.

H. All other terms in this appendix have the meaning set out in 10 CFR 50.2 or 52.1, or Section 11 of the Atomic Energy Act of 1954, as amended, as applicable.

III. Scope and Contents

A. Tier 1, Tier 2, and the generic technical specifications in the System 80+ Design Control Document, ABB–CE, with revisions dated January 1997, are approved for incorporation by reference by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the generic DCD may be obtained from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22161. A copy is available for examination and copying at the NRC Public Document Room located at One White Flint North, 11555 Rockville Pike (first
floor), Rockville, Maryland 20852. Copies are also available for examination at the NRC Library located at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland 20582 and the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

B. An applicant or licensee referencing this appendix, in accordance with Section IV of this appendix, shall incorporate by reference and comply with the requirements of this appendix, including Tier 1, Tier 2, and the generic technical specifications except as otherwise provided in this appendix. Conceptual design information, as set forth in the generic DCD, and the Technical Support Document for the System 80+ design are not part of this appendix.

C. If there is a conflict between Tier 1 and Tier 2 of the DCD, then Tier 1 controls.

D. If there is a conflict between the generic DCD and either the application for design certification of the System 80+ design or NUREG–1462, "Final Safety Evaluation Report Related to the Certification of the System 80+ Design," (FSER) and Supplement No. 1, then the generic DCD controls.

E. Design activities for structures, systems, and components that are wholly outside the scope of this appendix may be performed using site characteristics, provided the design activities do not affect the DCD or conflict with the interface requirements.

IV. Additional Requirements and Restrictions

A. An applicant for a combined license that wishes to reference this appendix shall, in addition to complying with the requirements of 10 CFR 52.77, 52.79, and 52.80, comply with the following requirements:

1. Incorporate by reference, as part of its application, this appendix;

2. Include, as part of its application:

a. A plant-specific DCD containing the same type of information and using the same organization and numbering as the generic DCD for the System 80+ design, as modified and supplemented by the applicant's exemptions and departures;

b. The reports on departures from and updates to the plant-specific DCD required by paragraph X.B of this appendix;

c. Plant-specific technical specifications, consisting of the generic and site-specific technical specifications, that are required by 10 CFR 50.36 and 50.36a;

d. Information demonstrating compliance with the site parameters and interface requirements;

e. Information that addresses the COL action items; and

f. Information required by 10 CFR 52.47 that is not within the scope of this appendix.

3. Include, in the plant-specific DCD, the proprietary information referenced in the System 80+ DCD.

B. The Commission reserves the right to determine in what manner this appendix may be referenced by an applicant for a construction permit or operating license under 10 CFR part 50.

V. Applicable Regulations

A. Except as indicated in paragraph B of this section, the regulations that apply to the System 80+ design are in 10 CFR parts 20, 50, 73, and 100, codified as of May 9, 1997, that are applicable and technically relevant, as described in the FSER (NUREG–1462) and Supplement No. 1.

B. The System 80+ design is exempt from portions of the following regulations:

1. Paragraph (f)(2)(iv) of 10 CFR 50.34—Separate Plant Safety Parameter Display Console;

2. Paragraphs (f)(2) (vii), (viii), (xxvi), and (xxviii) of 10 CFR 50.34—Accident Source Terms;

3. Paragraph (f)(2)(viii) of 10 CFR 50.34—Post-Accident Sampling for Hydrogen, Boron, Chloride, and Dissolved Gases;

4. Paragraph (f)(3)(iv) of 10 CFR 50.34—Dedicated Containment Penetration; and

5. Paragraphs III.A.1(a) and III.C.3(b) of Appendix J to 10 CFR 50—Containment Leakage Testing.

VI. Issue Resolution

A. The Commission has determined that the structures, systems, components, and design features of the System 80+ design comply with the provisions of the Atomic Energy Act of 1954, as amended, and the applicable regulations identified in Section V of this appendix; and therefore, provide adequate protection to the health and safety of the public. A conclusion that a matter is resolved includes the finding that additional or alternative structures, systems,
components, design features, design criteria, testing, analyses, acceptance criteria, or justifications are not necessary for the System 80+ design.

B. The Commission considers the following matters resolved within the meaning of 10 CFR 52.63(a)(5) in subsequent proceedings for issuance of a combined license, amendment of a combined license, or renewal of a combined license, proceedings held under 10 CFR 52.103, and enforcement proceedings involving plants referencing this appendix:

1. All nuclear safety issues, except for the generic technical specifications and other operational requirements, associated with the information in the FSER and Supplement No. 1, Tier 1, Tier 2 (including referenced information which the context indicates is intended as requirements), and the rulemaking record for certification of the System 80+ design;

2. All nuclear safety and safeguards issues associated with the information in proprietary and safeguards documents, referenced and in context, are intended as requirements in the generic DCD for the System 80+ design;

3. All generic changes to the DCD under and in compliance with the change processes in Sections VIII.A.1 and VIII.B.1 of this appendix;

4. All exemptions from the DCD under and in compliance with the change processes in Sections VIII.A.4 and VIII.B.4 of this appendix, but only for that plant;

5. All departures from the DCD that are approved by license amendment, but only for that plant;

6. Except as provided in paragraph VIII.B.5.f of this appendix, all departures from Tier 2 under and in compliance with the change processes in paragraph VIII.B.5 of this appendix that do not require prior NRC approval, but only for that plant;

7. All environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's final environmental assessment for the System 80+ design and the technical support document for the System 80+ design, dated January 1995, for plants referencing this appendix whose site parameters are within those specified in the technical support document.

C. The Commission does not consider operational requirements for an applicant or licensee who references this appendix to be matters resolved within the meaning of 10 CFR 52.63(a)(5). The Commission reserves the right to require operational requirements for an applicant or licensee who references this appendix by rule, regulation, order, or license condition.

D. Except in accordance with the change processes in Section VIII of this appendix, the Commission may not require an applicant or licensee who references this appendix to:

1. Modify structures, systems, components, or design features as described in the generic DCD;

2. Provide additional or alternative structures, systems, components, or design features not discussed in the generic DCD; or

3. Provide additional or alternative design criteria, testing, analyses, acceptance criteria, or justification for structures, systems, components, or design features discussed in the generic DCD.

E.1. Persons who wish to review proprietary information or other secondary references in the DCD for the System 80+ design, in order to request or participate in the hearing required by 10 CFR 52.85 or the hearing provided under 10 CFR 52.103, or to request or participate in any other hearing relating to this appendix in which interested persons have adjudicatory hearing rights, shall first request access to such information from Westinghouse. The request must state with particularity:

a. The nature of the proprietary or other information sought;

b. The reason why the information currently available to the public at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room, is insufficient;

c. The relevance of the requested information to the hearing issue(s) which the person proposes to raise; and

d. A showing that the requesting person has the capability to understand and utilize the requested information.

2. If a person claims that the information is necessary to prepare a request for hearing, the request must be filed no later than 15 days after publication in the **Federal Register** of the notice required either by 10 CFR 52.85 or 10 CFR 52.103. If Westinghouse declines to provide the information sought, Westinghouse shall send a written response within ten (10) days of receiving the request to the requesting person setting forth with particularity the reasons for its refusal. The person may then request the Commission (or presiding officer, if a proceeding has been established) to order disclosure. The person shall include copies of the original request (and any subsequent clarifying information provided by the requesting party to the applicant) and the applicant's response. The Commission and presiding officer shall base their decisions solely on the person's original request (including any clarifying information provided by the requesting person to Westinghouse), and Westinghouse's response. The Commission and presiding officer may order Westinghouse to provide access to some or all of the requested information, subject to an appropriate non-disclosure agreement.

VII. Duration of This Appendix

This appendix may be referenced for a period of 15 years from June 20, 1997, except as provided for in 10 CFR 52.55(b) and 52.57(b). This appendix remains valid for an applicant or licensee who references this appendix until the application is withdrawn or the license expires, including any period of extended operation under a renewed license.

VIII. Processes for Changes and Departures

A. Tier 1 information.

1. Generic changes to Tier 1 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 1 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs A.3 or A.4 of this section.

3. Departures from Tier 1 information that are required by the Commission through plant-specific orders are governed by the requirements in 10 CFR 52.63(a)(4).

4. Exemptions from Tier 1 information are governed by the requirements in 10 CFR 52.63(b)(1) and 52.98(f). The Commission will deny a request for an exemption from Tier 1, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design.

B. Tier 2 information.

1. Generic changes to Tier 2 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 2 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs B.3, B.4, B.5, or B.6 of this section.

3. The Commission may not require new requirements on Tier 2 information by plant-specific order while this appendix is in effect under §§ 52.55 or 52.61, unless:

a. A modification is necessary to secure compliance with the Commission's regulations applicable and in effect at the time this appendix was approved, as set forth in Section V of this appendix, or to assure adequate protection of the public health and safety or the common defense and security; and

b. Special circumstances as defined in 10 CFR 52.7 are present.

4. An applicant or licensee who references this appendix may request an exemption from Tier 2 information. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 52.7. The Commission will deny a

request for an exemption from Tier 2, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design. The grant of an exemption to an applicant must be subject to litigation in the same manner as other issues material to the license hearing. The grant of
an exemption to a licensee must be subject to an opportunity for a hearing in the same manner as license amendments.

5.a. An applicant or licensee who references this appendix may depart from Tier 2 information, without prior NRC approval, unless the proposed departure involves a change to or departure from Tier 1 information, Tier 2* information, or the technical specifications, or requires a license amendment under paragraphs B.5.b or B.5.c of this section. When evaluating the proposed departure, an applicant or licensee shall consider all matters described in the
plant-specific DCD.

b. A proposed departure from Tier 2, other than one affecting resolution of a severe accident issue identified in the plant-specific DCD, requires a license amendment if it would—

(1) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD;

(2) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety previously evaluated in the plant-specific DCD;

(3) Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD;

(4) Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD;

(5) Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD;

(6) Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD;

(7) Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered; or

(8) Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

c. A proposed departure from Tier 2 affecting resolution of an ex-vessel severe accident design feature identified in the plant-specific DCD, requires a license amendment if:

(1) There is a substantial increase in the probability of an ex-vessel severe accident such that a particular ex-vessel severe accident previously reviewed and determined to be not credible could become credible; or

(2) There is a substantial increase in the consequences to the public of a particular ex-vessel severe accident previously reviewed.

d. If a departure requires a license amendment under paragraph B.5.b or B.5.c of this section, it is governed by 10 CFR 50.90.

e. A departure from Tier 2 information that is made under paragraph B.5 of this section does not require an exemption from this appendix.

f. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license or for operation under 10 CFR 52.103 (a), who believes that an applicant or licensee who references this appendix has not complied with paragraph VIII.B.5 of this appendix when departing from Tier 2 information, may petition the NRC to admit into the proceeding such a contention. In addition to compliance with the general requirements of 10 CFR 2.309, the petition must demonstrate that the departure does not comply with paragraph VIII.B.5 of this appendix. Further, the petition must demonstrate that the change bears on an asserted noncompliance with an ITAAC acceptance criterion in the case of a 10 CFR 52.103 preoperational hearing, or that the change bears directly on the amendment request in the case of a hearing on a license amendment. Any other party may file a response. If, on the basis of the petition and
any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. The Commission may admit such a contention if it determines the petition raises a genuine issue of material fact regarding compliance with paragraph VIII.B.5 of this appendix.

6.a. An applicant who references this appendix may not depart from Tier 2* information, which is designated with italicized text or brackets and an asterisk in the generic DCD, without NRC approval. The departure will not be considered a resolved issue, within the meaning of Section VI of this appendix and 10 CFR 52.63(a)(5).

b. A licensee who references this appendix may not depart from the following Tier 2* matters without prior NRC approval. A request for a departure will be treated as a request for a license amendment under 10 CFR 50.90.

(1) Maximum fuel rod average burnup.

(2) Control room human factors engineering.

c. A licensee who references this appendix may not, before the plant first achieves full power following the finding required by 10 CFR 52.103(g), depart from the following Tier 2* matters except in accordance with paragraph B.6.b of this section. After the plant first achieves full power, the following Tier 2* matters revert to Tier 2 status and are thereafter subject to the departure provisions in paragraph B.5 of this section.

(1) ASME Boiler & Pressure Vessel Code, Section III.

(2) ACI 349 and ANSI/AISC–690.

(3) Motor-operated valves.

(4) Equipment seismic qualification methods.

(5) Piping design acceptance criteria.

(6) Fuel and control rod design, except burnup limit.

(7) Instrumentation and controls setpoint methodology.

(8) Instrumentation and controls hardware and software changes.

(9) Instrumentation and controls environmental qualification.

(10) Seismic design criteria for non-seismic Category I structures.

d. Departures from Tier 2* information that are made under paragraph B.6 of this section do not require an exemption from this appendix.

C. Operational requirements.

1. Generic changes to generic technical specifications and other operational requirements that were completely reviewed and approved in the design certification rulemaking and do not require a change to a design feature in the generic DCD are governed by the requirements in 10 CFR 50.109. Generic changes that do require a change to a design feature in the generic DCD are governed by the requirements in paragraphs A or B of this section.

2. Generic changes to generic TS and other operational requirements are applicable to all applicants who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs C.3 or C.4 of this section.

3. The Commission may require plant-specific departures on generic technical specifications and other operational requirements that were completely reviewed and approved, provided a change to a design feature in the generic DCD is not required and special circumstances as defined in 10 CFR 2.335 are present. The Commission may modify or supplement generic technical specifications and other operational requirements that were not completely reviewed and approved or require additional technical specifications and other operational requirements on a plant-specific basis, provided a change to a design feature in the generic DCD is not required.

4. An applicant who references this appendix may request an exemption from the generic technical specifications or other operational requirements. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 52.7. The grant of an exemption must be subject to litigation in the same manner as other issues material to the license hearing.

5. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license or for operation under 10 CFR 52.103 (a), who believes that an operational requirement approved in the DCD or a technical specification derived from the generic technical specifications must be changed may petition to admit into the proceeding such a contention. Such a petition must comply with the general requirements of 10 CFR 2.309 and must demonstrate why special circumstances as defined in 10 CFR 2.335 are present, or for compliance with the Commission's regulations in effect at the time this appendix was approved, as set forth in Section V of this appendix. Any other party may file a response thereto. If, on the basis of the petition and any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. All other issues with respect to the plant-specific technical specifications or other operational requirements are subject to a hearing as part of the license proceeding.

6. After issuance of a license, the generic technical specifications have no further effect on the plant-specific technical specifications and changes to the plant-specific technical specifications will be treated as license amendments under 10 CFR 50.90.

IX. Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

A.1 An applicant or licensee who references this appendix shall perform and demonstrate conformance with the ITAAC before fuel load. With respect to activities subject to an ITAAC, an applicant for a license may proceed at its own risk with design and procurement activities, and a licensee may proceed at its own risk with design, procurement, construction, and preoperational activities, even though the NRC may not have found that any particular ITAAC has been met.

2. The licensee who references this appendix shall notify the NRC that the required inspections, tests, and analyses in the ITAAC have been successfully completed and that the corresponding acceptance criteria have been met.

3. In the event that an activity is subject to an ITAAC, and the applicant or licensee who references this appendix has not demonstrated that the ITAAC has been met, the applicant or licensee may either take corrective actions to successfully complete that ITAAC, request an exemption from the ITAAC in accordance with Section VIII of this appendix and 10 CFR 52.97(b), or petition for rulemaking to amend this appendix by changing the requirements of
the ITAAC, under 10 CFR 2.802 and 52.97(b). Such rulemaking changes to the ITAAC must meet the requirements of Section VIII.A.1 of this appendix.

B.1 The NRC shall ensure that the required inspections, tests, and analyses in the ITAAC are performed. The NRC shall verify that the inspections, tests, and analyses referenced by the licensee have been successfully completed and, based solely thereon, find the prescribed acceptance criteria have been met. At appropriate intervals during construction, the NRC shall publish notices of the successful completion of ITAAC in the **Federal Register.**

2. In accordance with 10 CFR 52.103(g), the Commission shall find that the acceptance criteria in the ITAAC for the license are met before fuel load.

3. After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not, by virtue of their inclusion within the DCD, constitute regulatory requirements either for licensees or for renewal of the license; except for specific ITAAC, which are the subject of a § 52.103(a) hearing, their expiration will occur upon final Commission action in such proceeding. However, subsequent modifications must comply with the Tier 1 and Tier 2 design descriptions in the plant-specific DCD unless the licensee has complied with the applicable requirements of 10 CFR 52.98 and Section VIII of this appendix.

X. Records and Reporting

A. Records.

1. The applicant for this appendix shall maintain a copy of the generic DCD that includes all generic changes to Tier 1, Tier 2, and the generic TS and other operational requirements. The applicant shall maintain the proprietary and safeguards information referenced in the generic DCD for the period that this appendix may be referenced, as
specified in Section VII of this appendix.

2. An applicant or licensee who references this appendix shall maintain the plant-specific DCD to accurately reflect both
generic changes to the generic DCD and plant-specific departures made under Section VIII of this appendix throughout the period of application and for the term of the license (including any period of renewal).

3. An applicant or licensee who references this appendix shall prepare and maintain written evaluations which provide the bases for the determinations required by Section VIII of this appendix. These evaluations must be retained throughout the period of application and for the term of the license (including any period of renewal).

B. Reporting.

1. An applicant or licensee who references this appendix shall submit a report to the NRC containing a brief description of any plant-specific departures from the DCD, including a summary of the evaluation of each. This report must be filed in accordance with the filing requirements applicable to reports in 10 CFR 52.3.

2. An applicant or licensee who references this appendix shall submit updates to its DCD, which reflect the generic changes to and plant-specific departures from the generic DCD made under Section VIII of this appendix. These updates must be filed under the filing requirements applicable to final safety analysis report updates in 10 CFR 52.3
and 50.71(e).

3. The reports and updates required by paragraphs X.B.1 and X.B.2 must be submitted as follows:

a. On the date that an application for a license referencing this appendix is submitted, the application must include the
report and any updates to the generic DCD.

b. During the interval from the date of application for a license to the date the Commission makes the finding required by 10 CFR 52.103 (g), the report must be submitted semi-annually. Updates to the plant-specific DCD must be submitted annually and may be submitted along with amendments to the application.

c. After the Commission makes the finding required by 10 CFR 52.103(g), the reports and updates to the plant-specific DCD must be submitted, along with updates to the site-specific portion of the final safety analysis report for the facility, at the intervals required by 10 CFR 50.59(d)(2) and 50.71(e)(4), respectively, or at shorter intervals as specified in the license.

[62 FR 27867, May 21, 1997, as amended at 64 FR 48953, Sept. 9, 1999; 68 FR 58812, Oct. 10, 2003; 69 FR 2278, Jan. 14, 2004; 69 FR 18803, Apr. 9, 2004; 72 FR 49548, Aug. 28, 2007]

1. "System 80+" is a trademark of Westinghouse Electric Company LLC.

Appendix C to Part 52--Design Certification Rule for the AP600 Design

[Top of File]

I. Introduction

Appendix C constitutes the standard design certification for the AP600[1] design, in accordance with 10 CFR Part 52, subpart B. The applicant for certification of the AP600 design is Westinghouse Electric Company LLC.

II. Definitions

A. Generic design control document (generic DCD) means the document containing the Tier 1 and Tier 2 information and generic technical specifications that is incorporated by reference into this appendix.

B. Generic technical specifications means the information, required by 10 CFR 50.36 and 50.36a, for the portion of the plant that is within the scope of this appendix.

C. Plant-specific DCD means the document, maintained by an applicant or licensee who references this appendix, consisting of the information in the generic DCD, as modified and supplemented by the plant-specific departures and exemptions made under Section VIII of this appendix.

D. *Tier 1* means the portion of the design-related information contained in the generic DCD that is approved and certified by this appendix (hereinafter Tier 1 information). The design descriptions, interface requirements, and site parameters are derived from Tier 2 information. Tier 1 information includes:

1. Definitions and general provisions;

2. Design descriptions;

3. Inspections, tests, analyses, and acceptance criteria (ITAAC);

4. Significant site parameters; and

5. Significant interface requirements.

E. *Tier 2* means the portion of the designrelated information contained in the generic DCD that is approved but not certified by this appendix (Tier 2 information). Compliance with Tier 2 is required, but generic changes to and plant-specific departures from Tier 2 are governed by Section VIII of this appendix. Compliance with Tier 2 provides a sufficient, but not the only acceptable, method for complying with Tier 1. Compliance methods differing from Tier 2 must satisfy the change process in Section VIII of this appendix. Regardless of these differences, an applicant or licensee must meet the requirement in Section III.B of this appendix to reference Tier 2 when referencing Tier 1. Tier 2 information includes:

1. Information required by §§ 52.47(a) and 52.47(c), with the exception of generic technical specifications and conceptual design information;

2. Supporting information on the inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met; and

3. Combined license (COL) action items (COL license information), which identify certain matters that must be addressed in the site-specific portion of the final safety analysis report (FSAR) by an applicant who references this appendix. These items constitute information requirements but are not the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a construction permit or COL, these items are not requirements for the licensee unless such items are restated in the FSAR.

4. The investment protection short-term availability controls in Section 16.3 of the DCD.

F. *Tier 2** means the portion of the Tier 2 information, designated as such in the generic DCD, which is subject to the change process in Section VIII.B.6 of this appendix. This designation expires for some Tier 2* information under Section VIII.B.6.

G. Departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses means:

(1) Changing any of the elements of the method described in the plant-specific DCD unless the results of the analysis are conservative or essentially the same; or

(2) Changing from a method described in the plant-specific DCD to another method unless that method has been approved by NRC for the intended application.

H. All other terms in this appendix have the meaning set out in 10 CFR 50.2 or 52.1, or Section 11 of the Atomic Energy Act of 1954, as amended, as applicable.

III. Scope and Contents

A. Tier 1, Tier 2 (including the investment protection short-term availability controls in Section 16.3), and the generic technical specifications in the AP600 DCD (12/99 revision) are approved for incorporation by reference by the Director of the Office of the Federal Register on January 24, 2000, in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the generic DCD may be obtained from Ronald P. Vijuk, Manager, Passive Plant Engineering, Westinghouse Electric Company, P.O. Box 355, Pittsburgh, Pennsylvania 15230–0355. A copy of the generic DCD is available for examination and copying at the NRC Public Document Room located at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852. Copies are also available for examination at the NRC Library located at Two White Flint North, 11545 Rockville Pike, Rockville, Maryland 20582; and the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

B. An applicant or licensee referencing this appendix, in accordance with Section IV of this appendix, shall incorporate by reference and comply with the requirements of this appendix, including Tier 1, Tier 2 (including the investment protection short-term availability controls in Section 16.3), and the generic technical specifications except as otherwise provided in this appendix. Conceptual design information in the generic DCD and the evaluation of severe accident
mitigation design alternatives in Appendix 1B of the generic DCD are not part of this appendix.

C. If there is a conflict between Tier 1 and Tier 2 of the DCD, then Tier 1 controls.

D. If there is a conflict between the generic DCD and either the application for design certification of the AP600 design or NUREG–1512, "Final Safety Evaluation Report Related to Certification of the AP600 Standard Design," (FSER), then the generic DCD controls.

E. Design activities for structures, systems, and components that are wholly outside the scope of this appendix may be performed using site characteristics, provided the design activities do not affect the DCD or conflict with the interface requirements.

IV. Additional Requirements and Restrictions

A. An applicant for a combined license that wishes to reference this appendix shall, in addition to complying with the requirements of 10 CFR 52.77, 52.79, and 52.80, comply with the following requirements:

1. Incorporate by reference, as part of its application, this appendix;

2. Include, as part of its application:

a. A plant-specific DCD containing the same type of information and utilizing the same organization and numbering as the generic DCD for the AP600 design, as modified and supplemented by the applicant's exemptions and departures;

b. The reports on departures from and updates to the plant-specific DCD required by paragraph X.B of this appendix;

c. Plant-specific technical specifications, consisting of the generic and site-specific technical specifications, that are required by 10 CFR 50.36 and 50.36a;

d. Information demonstrating compliance with the site parameters and interface requirements;

e. Information that addresses the COL action items; and

f. Information required by 10 CFR 52.47 that is not within the scope of this appendix.

3. Include, in the plant-specific DCD, the proprietary information and safeguards information referenced in the AP600 DCD.

B. The Commission reserves the right to determine in what manner this appendix may be referenced by an applicant for a construction permit or operating license under 10 CFR part 50.

V. Applicable Regulations

A. Except as indicated in paragraph B of this section, the regulations that apply to the AP600 design are in 10 CFR parts 20, 50, 73, and 100, codified as of December 16, 1999, that are applicable and technically relevant, as described in the FSER (NUREG–1512) and the supplementary information for this section.

B. The AP600 design is exempt from portions of the following regulations:

1. Paragraph (a)(1) of 10 CFR 50.34—whole body dose criterion;

2. Paragraph (f)(2)(iv) of 10 CFR 50.34—Plant Safety Parameter Display Console;

3. Paragraphs (f)(2)(vii), (viii), (xxvi), and (xxviii) of 10 CFR 50.34—Accident Source Term in TID 14844;

4. Paragraph (a)(2) of 10 CFR 50.55a—ASME Boiler and Pressure Vessel Code;

5. Paragraph (c)(1) of 10 CFR 50.62—Auxiliary (or emergency) feedwater system;

6. Appendix A to 10 CFR part 50, GDC 17—Offsite Power Sources; and

7. Appendix A to 10 CFR part 50, GDC 19—whole body dose criterion.

VI. Issue Resolution

A. The Commission has determined that the structures, systems, components, and design features of the AP600 design comply with the provisions of the Atomic Energy Act of 1954, as amended, and the applicable regulations identified in Section V of this appendix; and therefore, provide adequate protection to the health and safety of the public. A conclusion that a matter is resolved includes the finding that additional or alternative structures, systems, components, design features, design criteria, testing, analyses, acceptance criteria, or justifications are not necessary for the AP600 design.

B. The Commission considers the following matters resolved within the meaning of 10 CFR 52.63(a)(5) in subsequent proceedings for issuance of a combined license, amendment of a combined license, or renewal of a combined license, proceedings held under 10 CFR 52.103, and enforcement proceedings involving plants referencing this appendix:

1. All nuclear safety issues, except for the generic technical specifications and other operational requirements, associated with the information in the FSER and Supplement No. 1, Tier 1, Tier 2 (including referenced information which the context indicates is intended as requirements and the investment protection short-term availability controls in Section 16.3), and the rulemaking record for certification of the AP600 design;

2. All nuclear safety and safeguards issues associated with the information in proprietary and safeguards documents, referenced and in context, are intended as requirements in the generic DCD for the AP600 design;

3. All generic changes to the DCD under and in compliance with the change processes in Sections VIII.A.1 and VIII.B.1 of this appendix;

4. All exemptions from the DCD under and in compliance with the change processes in Sections VIII.A.4 and VIII.B.4 of this appendix, but only for that plant;

5. All departures from the DCD that are approved by license amendment, but only for that plant;

6. Except as provided in paragraph VIII.B.5.f of this appendix, all departures from Tier 2 under and in compliance with the change processes in paragraph VIII.B.5 of this appendix that do not require prior NRC approval, but only for that plant;

7. All environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's environmental assessment for the AP600 design and appendix 1B of the generic DCD, for plants referencing this appendix whose site parameters are within those specified in the severe accident mitigation design alternatives evaluation.

C. The Commission does not consider operational requirements for an applicant or licensee who references this appendix to be matters resolved within the meaning of 10 CFR 52.63(a)(5). The Commission reserves the right to require operational requirements for an applicant or licensee who references this appendix by rule, regulation, order, or license condition.

D. Except in accordance with the change processes in Section VIII of this appendix, the Commission may not require an applicant or licensee who references this appendix to:

1. Modify structures, systems, components, or design features as described in the generic DCD;

2. Provide additional or alternative structures, systems, components, or design features not discussed in the generic DCD; or

3. Provide additional or alternative design criteria, testing, analyses, acceptance criteria, or justification for structures, systems, components, or design features discussed in the generic DCD.

E.1. Persons who wish to review proprietary and safeguards information or other secondary references in the AP600 DCD, in order to request or participate in the hearing required by 10 CFR 52.85 or the hearing provided under 10 CFR 52.103, or to request or participate in any other hearing relating to this appendix in which interested persons have adjudicatory hearing rights, shall first request access to such information from Westinghouse. The request must state with particularity:

a. The nature of the proprietary or other information sought;

b. The reason why the information currently available to the public at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room, is insufficient;

c. The relevance of the requested information to the hearing issue(s) which the person proposes to raise; and

d. A showing that the requesting person has the capability to understand and utilize the requested information.

2. If a person claims that the information is necessary to prepare a request for hearing, the request must be filed no later than 15 days after publication in the **Federal Register** of the notice required either by 10 CFR 52.85 or 10 CFR 52.103. If Westinghouse declines to provide the information sought, Westinghouse shall send a written response
within 10 days of receiving the request to the requesting person setting forth with particularity the reasons for its refusal. The person may then request the Commission (or presiding officer, if a proceeding has been established) to order disclosure. The person shall include copies of the original request (and any subsequent clarifying information
provided by the requesting party to the applicant) and the applicant's response. The Commission and presiding officer shall base their decisions solely on the person's original request (including any clarifying information provided by the requesting person to Westinghouse), and Westinghouse's response. The Commission and presiding officer may order Westinghouse to provide access to some or all of the requested information, subject to an appropriate non-disclosure
agreement.

VII. Duration of This Appendix

This appendix may be referenced for a period of 15 years from January 24, 2000, except as provided for in 10 CFR 52.55(b) and 52.57(b). This appendix remains valid for an applicant or licensee who references this appendix until the application is withdrawn or the license expires, including any period of extended operation under a renewed license.

VIII. Processes for Changes and Departures

A. Tier 1 information.

1. Generic changes to Tier 1 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 1 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs A.3 or A.4 of this section.

3. Departures from Tier 1 information that are required by the Commission through plant-specific orders are governed by the requirements in 10 CFR 52.63(a)(4).

4. Exemptions from Tier 1 information are governed by the requirements in 10 CFR 52.63(b)(1) and 52.98(f). The Commission will deny a request for an exemption from Tier 1, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design.

B. Tier 2 information.

1. Generic changes to Tier 2 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 2 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs B.3, B.4, B.5, or B.6 of this section.

3. The Commission may not require new requirements on Tier 2 information by plant-specific order while this appendix is in effect under §§ 52.55 or 52.61, unless: a. A modification is necessary to secure compliance with the Commission's
regulations applicable and in effect at the time this appendix was approved, as set forth in Section V of this appendix, or to assure adequate protection of the public health and safety or the common defense and security; and

b. Special circumstances as defined in 10 CFR 52.7 are present.

4. An applicant or licensee who references this appendix may request an exemption from Tier 2 information. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 52.7. The Commission will deny a request for an exemption from Tier 2, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design. The grant of an exemption to an applicant must be subject to litigation in the same manner as other issues material to the license hearing. The grant of
an exemption to a licensee must be subject to an opportunity for a hearing in the same manner as license amendments.

5.a. An applicant or licensee who references this appendix may depart from Tier 2 information, without prior NRC
approval, unless the proposed departure involves a change to or departure from Tier 1 information, Tier 2* information, or the technical specifications, or requires a license amendment under paragraphs B.5.b or B.5.c of this section. When evaluating the proposed departure, an applicant or licensee shall consider all matters described in the
plant-specific DCD.

b. A proposed departure from Tier 2, other than one affecting resolution of a severe accident issue identified in the plant-specific DCD, requires a license amendment if it would:

(1) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD;

(2) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or

component (SSC) important to safety previously evaluated in the plant-specific DCD;

(3) Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD;

(4) Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD;

(5) Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD;

(6) Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD;

(7) Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered; or

(8) Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses.

c. A proposed departure from Tier 2 affecting resolution of an ex-vessel severe accident design feature identified in the plant-specific DCD, requires a license amendment if:

(1) There is a substantial increase in the probability of an ex-vessel severe accident such that a particular ex-vessel severe accident previously reviewed and determined to be not credible could become credible; or

(2) There is a substantial increase in the consequences to the public of a particular ex-vessel severe accident previously reviewed.

d. If a departure requires a license amendment under paragraphs B.5.b or B.5.c of this section, it is governed by 10 CFR 50.90.

e. A departure from Tier 2 information that is made under paragraph B.5 of this section does not require an exemption from this appendix.

f. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license or for operation under 10 CFR 52.103 (a), who believes that an applicant or licensee who references this appendix has not complied with paragraph VIII.B.5 of this appendix when departing from Tier 2 information, may petition the NRC to admit into the proceeding such a contention. In addition to compliance with the general requirements of 10 CFR 2.309, the petition must demonstrate that the departure does not comply with paragraph VIII.B.5 of this appendix. Further, the petition must demonstrate that the change bears on an asserted noncompliance with an ITAAC acceptance criterion in the case of a 10 CFR 52.103 preoperational hearing, or that the change bears directly on the amendment request in the case of a hearing on a license amendment. Any other party may file a response. If, on the basis of the petition and any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. The Commission may admit such a contention if it determines the petition raises a genuine issue of material fact regarding compliance with paragraph VIII.B.5 of this appendix.

6a. An applicant who references this appendix may not depart from Tier 2* information, which is designated with italicized text or brackets and an asterisk in the generic DCD, without NRC approval. The departure will not be considered a resolved issue, within the meaning of Section VI of this appendix and 10 CFR 52.63(a)(5).

b. A licensee who references this appendix may not depart from the following Tier 2* matters without prior NRC approval. A request for a departure will be treated as a request for a license amendment under 10 CFR 50.90.

(1) Maximum fuel rod average burn-up.

(2) Fuel principal design requirements.

(3) Fuel criteria evaluation process.

(4) Fire areas.

(5) Human factors engineering.

c. A licensee who references this appendix may not, before the plant first achieves full power following the finding required by 10 CFR 52.103(g), depart from the following Tier 2* matters except in accordance with paragraph B.6.b of this section. After the plant first achieves full power, the following Tier 2* matters revert to Tier 2 status and are thereafter subject to the departure provisions in paragraph B.5 of this section.

(1) Nuclear Island structural dimensions.

(2) ASME Boiler and Pressure Vessel Code, Section III, and Code Case—284.

(3) Design Summary of Critical Sections.

(4) ACI 318, ACI 349, and ANSI/AISC—690.

(5) Definition of critical locations and thicknesses.

(6) Seismic qualification methods and standards.

(7) Nuclear design of fuel and reactivity control system, except burn-up limit.

(8) Motor-operated and power-operated valves.

(9) Instrumentation and control system design processes, methods, and standards.

(10) PRHR natural circulation test (first plant only).

(11) ADS and CMT verification tests (first three plants only).

d. Departures from Tier 2* information that are made under paragraph B.6 of this section do not require an exemption from this appendix.

C. Operational requirements.

1. Generic changes to generic technical specifications and other operational requirements that were completely reviewed and approved in the design certification rulemaking and do not require a change to a design feature in the generic DCD are governed by the requirements in 10 CFR 50.109. Generic changes that do require a change to a design feature in the generic DCD are governed by the requirements in paragraphs A or B of this section.

2. Generic changes to generic TS and other operational requirements are applicable to all applicants who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs C.3 or C.4 of this section.

3. The Commission may require plant-specific departures on generic technical specifications and other operational requirements that were completely reviewed and approved, provided a change to a design feature in the generic DCD is not required and special circumstances as defined in 10 CFR 2.335 are present. The Commission may modify or supplement generic technical specifications and other operational requirements that were not completely reviewed and approved or require additional technical specifications and other operational requirements on a plant-specific basis, provided a change to a design feature in the generic DCD is not required.

4. An applicant who references this appendix may request an exemption from the generic technical specifications or other operational requirements. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 52.7. The grant of an exemption must be subject to litigation in the same manner as other issues material to the license hearing.

5. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license or for operation under 10 CFR 52.103 (a), who believes that an operational requirement approved in the DCD or a technical specification derived from the generic technical specifications must be changed may petition to admit into the proceeding such a contention. Such petition must comply with the general requirements of 10 CFR 2.309 and must demonstrate why special circumstances as defined in 10 CFR 2.335 are present, or for compliance with the Commission's regulations in effect at the time this appendix was approved, as set forth in Section V of this appendix. Any other party may file a response thereto. If, on the basis of the petition and any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. All other issues with respect to the plant-specific technical specifications or other operational requirements are subject to a hearing as part of the license proceeding.

6. After issuance of a license, the generic technical specifications have no further effect on the plant-specific technical specifications and changes to the plant-specific technical specifications will be treated as license amendments under 10 CFR 50.90.

IX. Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

A.1 An applicant or licensee who references this appendix shall perform and demonstrate conformance with the ITAAC before fuel load. With respect to activities subject to an ITAAC, an applicant for a license may proceed at its own risk with design and procurement activities, and a licensee may proceed at its own risk with design, procurement, construction, and preoperational activities, even though the NRC may not have found that any particular ITAAC has been met.

2. The licensee who references this appendix shall notify the NRC that the required inspections, tests, and analyses in the ITAAC have been successfully completed and that the corresponding acceptance criteria have been met.

3. In the event that an activity is subject to an ITAAC, and the applicant or licensee who references this appendix has not demonstrated that the ITAAC has been met, the applicant or licensee may either take corrective actions to successfully complete that ITAAC, request an exemption from the ITAAC in accordance with Section VIII of this appendix and 10 CFR 52.97(b), or petition for rulemaking to amend this appendix by changing the requirements of the ITAAC, under 10 CFR 2.802 and 52.97(b). Such rulemaking changes to the ITAAC must meet the requirements of paragraph VIII.A.1 of this appendix.

B.1. The NRC shall ensure that the required inspections, tests, and analyses in the ITAAC are performed. The NRC shall verify that the inspections, tests, and analyses referenced by the licensee have been successfully completed and, based solely thereon, find the prescribed

acceptance criteria have been met. At appropriate intervals during construction, the NRC shall publish notices of the successful completion of ITAAC in the **Federal Register**.

2. In accordance with 10 CFR 52.103(g), the Commission shall find that the acceptance criteria in the ITAAC for the license are met before fuel load.

3. After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not, by virtue of their inclusion within the DCD, constitute regulatory requirements either for licensees or for renewal of the license; except for specific ITAAC, which are the subject of a § 52.103(a) hearing, their expiration will occur upon final Commission action in such proceeding. However, subsequent modifications must comply with the Tier 1 and Tier 2 design descriptions in the plant-specific DCD unless the licensee has complied with the applicable requirements of 10 CFR 52.98 and Section VIII of this appendix.

X. Records and Reporting

A. Records.

1. The applicant for this appendix shall maintain a copy of the generic DCD that includes all generic changes to Tier 1, Tier 2, and the generic TS and other operational requirements. The applicant shall maintain the proprietary and safeguards information referenced in the generic DCD for the period that this appendix may be referenced, as specified in Section VII of this appendix.

2. An applicant or licensee who references this appendix shall maintain the plant-specific DCD to accurately reflect both generic changes to the generic DCD and plant-specific departures made under Section VIII of this appendix throughout the period of application and for the term of the license (including any period of renewal).

3. An applicant or licensee who references this appendix shall prepare and maintain written evaluations which provide the bases for the determinations required by Section VIII of this appendix. These evaluations must be retained throughout the period of application and for the term of the license (including any period of renewal).

B. Reporting.

1. An applicant or licensee who references this appendix shall submit a report to the NRC containing a brief description of any plant-specific departures from the DCD, including a summary of the evaluation of each. This report must be filed in accordance with the filing requirements applicable to reports in 10 CFR 52.3.

2. An applicant or licensee who references this appendix shall submit updates to its DCD, which reflect the generic changes to and plant-specific departures from the generic DCD made under Section VIII of this appendix. These updates must be filed under the filing requirements applicable to final safety analysis report updates in 10 CFR 52.3 and 50.71(e).

3. The reports and updates required by paragraphs X.B.1 and X.B.2 must be submitted as follows:

a. On the date that an application for a license referencing this appendix is submitted, the application must include the report and any updates to the generic DCD. b. During the interval from the date of application for a license to the date the Commission makes the finding required by 10 CFR 52.103(g), the report must be submitted semi-annually. Updates to the plant-specific DCD must be submitted annually and may be submitted along with amendments to the application.

c. After the Commission makes the finding required by 10 CFR 52.103(g), the reports and updates to the plant-specific DCD must be submitted, along with updates to the site-specific portion of the final safety analysis report for the facility, at the intervals required by 10 CFR 50.59(d)(2) and 50.71(e), respectively, or at shorter intervals as specified in the license.

[64 FR 72015, Dec. 23, 1999, as amended at 68 FR 58812, Oct. 10, 2003; 69 FR 2278, Jan. 14, 2004; 69 FR 18803, Apr. 9, 2004; 72 FR 49552, Aug. 28, 2007]

[1] AP600 is a trademark of Westinghouse Electric Company LLC.

Appendix D to Part 52-- Design Certification Rule for the AP1000 Design

[Top of File]

I. Introduction

Appendix D constitutes the standard design certification for the AP1000 [1] design, in accordance with 10 CFR part 52, subpart B. The applicant for certification of the AP1000 design is Westinghouse Electric Company LLC.

II. Definitions

A. *Generic design control document (generic DCD)* means the document containing the Tier 1 and Tier 2 information

and generic technical specifications that is incorporated by reference into this appendix.

B. *Generic technical specifications* means the information required by 10 CFR 50.36 and 50.36a for the portion of the plant that is within the scope of this appendix.

C. *Plant-specific DCD* means the document maintained by an applicant or licensee who references this appendix consisting of the information in the generic DCD as modified and supplemented by the plant-specific departures and exemptions made under Section VIII of this appendix.

D. *Tier 1* means the portion of the design-related information contained in the generic DCD that is approved and certified by this appendix (Tier 1 information). The design descriptions, interface requirements, and site parameters are derived from Tier 2 information. Tier 1 information includes:

1. Definitions and general provisions;

2. Design descriptions;

3. Inspections, tests, analyses, and acceptance criteria (ITAAC);

4. Significant site parameters; and

5. Significant interface requirements.

E. *Tier 2* means the portion of the design-related information contained in the generic DCD that is approved but not certified by this appendix (Tier 2 information). Compliance with Tier 2 is required, but generic changes to and plant-specific departures from Tier 2 are governed by Section VIII of this appendix. Compliance with Tier 2 provides a sufficient, but not the only acceptable, method for complying with Tier 1.Compliance methods differing from Tier 2 must satisfy the change process in Section VIII of this appendix. Regardless of these differences, an applicant or licensee must meet the requirement in Section III.B of this appendix to reference Tier 2 when referencing Tier 1. Tier 2 information includes:

1. Information required by §§ 52.47(a) and 52.47(c), with the exception of generic technical specifications and conceptual design information;

2. Supporting information on the inspections, tests, and analyses that will be performed to demonstrate that the acceptance criteria in the ITAAC have been met; and

3. Combined license (COL) action items (COL license information), which identify certain matters that must be addressed in the site-specific portion of the final safety analysis report (FSAR) by an applicant who references this appendix. These items constitute information requirements but are not the only acceptable set of information in the FSAR. An applicant may depart from or omit these items, provided that the departure or omission is identified and justified in the FSAR. After issuance of a construction permit or COL, these items are not requirements for the licensee unless such items are restated in the FSAR.

4. The investment protection short-term availability controls in Section 16.3 of the DCD.

F. *Tier 2** means the portion of the Tier 2 information, designated as such in the generic DCD, which is subject to the change process in Section VIII.B.6 of this appendix. This designation expires for some Tier 2* information under paragraph VIII.B.6.

G. *Departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the safety analyses* means:

1. Changing any of the elements of the method described in the plant-specific DCD unless the results of the analysis are conservative or essentially the same; or

2. Changing from a method described in the plant-specific DCD to another method unless that method has been approved by the NRC for the intended application.

H. All other terms in this appendix have the meaning set out in 10 CFR 50.2, or 52.1, or Section 11 of the Atomic Energy Act of 1954, as amended, as applicable.

III. Scope and Contents

A. Tier 1, Tier 2 (including the investment protection short-term availability controls in Section 16.3), and the generic TS in the AP1000 DCD (Revision 15, dated December 8, 2005) are approved for incorporation by reference by the Director of the Office of the Federal Register on February 27, 2006, under 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the generic DCD may be obtained from Ronald P. Vijuk, Manager, Passive Plant Engineering, Westinghouse Electric
Company, P.O. Box 355, Pittsburgh, Pennsylvania 15230–0355. A copy of the generic DCD is also available for examination and copying at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. Copies are available for examination at the NRC Library, Two White Flint North, 11545 Rockville Pike, Rockville, Maryland, telephone (301) 415–5610, e-mail *LIBRARY@NRC.GOV* or at the National Archives and Records Administration (NARA). For information on the availability of this material at

NARA, call (202) 741–6030 or go to *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

B. An applicant or licensee referencing this appendix, in accordance with Section IV of this appendix, shall incorporate by reference and comply with the requirements of this appendix, including Tier 1, Tier 2 (including the investment protection short-term availability controls in Section 16.3 of the DCD), and the generic TS except as otherwise
provided in this appendix. Conceptual design information in the generic DCD and the evaluation of severe accident mitigation design alternatives in appendix 1B of the generic DCD are not part of this appendix.

C. If there is a conflict between Tier 1 and Tier 2 of the DCD, then Tier 1 controls.

D. If there is a conflict between the generic DCD and either the application for design certification of the AP1000 design or NUREG–1793, "Final Safety Evaluation Report Related to Certification of the AP1000 Standard Design," (FSER) and Supplement No. 1, then the generic DCD controls.

E. Design activities for structures, systems, and components that are wholly outside the scope of this appendix may be performed using site characteristics, provided the design activities do not affect the DCD or conflict with the interface requirements.

IV. Additional Requirements and Restrictions

A. An applicant for a combined license that wishes to reference this appendix shall, in addition to complying with the requirements of 10 CFR 52.77, 52.79, and 52.80, comply with the following requirements:

1. Incorporate by reference, as part of its application, this appendix.

2. Include, as part of its application:

a. A plant-specific DCD containing the same type of information and using the same organization and numbering as the generic DCD for the AP1000 design, as modified and supplemented by the applicant's exemptions and departures;

b. The reports on departures from and updates to the plant-specific DCD required by paragraph X.B of this appendix;

c. Plant-specific TS, consisting of the generic and site-specific TS that are required by 10 CFR 50.36 and 50.36a;

d. Information demonstrating compliance with the site parameters and interface requirements;

e. Information that addresses the COL action items; and

f. Information required by 10 CFR 52.47(a) that is not within the scope of this appendix.

3. Include, in the plant-specific DCD, the proprietary information and safeguards information referenced in the AP1000 DCD.

B. The Commission reserves the right to determine in what manner this appendix may be referenced by an applicant for a construction permit or operating license under 10 CFR part 50.

V. Applicable Regulations

A. Except as indicated in paragraph B of this section, the regulations that apply to the AP1000 design are in 10 CFR parts 20, 50, 73, and 100, codified as of January 23, 2006, that are applicable and technically relevant, as described in the FSER (NUREG–1793) and Supplement No. 1.

B. The AP1000 design is exempt from portions of the following regulations:

1. Paragraph (f)(2)(iv) of 10 CFR 50.34—Plant Safety Parameter Display Console;

2. Paragraph (c)(1) of 10 CFR 50.62—Auxiliary (or emergency) feedwater system; and

3. Appendix A to 10 CFR part 50, GDC 17—Second offsite power supply circuit.

VI. Issue Resolution

A. The Commission has determined that the structures, systems, components, and design features of the AP1000 design comply with the provisions of the Atomic Energy Act of 1954, as amended, and the applicable regulations identified in Section V of this appendix; and therefore, provide adequate protection to the health and safety of the
public. A conclusion that a matter is resolved includes the finding that additional or alternative structures, systems, components, design features, design criteria, testing, analyses, acceptance criteria, or justifications are not necessary for the AP1000 design.

B. The Commission considers the following matters resolved within the meaning of 10 CFR 52.63(a)(5) in subsequent

proceedings for issuance of a COL, amendment of a COL, or renewal of a COL, proceedings held under 10 CFR 52.103, and enforcement proceedings involving plants referencing this appendix:

1. All nuclear safety issues, except for the generic TS and other operational requirements, associated with the information in the FSER and Supplement No. 1, Tier 1, Tier 2 (including referenced information, which the context indicates is intended as requirements, and the investment protection short-term availability controls in Section 16.3 of the DCD), and the rulemaking record for certification of the AP1000 design;

2. All nuclear safety and safeguards issues associated with the information in proprietary and safeguards documents, referenced and in context, are intended as requirements in the generic DCD for the AP1000 design;

3. All generic changes to the DCD under and in compliance with the change processes in Sections VIII.A.1 and VIII.B.1 of this appendix;

4. All exemptions from the DCD under and in compliance with the change processes in Sections VIII.A.4 and VIII.B.4 of this appendix, but only for that plant;

5. All departures from the DCD that are approved by license amendment, but only for that plant;

6. Except as provided in paragraph VIII.B.5.f of this appendix, all departures from Tier 2 under and in compliance with the change processes in paragraph VIII.B.5 of this appendix that do not require prior NRC approval, but only for that plant;

7. All environmental issues concerning severe accident mitigation design alternatives associated with the information in the NRC's EA for the AP1000 design and Appendix 1B of the generic DCD, for plants referencing this appendix whose site parameters are within those specified in the severe accident mitigation design alternatives evaluation.

C. The Commission does not consider operational requirements for an applicant or licensee who references this appendix to be matters resolved within the meaning of 10 CFR 52.63(a)(5). The Commission reserves the right to require operational requirements for an applicant or licensee who references this appendix by rule, regulation, order, or license condition.

D. Except under the change processes in Section VIII of this appendix, the Commission may not require an applicant or licensee who references this appendix to:

1. Modify structures, systems, components, or design features as described in the generic DCD;

2. Provide additional or alternative structures, systems, components, or design features not discussed in the generic DCD; or

3. Provide additional or alternative design criteria, testing, analyses, acceptance criteria, or justification for structures, systems, components, or design features discussed in the generic DCD.

E.1. Persons who wish to review proprietary and safeguards information or other secondary references in the AP1000 DCD, in order to request or participate in the hearing required by 10 CFR 52.85 or the hearing provided under 10 CFR 52.103, or to request or participate in any other hearing relating to this appendix in which interested persons have adjudicatory hearing rights, shall first request access to such information from Westinghouse. The request must state with particularity:

a. The nature of the proprietary or other information sought;

b. The reason why the information currently available to the public in the NRC's public document room is insufficient;

c. The relevance of the requested information to the hearing issue(s) which the person proposes to raise; and

d. A showing that the requesting person has the capability to understand and utilize the requested information.

2. If a person claims that the information is necessary to prepare a request for hearing, the request must be filed no later than 15 days after publication in the **Federal Register** of the notice required either by 10 CFR 52.85 or 10 CFR 52.103. If Westinghouse declines to provide the information sought, Westinghouse shall send a written response within 10 days of receiving the request to the requesting person setting forth with particularity the reasons for its refusal. The person may then request the Commission (or presiding officer, if a proceeding has been established) to order disclosure. The person shall include copies of the original request (and any subsequent clarifying information provided by the requesting party to the applicant) and the applicant's response. The Commission and presiding officer shall base their decisions solely on the person's original request (including any clarifying information provided by the requesting person to Westinghouse), and Westinghouse's response. The Commission and presiding officer may order Westinghouse to provide access to some or all of the requested information, subject to an appropriate nondisclosure agreement.

VII. Duration of This Appendix

This appendix may be referenced for a period of 15 years from February 27, 2006, except as provided for in 10 CFR 52.55(b) and 52.57(b). This appendix remains valid for an applicant or licensee who references this appendix until the application is withdrawn or the license

expires, including any period of extended operation under a renewed license.

VIII. Processes for Changes and Departures

A. Tier 1 information.

1. Generic changes to Tier 1 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 1 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs A.3 or A.4 of this section.

3. Departures from Tier 1 information that are required by the Commission through plant-specific orders are governed by the requirements in 10 CFR 52.63(a)(4).

4. Exemptions from Tier 1 information are governed by the requirements in 10 CFR 52.63(b)(1) and 52.98(f). The Commission will deny a request for an exemption from Tier 1, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design.

B. Tier 2 information.

1. Generic changes to Tier 2 information are governed by the requirements in 10 CFR 52.63(a)(1).

2. Generic changes to Tier 2 information are applicable to all applicants or licensees who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs B.3, B.4, B.5, or B.6 of this section.

3. The Commission may not require new requirements on Tier 2 information by plant-specific order while this appendix is in effect under 10 CFR 52.55 or 52.61, unless:

a. A modification is necessary to secure compliance with the Commission's regulations applicable and in effect at the time this appendix was approved, as set forth in Section V of this appendix, or to ensure adequate protection of the public health and safety or the common defense and security; and

b. Special circumstances as defined in 10 CFR 50.12(a) are present.

4. An applicant or licensee who references this appendix may request an exemption from Tier 2 information. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 50.12(a). The Commission will deny a request for an exemption from Tier 2, if it finds that the design change will result in a significant decrease in the level of safety otherwise provided by the design. The grant of an exemption to an applicant must be subject to litigation in the same manner as other issues material to the license hearing. The grant of an exemption to a licensee must be subject to an opportunity for a hearing in the same manner as license amendments.

5.a. An applicant or licensee who references this appendix may depart from Tier 2 information, without prior NRC approval, unless the proposed departure involves a change to or departure from Tier 1 information, Tier 2* information, or the TS, or requires a license amendment under paragraphs B.5.b or B.5.c of this section. When evaluating the proposed departure, an applicant or licensee shall consider all matters described in the plant-specific DCD.

b. A proposed departure from Tier 2, other than one affecting resolution of a severe accident issue identified in the plant-specific DCD, requires a license amendment if it would:

(1) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the plant-specific DCD;

(2) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a structure, system, or component (SSC) important to safety and previously evaluated in the plant-specific DCD;

(3) Result in more than a minimal increase in the consequences of an accident previously evaluated in the plant-specific DCD;

(4) Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the plant-specific DCD;

(5) Create a possibility for an accident of a different type than any evaluated previously in the plant-specific DCD;

(6) Create a possibility for a malfunction of an SSC important to safety with a different result than any evaluated previously in the plant-specific DCD;

(7) Result in a design basis limit for a fission product barrier as described in the plant-specific DCD being exceeded or altered; or

(8) Result in a departure from a method of evaluation described in the plant-specific DCD used in establishing the design bases or in the

safety analyses.

c. A proposed departure from Tier 2 affecting resolution of an ex-vessel severe accident design feature identified in the plant-specific DCD, requires a license amendment if:

(1) There is a substantial increase in the probability of an ex-vessel severe accident such that a particular ex-vessel severe accident previously reviewed and determined to be not credible could become credible; or

(2) There is a substantial increase in the consequences to the public of a particular exvessel severe accident previously reviewed.

d. If a departure requires a license amendment under paragraph B.5.b or B.5.c of this section, it is governed by 10 CFR 50.90.

e. A departure from Tier 2 information that is made under paragraph B.5 of this section does not require an exemption from this appendix.

f. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license or for operation under 10 CFR 52.103 (a), who believes that an applicant or licensee who references this appendix has not complied with paragraph VIII.B.5 of this appendix when departing from Tier 2 information, may petition to admit into the proceeding such a contention. In addition to compliance with the general requirements of 10 CFR 2.309, the petition must demonstrate that the departure does not comply with paragraph VIII.B.5 of this appendix. Further, the petition must demonstrate that the change bears on an asserted noncompliance with an ITAAC acceptance criterion in the case of a 10 CFR 52.103 preoperational hearing, or that the change bears directly on the amendment request in the case of a hearing on a license amendment. Any other party may file a response. If, on the basis of the petition and any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. The Commission may admit such a contention if it determines the petition raises a genuine issue of material fact regarding compliance with paragraph VIII.B.5 of this appendix.

6.a. An applicant who references this appendix may not depart from Tier 2* information, which is designated with italicized text or brackets and an asterisk in the generic DCD, without NRC approval. The departure will not be considered a resolved issue, within the meaning of Section VI of this appendix and 10 CFR 52.63(a)(5).

b. A licensee who references this appendix may not depart from the following Tier 2* matters without prior NRC approval. A request for a departure will be treated as a request for a license amendment under 10 CFR 50.90.

(1) Maximum fuel rod average burn-up.

(2) Fuel principal design requirements.

(3) Fuel criteria evaluation process.

(4) Fire areas.

(5) Human factors engineering.

(6) Small-break loss-of-coolant accident (LOCA) analysis methodology.

c. A licensee who references this appendix may not, before the plant first achieves full power following the finding required by 10 CFR 52.103(g), depart from the following Tier 2* matters except under paragraph B.6.b of this section. After the plant first achieves full power, the following Tier 2* matters revert to Tier 2 status and are subject to the departure provisions in paragraph B.5 of this section.

(1) Nuclear Island structural dimensions.

(2) American Society of Mechanical Engineers Boiler & Pressure Vessel Code (ASME Code), Section III, and Code Case–284.

(3) Design Summary of Critical Sections.

(4) American Concrete Institute (ACI) 318, ACI 349, American National Standards Institute/American Institute of Steel Construction (ANSI/AISC)–690, and American Iron and Steel Institute (AISI), "Specification for the Design of Cold Formed Steel Structural Members, Part 1 and 2," 1996 Edition and 2000 Supplement.

(5) Definition of critical locations and thicknesses.

(6) Seismic qualification methods and standards.

(7) Nuclear design of fuel and reactivity control system, except burn-up limit.

(8) Motor-operated and power-operated valves.

(9) Instrumentation and control system design processes, methods, and standards.

(10) Passive residual heat removal (PRHR) natural circulation test (first plant only).

(11) Automatic depressurization system (ADS) and core make-up tank (CMT) verification tests (first three plants only).

(12) Polar crane parked orientation.

(13) Piping design acceptance criteria.

(14) Containment vessel design parameters.

d. Departures from Tier 2* information that are made under paragraph B.6 of this section do not require an exemption from this appendix.

C. Operational requirements.

1. Generic changes to generic TS and other operational requirements that were completely reviewed and approved in the design certification rulemaking and do not require a change to a design feature in the generic DCD are governed by the requirements in 10 CFR 50.109. Generic changes that require a change to a design feature in the generic DCD are governed by the requirements in paragraphs A or B of this section.

2. Generic changes to generic TS and other operational requirements are applicable to all applicants who reference this appendix, except those for which the change has been rendered technically irrelevant by action taken under paragraphs C.3 or C.4 of this section.

3. The Commission may require plant-specific departures on generic TS and other operational requirements that were completely reviewed and approved, provided a change to a design feature in the generic DCD is not required and special circumstances as defined in 10 CFR 2.335 are present. The Commission may modify or supplement generic TS and other operational requirements that were not completely reviewed and approved or require additional TS and other operational requirements on a plant-specific basis, provided a change to a design feature in the generic DCD is not required.

4. An applicant who references this appendix may request an exemption from the generic technical specifications or other operational requirements. The Commission may grant such a request only if it determines that the exemption will comply with the requirements of 10 CFR 52.7. The grant of an exemption must be subject to litigation in the same manner as other issues material to the license hearing.

5. A party to an adjudicatory proceeding for either the issuance, amendment, or renewal of a license, or for operation under 10 CFR 52.103 (a), who believes that an operational requirement approved in the DCD or a TS derived from the generic TS must be changed may petition to admit such a contention into the proceeding. The petition must comply with the general requirements of 10 CFR 2.309 and must demonstrate why special circumstances as defined in 10 CFR 2.335 are present, or demonstrate compliance with the Commission's regulations in effect at the time this appendix was approved, as set forth in Section V of this appendix. Any other party may file a response to the petition. If, on the basis of the petition and any response, the presiding officer determines that a sufficient showing has been made, the presiding officer shall certify the matter directly to the Commission for determination of the admissibility of the contention. All other issues with respect to the plant-specific TS or other operational requirements are subject to a hearing as part of the license proceeding.

6. After issuance of a license, the generic TS have no further effect on the plant-specific TS. Changes to the plant-specific TS will be treated as license amendments under 10 CFR 50.90.

IX. Inspections, Tests, Analyses, and Acceptance Criteria (ITAAC)

A.1. An applicant or licensee who references this appendix shall perform and demonstrate conformance with the ITAAC before fuel load. With respect to activities subject to an ITAAC, an applicant for a license may proceed at its own risk with design and procurement activities. A licensee may also proceed at its own risk with design, procurement, construction, and preoperational activities, even though the NRC may not have found that any particular ITAAC has been met.

2. The licensee who references this appendix shall notify the NRC that the required inspections, tests, and analyses in the ITAAC have been successfully completed and that the corresponding acceptance criteria have been met.

3. If an activity is subject to an ITAAC and the applicant or licensee who references this appendix has not demonstrated that the ITAAC has been met, the applicant or licensee may either take corrective actions to successfully complete that ITAAC, request an exemption from the ITAAC under Section VIII of this appendix and 10 CFR 52.97(b), or petition for rulemaking to amend this appendix by changing the requirements of the ITAAC, under 10 CFR 2.802 and 52.97(b). Such rulemaking changes to the ITAAC must meet the requirements of paragraph VIII.A.1 of this appendix.

B.1. The NRC shall ensure that the required inspections, tests, and analyses in the ITAAC are performed. The NRC shall verify that the inspections, tests, and analyses referenced by the licensee have been successfully completed and, based solely thereon, find that the prescribed acceptance criteria have been met. At appropriate intervals during construction, the NRC shall publish notices of the successful completion of ITAAC in the **Federal Register**.

2. In accordance with 10 CFR 52.103(g), the Commission shall find that the acceptance criteria in the ITAAC for the license are met before

fuel load.

3. After the Commission has made the finding required by 10 CFR 52.103(g), the ITAAC do not, by virtue of their inclusion within the DCD, constitute regulatory requirements either for licensees or for renewal of the license; except for specific ITAAC, which are the subject of a § 52.103(a) hearing, their expiration will occur upon final Commission action in such a proceeding. However, subsequent modifications must comply with the Tier 1 and Tier 2 design descriptions in the plantspecific DCD unless the licensee has complied with the applicable requirements of 10 CFR 52.98 and Section VIII of this appendix.

X. Records and Reporting

A. Records

1. The applicant for this appendix shall maintain a copy of the generic DCD that includes all generic changes to Tier 1, Tier 2, and the generic TS and other operational requirements. The applicant shall maintain the proprietary and safeguards information referenced in the generic DCD for the period that this appendix may be referenced, as specified in Section VII of this appendix.

2. An applicant or licensee who references this appendix shall maintain the plant-specific DCD to accurately reflect both generic changes to the generic DCD and plant-specific departures made under Section VIII of this appendix throughout the period of application and for the term of the license (including any period of renewal).

3. An applicant or licensee who references this appendix shall prepare and maintain written evaluations which provide the bases for the determinations required by Section VIII of this appendix. These evaluations must be retained throughout the period of application and for the term of the license (including any period of renewal).

B. Reporting

1. An applicant or licensee who references this appendix shall submit a report to the NRC containing a brief description of any plant-specific departures from the DCD, including a summary of the evaluation of each. This report must be filed in accordance with the filing requirements applicable to reports in 10 CFR 52.3.

2. An applicant or licensee who references this appendix shall submit updates to its DCD, which reflect the generic changes to and plant-specific departures from the generic DCD made under Section VIII of this appendix. These updates must be filed under the filing requirements applicable to final safety analysis report updates in 10 CFR 52.3 and 50.71(e).

3. The reports and updates required by paragraphs X.B.1 and X.B.2 must be submitted as follows:

a. On the date that an application for a license referencing this appendix is submitted, the application must include the report and any updates to the generic DCD.

b. During the interval from the date of application for a license to the date the Commission makes its findings required by 10 CFR 52.103 (g), the report must be submitted semi-annually. Updates to the plant-specific DCD must be submitted annually and may be submitted along with amendments to the application.

c. After the Commission makes the finding required by 10 CFR 52.103(g), the reports and updates to the plant-specific DCD must be submitted, along with updates to the site-specific portion of the final safety analysis report for the facility, at the intervals required by 10 CFR 50.59(d)(2) and 50.71(e)(4), respectively, or at shorter intervals as specified in the license.

[71 FR 4478, Jan. 27, 2006; 72 FR 49555, Aug. 28, 2007]

[1] AP1000 is a trademark of Westinghouse Electric Company LLC.

Appendices E Through M to Part 52 [Reserved]

[Top of File]

[72 FR 49559, Aug. 28, 2007]

Appendix M to Part 52--Standardization of Design; Manufacture of Nuclear Power Reactors; Construction and Operation of Nuclear Power Reactors Manufactured Pursuant to Commission License

[Top of File]

Section 101 of the Atomic Energy Act of 1954, as amended, and § 50.10 of this chapter require a Commission license to transfer or receive in interstate commerce, manufacture, produce, transfer, acquire, possess, use, import, or export any production or utilization facility. The regulations in part 50 require the issuance of a construction permit by the Commission before commencement of construction of a production or utilization facility, and the issuance of an operating license before operation of the facility. The provisions of part 50 relating to the facility licensing process are, in general, predicated on the assumption that the facility will be assembled and constructed on the site

at which it is to be operated. In those circumstances, both facility design and site-related issues can be considered in the initial, construction permit stage of the licensing process.

However, under the Atomic Energy Act, a license may be sought and issued authorizing the manufacture of facilities but not their construction and installation at the sites on which the facilities are to be operated. Prior to the "commencement of construction", as defined in § 50.10(c) of this chapter of a facility (manufactured pursuant to such a Commission license) on the site at which it is to operate--that is preparation of the site and installation of the facility--a construction permit that, among other things, reflects approval of the site on which the facility is to be operated, must be issued by the Commission. This appendix sets out the particular requirements and provisions applicable to such situations where nuclear power reactors to be manufactured pursuant to a Commission license and subsequently installed at the site pursuant to a Commission construction permit, are of the type described in § 50.22 of this chapter. It thus codifies one approach to the standardization of nuclear power reactors.

1. Except as otherwise specified in this appendix or as the context otherwise indicates, the provisions in part 50 applicable to construction permits, including the requirement in § 50.58 of this chapter for review of the application by the Advisory Committee on Reactor Safeguards and the holding of a public hearing, apply in context, with respect to matters of radiological health and safety, environmental protection, and the common defense and security, to licenses pursuant to this appendix M to manufacture nuclear power reactors (manufacturing licenses) to be operated at sites not identified in the license application.

2. An application for a manufacturing license pursuant to this appendix M must be submitted, as specified in § 50.4 of this chapter and meet all the requirements of §§ 50.34(a) (1)-(9) and 50.34a (a) and (b) of this chapter except that the preliminary safety analysis report shall be designated as a "design report" and any required information or analyses relating to site matters shall be predicated on postulated site parameters which must be specified in the application. The application must also include information pertaining to design features of the proposed reactor(s) that affect plans for coping with emergencies in the operation of the reactor(s).

3. An applicant for a manufacturing license pursuant to this appendix M shall submit with his application an environmental report as required of applicants for construction permits in accordance with subpart A of part 51 of this chapter, provided, however, that such report shall be directed at the manufacture of the reactor(s) at the manufacturing site; and, in general terms, at the construction and operation of the reactor(s) at a hypothetical site or sites having characterisitics that fall within the postulated site parameters. The related draft and final environmental impact statement prepared by the Commission's regulatory staff will be similarly directed.

4. (a) Sections 50.10 (b) and (c), 50.12(b), 50.23, 50.30(d), 50.34(a)(10), 50.34a(c), 50.35 (a) and (c), 50.40(a), 50.45, 50.55(d), 50.56 of this chapter and appendix J of part 50 do not apply to manufacturing licenses. Appendices E and H of part 50 apply to manufacturing licenses only to the extent that the requirements of these appendices involve facility design features.

(b) The financial information submitted pursuant to § 50.33(f) of this chapter and appendix C of part 50 shall be directed at a demonstration of the financial qualifications of the applicant for the manufacturing license to carry out the manufacturing activity for which the license is sought.

5. The Commission may issue a license to manufacture one or more nuclear power reactors to be operated at sites not identified in the license application if the Commission finds that:

(a) The applicant has described the proposed design of and the site parameters postulated for the reactor(s), including, but not limited to, the principal architectural and engineering criteria for the design, and has identified the major features of components incorporated therein for the protection of the health and safety of the public.

(b) Such further technical or design information as may be required to complete the design report and which can reasonably be left for later consideration, will be supplied in a supplement to the design report.

(c) Safety features or components, if any, which require research and development have been described by the applicant and the applicant has identified, and there will be conducted a research and development program reasonably designed to resolve any safety questions associated with such features of components; and

(d) On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved before any of the proposed nuclear power reactor(s) are removed from the manufacturing site and (ii) taking into consideration the site criteria contained in part 100 of this chapter, the proposed reactor(s) can be constructed and operated at sites having characteristics that fall within the site parameters postulated for the design of the reactor(s) without undue risk to the health and safety of the public.

(e) The applicant is technically and financially qualified to design and manufacture the proposed nuclear power reactor(s).

(f) The issuance of a license to the applicant will not be inimical to the common defense and security or to the health and safety of the public.

(g) On the basis of the evaluations and analyses of the environmental effects of the proposed action required by subpart A of part 51 of this chapter and paragraph 3 of this appendix, the action called for is the issuance of the license.

Note: When an applicant has supplied initially all of the technical information required to complete the application, including the final design of the reactor(s), the findings required for the issuance of the license will be appropriately modified to reflect that fact.

6. Each manufacturing license issued pursuant to this appendix will specify the number of nuclear power reactors authorized to be manufactured and the latest date for the completion of the manufacture of all such reactors. Upon good cause shown, the Commission will extend such completion date for a reasonable period of time.

7. The holder of a manufacturing license issued pursuant to this appendix M shall submit to the Commission the final design of the nuclear power reactor(s) covered by the license as soon as such design has been completed. Such submittal shall be in the form of an application for amendment of the manufacturing license.

8. The prohibition in § 50.10(c) of this chapter against commencement of construction of a production or utilization facility prior to issuance of a construction permit applies to the transport of a nuclear power reactor(s) manufactured pursuant to this appendix from the manufacturing facility to the site at which the reactor(s) will be installed and operated. In addition, such nuclear power reactor(s) shall not be removed from the manufacturing site until the final design of the reactor(s) has been approved by the Commission in accordance with paragraph 7.

9. An application for a permit to construct a nuclear power reactor(s) which is the subject of an application for a manufacturing license pursuant to this appendix M need not contain such information or analyses as have previously been submitted to the Commission in connection with the application for a manufacturing license, but shall by §§ 50.34(a) and 50.34a of this chapter, sufficient information to demonstrate that the site on which the reactor(s) is to be operated falls within the postulated site parameters specified in the relevant manufacturing license application.

10. The Commission may issue a permit to construct a nuclear power reactor(s) which is the subject of an application for a manufacturing license pursuant to this appendix M if the Commission (a) finds that the site on which the reactor is to be operated falls within the postulated site parameters specified in the relevant application for a manufacturing license and (b) makes the findings otherwise required by part 50. In no event will a construction permit be issued until the relevant manufacturing license has been issued.

11. An operating license for a nuclear power reactor(s) that has been manufactured under a Commission license issued pursuant to this appendix M may be issued by the Commission pursuant to § 50.57 and subpart A of part 51 of this chapter except that the Commission shall find, pursuant to § 50.57(a)(1), that construction of the reactor(s) has been substantially completed in conformity with both the manufacturing license and the construction permit and the applications therefor, as amended, and the provisions of the Act, and the rules and regulations of the Commission. Notwithstanding the other provisions of this paragraph, no application for an operating license for a nuclear power reactor(s) that has been manufactured under a Commission license issued pursuant to this appendix M will be docketed until the application for an amendment to the relevant manufacturing license required by paragraph 7 has been docketed.

12. In making the findings required by this part for the issuance of a construction permit or an operating license for a nuclear power reactor (s) that has been manufactured under a Commission license issued pursuant to this appendix, or an amendment to such a manufacturing license, construction permit, or operating license, the Commission will treat as resolved those matters which have been resolved at an earlier stage of the licensing process, unless there exists significant new information that substantially affects the conclusion(s) reached at the earlier stage or other good cause.

Appendix N to Part 52—Standardization of Nuclear Power Plant Designs: Combined Licenses To Construct and Operate Nuclear Power Reactors of Identical Design at Multiple Sites

[Top of File]

The Commission's regulations in part 2 of this chapter specifically provide for the holding of hearings on particular issues separately from other issues involved in hearings in licensing proceedings, and for the consolidation of adjudicatory proceedings and of the presentations of parties in adjudicatory proceedings such as licensing
proceedings (§§ 2.316 and 2.317 of this chapter). This appendix sets out the particular requirements and provisions applicable to situations in which applications for combined licenses under subpart C of this part are filed by one or more applicants for licenses to construct and operate nuclear power reactors of identical design ("common design") to be located at multiple sites.[1]

1. Except as otherwise specified in this appendix or as the context otherwise indicates, the provisions of subpart C of this part and subpart D of part 2 of this chapter apply to combined license applications subject to this appendix.

2. Each combined license application submitted pursuant to this appendix must be submitted as specified in § 52.75 and 10 CFR 2.101. Each application must state that the applicant wishes to have the application considered under 10 CFR part 52, appendix N, and must list each of the applications to be treated together under this appendix.

3. Each application must include the information required by §§ 52.77, 52.79, and 52.80(a), *provided however*, that the application must identify the common design, and, if applicable, reference a standard design certification under subpart B of this part, or the use of a reactor manufactured under subpart F of this part. The final safety analysis report for each application must either incorporate by reference or include the final safety analysis of the common design, including, if applicable, the final safety analysis report for the referenced design certification or the manufactured reactor.[2]

4. Each combined license application submitted pursuant to this appendix must contain an environmental report as required by § 52.80(b), and which complies with the applicable provisions of 10 CFR part 51, *provided, however*, that the application may incorporate by reference a single environmental report on the environmental impacts of the common design.

5. Upon a determination that each application is acceptable for docketing under 10 CFR 2.101, each application will be docketed and a notice of docketing for each application will be published in the **Federal Registe**r, in accordance with 10 CFR 2.104, *provided, however*, that the notice must state that the application will be processed under the provisions of 10 CFR part 52, appendix N, and subpart D of part 2 of this chapter. As the discretion of the Commission, a single notice of docketing for multiple applications may be published in the **Federal Register**.

6. The NRC staff shall prepare draft and final environmental impact statements for each of the applications under part 51 of this chapter. Scoping under 10 CFR 51.28 and 51.29 for each of the combined license applications may be conducted simultaneously and joint scoping may be conducted with respect to the environmental issues relevant to the common design. If the applications reference a standard design certification, then the environmental impact statement for each of the applications must incorporate by reference the design certification environmental assessment. If the applications do not reference a standard design certification, then the NRC staff shall prepare draft and final supplemental environmental impact statements which address severe accident mitigation design alternatives for the common design, which must be incorporated by reference into the environmental impact statement prepared for each application. Scoping under 10 CFR 51.28 and 51.29 for the supplemental environmental impact statement may be conducted simultaneously, and may be part of the scoping for each of the combined license applications.

7. The ACRS shall report on each of the applications as required by § 52.87. Each report must be limited to those safety matters for each application which are not relevant to the common design. In addition, the ACRS shall separately report on the safety of the common design, *provided, however*, that the report need not address the safety of a referenced standard design certification or reactor manufactured under subpart F of this part.

8. The Commission shall designate a presiding officer to conduct the proceeding with respect to the health and safety, common defense and security, and environmental matters relating to the common design. The hearing will be governed by the applicable provisions of subparts A, C, G, L, N, and O of part 2 of this chapter relating to applications for combined licenses. The presiding officer shall issue a partial initial decision on the common design.

[69 FR 2279, Jan. 14, 2004; 72 FR 49559, Aug. 28, 2007]

1. If the design for the power reactor(s) proposed in a particular application is not identical to the others, that application may not be processed under this appendix and subpart D of part 2 of this chapter.

2. As used in this appendix, the design of a nuclear power reactor included in a single referenced safety analysis report means the design of those structures, systems, and components important to radiological health and safety and the common defense and security.

Appendix O to Part 52--Standardization of Design: Staff Review of Standard Designs

[Top of File]

This appendix sets out procedures for the filing, staff review and referral to the Advisory Committee on Reactor Safeguards of standard designs for a nuclear power reactor of the type described in § 50.22 of this chapter or major portions thereof.

1. Any person may submit a proposed preliminary or final standard design for a nuclear power reactor of the type described in § 50.22 to the regulatory staff for its review. Such a submittal may consist of either the preliminary or final design for the entire reactor facility or the preliminary or final design of major portions thereof.

2. The submittal for review of the standard design must be made in the same manner as provided in §§ 50.4 and 50.30 for license applications.

3. The submittal for review of the standard design shall include the information described in §§ 50.33 (a) through (d) of this chapter and the applicable technical information required by §§ 50.34 (a) and (b), as appropriate, and 50.34a of this chapter (other than that required by §§ 50.34(a) (6) and (10), 50.34(b)(1), (6) (i), (ii), (iv), and (v) and 50.34(b) (7) and (8)). The submittal shall also include a description, analysis and evaluation of the interfaces between the submitted design and the balance of the nuclear power plant. With respect to the requirements of §§ 50.34(a)(1) of this chapter, the submittal for review of a standard design shall include the site parameters postulated for the design, and an analysis and evaluation of the design in terms of such postulated site parameters. The information submitted pursuant to § 50.34(a)(7) of this chapter, shall be limted to the quality assurance program to be applied to the design, procurement and fabrication of the structures, systems, and components for which design review has been requested and the information submitted pursuant to § 50.34(a)(9) of this chapter shall be limited to the qualifications of the person submitting the standard design to design the reactor or major portion thereof. The submittal shall also include information pertaining to design features that affect plans for coping with emergencies in the operation of the reactor or major portion thereof.

4. Once the regulatory staff has initiated a technical review of a submittal under this appendix, the submittal will be referred to the Advisory Committee on Reactor Safeguards (ACRS) for a review and report.

5. Upon completion of their review of a submittal under this appendix, the NRC regulatory staff shall publish in the Federal Register a determination as to whether or not the preliminary or final design is acceptable, subject to such conditions as may be appropriate, and make available at the NRC Web site, *http://www.nrc.gov*, an analysis of the design in the form of a report. An approved design shall be utilized by and relied upon by the regulatory staff and the ACRS in their review of any individual facility license application which incorporates by reference a design approved in accordance with this paragraph unless there exists significant new information which substantially affects the earlier determination or other good cause.

6. The determination and report by the regulatory staff shall not constitute a commitment to issue a permit or license, or in any way affect the authority of the Commission, Atomic Safety and Licensing Board Panel, and other presiding officers in any proceeding under part 2 of this chapter.

7. Information requests to the approval holder regarding an approved design shall be evaluated prior to issuance to ensure that the burden to be imposed on respondents is justified in view of the potential safety significance of the issue to be addressed in the requested information. Each such evaluation performed by the NRC staff shall be in accordance with 10 CFR 50.54(f) and shall be approved by the

Executive Director for Operations or his or her designee prior to issuance of the request.

[54 FR 15386, Apr. 18, 1989, as amended at 61 FR 9902, Mar. 12, 1996; 64 FR 48953, Sept. 9, 1999; 68 FR 58812, Oct. 10, 2003; 69 FR 2279, Jan. 14, 2004]

Appendix P to Part 52 [Reserved]

[Top of File]

Appendix Q to Part 52--Pre-Application Early Review of Site Suitability Issues

[Top of File]

This appendix sets out procedures for the filing, Staff review, and referral to the Advisory Committee on Reactor Safeguards (ACRS) of requests for early review of one or more site suitability issues relating to the construction and operation of certain utilization facilities separately from and prior to the submittal of applications for construction permits for the facilities. The appendix also sets out procedures for the preparation and issuance of Staff Site Reports and for their incorporation by reference in applications for the construction and operation of certain utilization facilities. The utilization facilities are those which are subject to § 51.20(b) of this chapter and are of the type specified in § 50.21(b) (2) or (3) or § 50.22 of this chapter or are testing facilities. This appendix does not apply to proceedings conducted pursuant to subpart F or part 2 of this chapter.

1. Any person may submit information regarding one or more site suitability issues to the Commission's Staff for its review separately from and prior to an application for a construction permit for a facility. Such a submittal shall be accompanied by any fee required by part 170 of this chapter and shall consist of the portion of the information required of applicants for construction permits by §§ 50.33 (a)-(c) and (e) of this chapter, and, insofar as it relates to the issue(s) of site suitability for which early review is sought, by §§ 50.34(a)(1) and 50.30(f) of this chapter, except that information with respect to operation of the facility at the projected initial power level need not be supplied.

2. The submittal for early review of site suitability issue(s) must be made in the same manner as provided in §§ 50.4 and 50.30 for license applications. The submittal must include sufficient information concerning range of postulated facility design and operation parameters to enable the Staff to perform the requested review of site suitability issues. The submittal must contain suggested conclusions on the issues of site suitability submitted for review and must be accompanied by a statement of the bases or the reasons for those conclusions. The submittal must also list, to the extent possible, any long-range objectives for ultimate development of the site, state whether any site selection process was used in preparing the submittal, describe any site selection process used, and explain what consideration, if any, was given to alternative sites.

3. The staff shall publish a note of docketing of the submittal in the Federal Register, and shall send a copy of the notice of docketing to the Governor or other appropriate official of the State in which the site is located. This notice shall identify the location of the site, briefly describe the site suitability issue(s) under review, and invite comments from Federal, State, and local agencies and interested persons within 120 days of publication or such other time as may be specified, for consideration by the staff in connection with the initiation or outcome of the review and, if appropriate by the ACRS, in connection with the outcome of their review. The person requesting review shall serve a copy of the submittal on the Governor or other appropriate official of the State in which the site is located, and on the chief executive of the municipality in which the site is located or, if the site is not located in a municipality, on the chief executive of the county. The portion of the submittal containing information requested of applicants for construction permits by §§ 50.33 (a)-(c) and (e) and 50.34 (a)(1) of this chapter will be referred to the ACRS for a review and report. There will be no referral to the ACRS unless early review of the site safety issues under § 50.34(a)(1) is requested.

4. Upon completion of review by the NRC staff and, if appropriate by the ACRS, of a submittal under this appendix, the NRC staff shall prepare a Staff Site Report which shall identify the location of the site, state the site suitability issues reviewed, explain the nature and scope of the review, state the conclusions of the staff regarding the issues reviewed and state the reasons for those conclusions. Upon issuance of an NRC Staff Site Report, the NRC staff shall publish a notice of the availability of the report in the Federal Register and shall make available a copy of the report at the NRC Web site, *http://www.nrc.gov.* The NRC staff shall also send a copy of the report to the Governor or other appropriate official of the State in which the site is located, and to the chief executive of the municipality in which the site is located or, if the site is not located in a municipality, to the chief executive of the county.]

5. Any Staff Site Report prepared and issued in accordance with this appendix may be incorporated by reference, as appropriate, in an application for a construction permit for a utilization facility which is subject to § 51.20(b) of this chapter and is of the type specific in § 50.21(b) (2) or (3) or § 50.22 of this chapter or is a testing facility. The conclusions of the Staff Site Report will be reexamined by the staff where five years or more have elapsed between the issuance of the Staff Site Report and its incorporation by reference in a construction permit application.

6. Issuance of a Staff Site Report shall not constitute a commitment to issue a permit or license, to permit on-site work under § 50.10(e) of this chapter, or in any way affect the authority of the Commission, Atomic Safety and Licensing Appeal Panel, Atomic Safety and Licensing Board Panel, and other presiding officers in any proceeding under subpart F and/or G of part 2 of this chapter.

7. The staff will not conduct more than one review of site suitability issues with regard to a particular site prior to the full construction permit review required by subpart A of part 51 of this chapter. The staff may decline to prepare and issue a Staff Site Report in response to a submittal under this appendix where it appears that, (a) in cases where no review of the relative merits of the submitted site and alternative sites under subpart A of part 51 of this chapter is requested, there is a reasonable likelihood that further staff review would identify one or more preferable alternative sites and the staff review of one or more site suitability issues would lead to an irreversible and irretrievable commitment of resources prior to the submittal of the analysis of alternative sites in the Environmental Report that would prejudice the later review and decision on alternative sites under subpart F and/or G of part 2 and subpart A of part 51 of this chapter; or (b) in cases where, in the judgment of the staff, early review of any site suitability issue or issues would not be in the public interest,

considering (1) the degree of likelihood that any early findings on those issues would retain their validity in later reviews, (2) the objections, if any, of cognizant state or local government agencies to the conduct of an early review on those issues, and (3) the possible effect on the public interest of having an early, if not necessarily conclusive, resolution of those issues.

[54 FR 15386, Apr. 18, 1989, as amended at 64 FR 48953, Sept. 9, 1999; 68 FR 58812, Oct. 10, 2003]

PART 53 [RESERVED]

[Top of File]

PART 54--REQUIREMENTS FOR RENEWAL OF OPERATING LICENSES FOR NUCLEAR POWER PLANTS

[Top of File]

General Provisions

[Top of File]

§ 54.1 Purpose.

This part governs the issuance of renewed operating licenses and renewed combined licenses for nuclear power plants licensed pursuant to Sections 103 or 104b of the Atomic Energy Act of 1954, as amended, and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242).

[72 FR 49560, Aug. 28, 2007]

§ 54.3 Definitions.

[Top of File]

(a) As used in this part,

Current licensing basis (CLB) is the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 52, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. It also includes the plant-specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required by 10 CFR 50.71 and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports.

Integrated plant assessment (IPA) is a licensee assessment that demonstrates that a nuclear power plant facility's structures and components requiring aging management review in accordance with § 54.21(a) for license renewal have been identified and that the effects of aging on the functionality of such structures and components will be managed to maintain the CLB such that there is an acceptable level of safety during the period of extended operation.

Nuclear power plant means a nuclear power facility of a type described in 10 CFR 50.21(b) or 50.22.

Renewed combined license means a combined license originally issued under part 52 of this chapter for which an application for renewal is filed in accordance with 10 CFR 52.107 and issued under this part.

Time-limited aging analyses, for the purposes of this part, are those licensee calculations and analyses that:

(1) Involve systems, structures, and components within the scope of license renewal, as delineated in § 54.4(a);

(2) Consider the effects of aging;

(3) Involve time-limited assumptions defined by the current operating term, for example, 40 years;

(4) Were determined to be relevant by the licensee in making a safety determination;

(5) Involve conclusions or provide the basis for conclusions related to the capability of the system, structure, and component to perform its intended functions, as delineated in § 54.4(b); and

(6) Are contained or incorporated by reference in the CLB.

(b) All other terms in this part have the same meanings as set out in 10 CFR 50.2 or Section 11 of the Atomic Energy Act, as applicable.

[; 72 FR 49560, Aug. 28, 2007]

§ 54.4 Scope.

[Top of File]

(a) Plant systems, structures, and components within the scope of this part are--

(1) Safety-related systems, structures, and components which are those relied upon to remain functional during and following design-basis events (as defined in 10 CFR 50.49 (b)(1)) to ensure the following functions--

(i) The integrity of the reactor coolant pressure boundary;

(ii) The capability to shut down the reactor and maintain it in a safe shutdown condition; or

(iii) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to those referred to in § 50.34(a)(1), § 50.67(b)(2), or § 100.11 of this chapter, as applicable.

(2) All nonsafety-related systems, structures, and components whose failure could prevent satisfactory accomplishment of any of the functions identified in paragraphs (a)(1)(i), (ii), or (iii) of this section.

(3) All systems, structures, and components relied on in safety analyses or plant evaluations to perform a function that demonstrates compliance with the Commission's regulations for fire protection (10 CFR 50.48), environmental qualification (10 CFR 50.49), pressurized thermal shock (10 CFR 50.61), anticipated transients without scram (10 CFR 50.62), and station blackout (10 CFR 50.63).

(b) The intended functions that these systems, structures, and components must be shown to fulfill in § 54.21 are those functions that are the bases for including them within the scope of license renewal as specified in paragraphs (a)(1) - (3) of this section.

[60 FR 22491, May 8, 1995, as amended at 61 FR 65175, Dec. 11, 1996; 64 FR 72002, Dec. 23, 1999]

§ 54.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 54.7 Written communications.

[Top of File]

All applications, correspondence, reports, and other written communications shall be filed in accordance with applicable portions of 10 CFR 50.4.

§ 54.9 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0155.

(b) The approved information requirements contained in this part appear in §§ 54.13, 54.15, 54.17, 54.19, 54.21, 54.22, 54.23, 54.33, and 54.37.

[60 FR 22491, May 8, 1995, as amended at 62 FR 52188, Oct. 6, 1997; 67 FR 67100, Nov. 4, 2002]

§ 54.11 Public inspection of applications.

[Top of File]

Applications and documents submitted to the Commission in connection with renewal applications may be made available for public inspection in accordance with the provisions of the regulations contained in 10 CFR Part 2.

§ 54.13 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a renewed license or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant must be complete and accurate in all material

respects.

(b) Each applicant shall notify the Commission of information identified by the applicant as having, for the regulated activity, a significant implication for public health and safety or common defense and security. An applicant violates this paragraph only if the applicant fails to notify the Commission of information that the applicant has identified as having a significant implication for public health and safety or common defense and security. Notification must be provided to the Administrator of the appropriate regional office within 2 working days of identifying the information. This requirement is not applicable to information that is already required to be provided to the Commission by other reporting or updating requirements.

§ 54.15 Specific exemptions.

[Top of File]

Exemptions from the requirements of this part may be granted by the Commission in accordance with 10 CFR 50.12.

§ 54.17 Filing of application.

[Top of File]

(a) The filing of an application for a renewed license must be in accordance with Subpart A of 10 CFR Part 2 and 10 CFR 50.4 and 50.30.

(b) Any person who is a citizen, national, or agent of a foreign country, or any corporation, or other entity which the Commission knows or has reason to know is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government, is ineligible to apply for and obtain a renewed license.

(c) An application for a renewed license may not be submitted to the Commission earlier than 20 years before the expiration of the operating license or combined license currently in effect.

(d) An applicant may combine an application for a renewed license with applications for other kinds of licenses.

(e) An application may incorporate by reference information contained in previous applications for licenses or license amendments, statements, correspondence, or reports filed with the Commission, provided that the references are clear and specific.

(f) If the application contains Restricted Data or other defense information, it must be prepared in such a manner that all Restricted Data and other defense information are separated from unclassified information in accordance with 10 CFR 50.33(j).

(g) As part of its application, and in any event before the receipt of Restricted Data or classified National Security Information or the issuance of a renewed license, the applicant shall agree in writing that it will not permit any individual to have access to or any facility to possess Restricted Data or classified National Security Information until the individual and/or facility has been approved for such access under the provisions of 10 CFR Parts 25 and/or 95. The agreement of the applicant in this regard shall be deemed part of the renewed license, whether so stated therein or not.

[60 FR 22491, May 8, 1995, as amended at 62 FR 17690, Apr. 11, 1997; 72 FR 49560, Aug. 28, 2007]

§ 54.19 Contents of application--general information.

[Top of File]

(a) Each application must provide the information specified in 10 CFR 50.33(a) through (e), (h), and (i). Alternatively, the application may incorporate by reference other documents that provide the information required by this section.

(b) Each application must include conforming changes to the standard indemnity agreement, 10 CFR 140.92, Appendix B, to account for the expiration term of the proposed renewed license.

§ 54.21 Contents of application--technical information.

[Top of File]

Each application must contain the following information:

(a) An integrated plant assessment (IPA). The IPA must--

(1) For those systems, structures, and components within the scope of this part, as delineated in § 54.4, identify and list those structures and components subject to an aging management review. Structures and components subject to an aging management review shall encompass those structures and components--

(i) That perform an intended function, as described in § 54.4, without moving parts or without a change in configuration or properties. These structures and components include, but are not limited to, the reactor vessel, the reactor coolant system pressure boundary, steam generators, the pressurizer, piping, pump casings, valve bodies, the core shroud, component supports, pressure retaining boundaries, heat exchangers, ventilation ducts, the containment, the containment liner, electrical and mechanical penetrations, equipment hatches, seismic Category I structures, electrical cables and connections, cable trays, and electrical cabinets, excluding, but not limited to, pumps (except casing), valves (except body), motors, diesel generators, air compressors, snubbers, the control rod drive, ventilation dampers, pressure transmitters, pressure indicators, water level indicators, switchgears, cooling fans, transistors, batteries, breakers, relays, switches, power inverters, circuit boards, battery chargers, and power supplies; and

(ii) That are not subject to replacement based on a qualified life or specified time period.

(2) Describe and justify the methods used in paragraph (a)(1) of this section.

(3) For each structure and component identified in paragraph (a)(1) of this section, demonstrate that the effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation.

(b) CLB changes during NRC review of the application. Each year following submittal of the license renewal application and at least 3 months before scheduled completion of the NRC review, an amendment to the renewal application must be submitted that identifies any change to the CLB of the facility that materially affects the contents of the license renewal application, including the FSAR supplement.

(c) An evaluation of time-limited aging analyses.

(1) A list of time-limited aging analyses, as defined in § 54.3, must be provided. The applicant shall demonstrate that--

(i) The analyses remain valid for the period of extended operation;

(ii) The analyses have been projected to the end of the period of extended operation; or

(iii) The effects of aging on the intended function(s) will be adequately managed for the period of extended operation.

(2) A list must be provided of plant-specific exemptions granted pursuant to 10 CFR 50.12 and in effect that are based on time-limited aging analyses as defined in § 54.3. The applicant shall provide an evaluation that justifies the continuation of these exemptions for the period of extended operation.

(d) An FSAR supplement. The FSAR supplement for the facility must contain a summary description of the programs and activities for managing the effects of aging and the evaluation of time-limited aging analyses for the period of extended operation determined by paragraphs (a) and (c) of this section, respectively.

§ 54.22 Contents of application--technical specifications.

[Top of File]

Each application must include any technical specification changes or additions necessary to manage the effects of aging during the period of extended operation as part of the renewal application. The justification for changes or additions to the technical specifications must be contained in the license renewal application.

§ 54.23 Contents of application--environmental information.

[Top of File]

Each application must include a supplement to the environmental report that complies with the requirements of Subpart A of 10 CFR Part 51.

§ 54.25 Report of the Advisory Committee on Reactor Safeguards.

[Top of File]

Each renewal application will be referred to the Advisory Committee on Reactor Safeguards for a review and report. Any report will be made part of the record of the application and made available to the public, except to the extent that security classification prevents disclosure.

§ 54.27 Hearings.

[Top of File]

A notice of an opportunity for a hearing will be published in the **Federal Register** in accordance with 10 CFR 2.105. In the absence of a request for a hearing filed within 30 days by a person whose interest may be affected, the
Commission may issue a renewed operating license or renewed combined license without a hearing upon 30-day

notice and publication in the **Federal Register** of its intent to do so.

[72 FR 49560, Aug. 28, 2007]

§ 54.29 Standards for issuance of a renewed license.

[Top of File]

A renewed license may be issued by the Commission up to the full term authorized by § 54.31 if the Commission finds that:

(a) Actions have been identified and have been or will be taken with respect to the matters identified in Paragraphs (a)(1) and (a)(2) of this section, such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the CLB, and that any changes made to the plant's CLB in order to comply with this paragraph are in accord with the Act and the Commission's regulations. These matters are:

(1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under § 54.21(a)(1); and

(2) time-limited aging analyses that have been identified to require review under § 54.21(c).

(b) Any applicable requirements of Subpart A of 10 CFR Part 51 have been satisfied.

(c) Any matters raised under § 2.335 have been addressed.

[69 FR 2279, Jan. 14, 2004]

§ 54.30 Matters not subject to a renewal review.

[Top of File]

(a) If the reviews required by § 54.21 (a) or (c) show that there is not reasonable assurance during the current license term that licensed activities will be conducted in accordance with the CLB, then the licensee shall take measures under its current license, as appropriate, to ensure that the intended function of those systems, structures or components will be maintained in accordance with the CLB throughout the term of its current license.

(b) The licensee's compliance with the obligation under Paragraph (a) of this section to take measures under its current license is not within the scope of the license renewal review.

§ 54.31 Issuance of a renewed license.

[Top of File]

(a) A renewed license will be of the class for which the operating license or combined license currently in effect was issued.

(b) A renewed license will be issued for a fixed period of time, which is the sum of the additional amount of time beyond the expiration of the operating license or combined license (not to exceed 20 years) that is requested in a renewal application plus the remaining number of years on the operating license or combined license currently in effect. The term of any renewed license may not exceed 40 years.

(c) A renewed license will become effective immediately upon its issuance, thereby superseding the operating license or combined license previously in effect. If a renewed license is subsequently set aside upon further administrative or judicial appeal, the operating license or combined license previously in effect will be reinstated unless its term has expired and the renewal application was not filed in a timely manner.

(d) A renewed license may be subsequently renewed in accordance with all applicable requirements.

[72 FR 49560, Aug. 28, 2007]

§ 54.33 Continuation of CLB and conditions of renewed license.

[Top of File]

(a) Whether stated therein or not, each renewed license will contain and otherwise be subject to the conditions set forth in 10 CFR 50.54.

(b) Each renewed license will be issued in such form and contain such conditions and limitations, including technical specifications, as the

Commission deems appropriate and necessary to help ensure that systems, structures, and components subject to review in accordance with § 54.21 will continue to perform their intended functions for the period of extended operation. In addition, the renewed license will be issued in such form and contain such conditions and limitations as the Commission deems appropriate and necessary to help ensure that systems, structures, and components associated with any time-limited aging analyses will continue to perform their intended functions for the period of extended operation.

(c) Each renewed license will include those conditions to protect the environment that were imposed pursuant to 10 CFR 50.36b and that are part of the CLB for the facility at the time of issuance of the renewed license. These conditions may be supplemented or amended as necessary to protect the environment during the term of the renewed license and will be derived from information contained in the supplement to the environmental report submitted pursuant to 10 CFR Part 51, as analyzed and evaluated in the NRC record of decision. The conditions will identify the obligations of the licensee in the environmental area, including, as appropriate, requirements for reporting and recordkeeping of environmental data and any conditions and monitoring requirements for the protection of the nonaquatic environment.

(d) The licensing basis for the renewed license includes the CLB, as defined in § 54.3(a); the inclusion in the licensing basis of matters such as licensee commitments does not change the legal status of those matters unless specifically so ordered pursuant to paragraphs (b) or (c) of this section.

§ 54.35 Requirements during term of renewed license.

[Top of File]

During the term of a renewed license, licensees shall be subject to and shall continue to comply with all Commission regulations contained in 10 CFR parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 52, 54, 55, 70, 72, 73, and 100, and the appendices to these parts that are applicable to holders of operating licenses or combined licenses, respectively.

[72 FR 49560, Aug. 28, 2007]

§ 54.37 Additional records and recordkeeping requirements.

[Top of File]

(a) The licensee shall retain in an auditable and retrievable form for the term of the renewed operating license or renewed combined license all information and documentation required by, or otherwise necessary to document compliance with, the provisions of this part.

(b) After the renewed license is issued, the FSAR update required by 10 CFR 50.71(e) must include any systems, structures, and components newly identified that would have been subject to an aging management review or evaluation of time-limited aging analyses in accordance with § 54.21. This FSAR update must describe how the effects of aging will be managed such that the intended function(s) in § 54.4(b) will be effectively maintained during the period of extended operation.

[72 FR 49560, Aug. 28, 2007]

§ 54.41 Violations.

[Top of File]

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of the following acts--

(1) The Atomic Energy Act of 1954, as amended.

(2) Title II of the Energy Reorganization Act of 1974, as amended or

(3) A regulation or order issued pursuant to those acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under Section 234 of the Atomic Energy Act--

(1) For violations of the following--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

§ 54.43 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violations of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in Part 54 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in Part 54 that are not issued under Sections 161b, 161i, or 161o for the purposes of Section 223 are as follows: §§ 54.1, 54.3, 54.4, 54.5, 54.7, 54.9, 54.11, 54.15, 54.17, 54.19, 54.21, 54.22, 54.23, 54.25, 54.27, 54.29, 54.31, 54.41, and 54.43.

PART 55--OPERATORS' LICENSES

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 55.1 Purpose.

The regulations in this part:

(a) Establish procedures and criteria for the issuance of licenses to operators and senior operators of utilization facilities licensed under the Atomic Energy Act of 1954, as amended, or Section 202 of the Energy Reorganization Act of 1974, as amended, and part 50, part 52, or part 54 of this chapter,

(b) Provide for the terms and conditions upon which the Commission will issue or modify these licenses, and

(c) Provide for the terms and conditions to maintain and renew these licenses.

[72 FR 49560, Aug. 28, 2007]

§ 55.2 Scope.

[Top of File]

The regulations in this part apply to --

(a) Any individual who manipulates the controls of any utilization facility licensed under parts 50, 52, or 54 of this chapter,

(b) Any individual designated by a facility licensee to be responsible for directing any licensed activity of a licensed operator.

(c) Any facility license.

[52 FR 9460, Mar. 25, 1987, as amended at 59 FR 5938, Feb. 9, 1994; 72 FR 49560, Aug. 28, 2007]

§ 55.3 License requirements.

[Top of File]

A person must be authorized by a license issued by the Commission to perform the function of an operator or a senior operator as defined in this part.

§ 55.4 Definitions.

[Top of File]

As used in this part:

Act means the Atomic Energy Act of 1954, including any amendments to the Act.

Actively performing the functions of an operator or senior operator means that an individual has a position on the shift crew that requires the individual to be licensed as defined in the facility's technical specifications, and that the individual carries out and is responsible for the duties covered by that position.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Controls when used with respect to a nuclear reactor means apparatus and mechanisms the manipulation of which directly affects the reactivity or power level of the reactor.

Facility means any utilization facility as defined in part 50 of this chapter. In cases for which a license is issued for operation of two or more facilities, facility means all facilities identified in the license.

Facility licensee means an applicant for or holder of a license for a facility.

Licensee means an individual licensed operator or senior operator.

Operator means any individual licensed under this part to manipulate a control of a facility.

Performance testing means testing conducted to verify a simulation facility's performance as compared to actual or predicted reference plant performance.

Physician means an individual licensed by a State or territory of the United States, the District of Columbia or the Commonwealth of Puerto Rico to dispense drugs in the practice of medicine.

Plant-referenced simulator means a simulator modeling the systems of the reference plant with which the operator interfaces in the control room, including operating consoles, and which permits use of the reference plant's procedures.

Reference plant means the specific nuclear power plant from which a simulation facility's control room configuration, system control arrangement, and design data are derived.

Senior operator means any individual licensed under this part to manipulate the controls of a facility and to direct the licensed activities of licensed operators.

Simulation facility means one or more of the following components, alone or in combination: used for either the partial conduct of operating tests for operators, senior operators, and license applicants, or to establish on-the-job training and experience prerequisites for operator license eligibility:

(1) A plant-referenced simulator;

(2) A Commission-approved simulator under § 55.46(b); or

(3) Another simulation device, including part-task and limited scope simulation devices, approved under § 55.46(b).

Systems approach to training means a training program that includes the following five elements:

(1) Systematic analysis of the jobs to be performed.

(2) Learning objectives derived from the analysis which describe desired performance after training.

(3) Training design and implementation based on the learning objectives.

(4) Evaluation of trainee mastery of the objectives during training.

(5) Evaluation and revision of the training based on the performance of trained personnel in the job setting.

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

[52 FR 9460, Mar. 25, 1987, as amended at 66 FR 52667, Oct. 17, 2001]

§ 55.5 Communications.

[Top of File]

(a) Except as provided under a regional licensing program identified in paragraph (b) of this section, an applicant or licensee or facility licensee shall submit any communication or report concerning the regulations in this part and shall submit any application filed under these regulations to the Commission as follows:

(1) By mail addressed to—Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; or

(2) By delivery in person to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland, or

(3) Where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov* or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(b)(1) Except for test and research reactor facilities, the Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, has delegated to the Regional Administrators of Regions I, II, III, and IV authority and responsibility under the regulations in this part for the issuance and renewal of licenses for operators and senior operators of nuclear power reactors licensed under 10 CFR part 50 or part 52 of this chapter and located in these regions.

(2) Any application for a license or license renewal filed under the regulations in this part involving a nuclear power reactor licensed under 10 CFR part 50 or part 52 of this chapter and any related inquiry, communication, information, or report must be submitted to the Regional Administrator by an appropriate method listed in paragraph (a) of this section. The Regional Administrator or the Administrator's designee will transmit to the Director, Office of New Reactors or Director, Office of Nuclear Reactor Regulation, as appropriate, any matter that is not within the scope of the Regional Administrator's delegated authority.

(i) If the nuclear power reactor is located in Region I, submissions must be made to the Regional Administrator of Region I. Submissions by mail or hand delivery must be addressed to the Administrator at U.S. Nuclear Regulatory Commission, 475 Allendale Road, King of Prussia, Pennsylvania 19406-1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter@nrc.gov*.

(ii) If the nuclear power reactor is located in Region II, submissions must be made to the Regional Administrator of Region II. Submissions by mail or hand delivery must be addressed to the Administrator at U.S. Nuclear Regulatory Commission, Sam Nunn Atlanta Federal Center, Suite 23T85, 61 Forsyth Street, SW, Atlanta, GA 30303-8931; where e-mail is appropriate it should be addressed to *RidsRgn2MailCenter@nrc.gov*.

(iii) If the nuclear power reactor is located in Region III, submissions must be made to the Regional Administrator of Region III. Submissions by mail or hand delivery must be addressed to the Administrator at U.S. Nuclear Regulatory Commission, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter@nrc.gov*.

(iv) If the nuclear power reactor is located in Region IV, submissions must be made to the Regional Administrator of Region IV. Submissions by mail or hand delivery must be addressed to the Administrator at U.S. Nuclear Regulatory Commission, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter@nrc.gov*.

(3)(i) Any application for a license or license renewal filed under the regulations in this part involving a test and research reactor facility licensed under 10 CFR part 50 and any related inquiry, communication, information, or report must be submitted to the Office of Nuclear Reactor Regulation, Division of Regulatory Improvement Programs at the NRC's headquarters, by an appropriate method listed in paragraph (a) of this section.

(ii) For all test and research reactor facilities located in the NRC's Regions, submissions must be made to the Office of Nuclear Reactor Regulation, Director of the Division of Regulatory Improvement Programs at the NRC's headquarters, by an appropriate method listed in paragraph (a) of this section.

[52 FR 9460, Mar. 25, 1987, as amended at 53 FR 6139, Mar. 1, 1988; 53 FR 43421, Oct. 27, 1988; 55 FR 41335, Oct. 11, 1990; 59 FR 17466, Apr. 13, 1994; 61 FR 9902, Mar. 12, 1996; 67 FR 77653, Dec. 19, 2002; 68 FR 58812, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 71 FR 15011, Mar. 27, 2006; 72 FR 33386, Jun. 18, 2007; 72 FR 49560, Aug. 28, 2007; 73 FR 5724, Jan. 31, 2008]

§ 55.6 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 55.7 Additional requirements.

[Top of File]

The Commission may, by rule, regulation, or order, impose upon any licensee such requirements, in addition to those established in the regulations in this part, as it deems appropriate or necessary to protect health and to minimize danger to life or property.

§ 55.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0018.

(b) The approved information collection requirements contained in this part appear in §§ 55.11, 55.25, 55.27, 55.31, 55.35, 55.40, 55.41, 55.43, 55.45, 55.47, 55.53, 55.57, and 55.59.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In §§ 55.23, 55.25, 55.27, 55.31, NRC Form 396 is approved under control number 3150-0024.

(2) In §§ 55.31, 55.35, 55.47, and 55.57, NRC Form 398 is approved under control number 3150-0090.

(3) in § 55.45, NRC Form 474 is approved under control number 3150-0138.

(4) In §§ 55.41, 55.43, 55.45, and 55.59, clearance is approved under control number 3150-0101.

[62 FR 52188, Oct. 6, 1997, as amended at 64 FR 19878, Apr. 23, 1999; 66 FR 52667, Oct. 17, 2001; 67 FR 67100, Nov. 4, 2002]

§ 55.9 Completeness and accuracy of information.

[Top of File]

Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

[52 FR 49372, Dec. 31, 1987]

Subpart B--Exemptions

[Top of File]

§ 55.11 Specific exemptions.

The Commission may, upon application by an interested person, or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property and are otherwise in the public interest.

§ 55.13 General exemptions.

[Top of File]

The regulations in this part do not require a license for an individual who --

(a) Under the direction and in the presence of a licensed operator or senior operator, manipulates the controls of --

(1) A research or training reactor as part of the individual's training as a student, or

(2) A facility as a part of the individual's training in a facility licensee's training program as approved by the Commission to qualify for an operator license under this part.

(b) Under the direction and in the presence of a licensed senior operator, manipulates the controls of a facility to load or unload the fuel into, out of, or within the reactor vessel.

Subpart C--Medical Requirements

[Top of File]

§ 55.21 Medical examination.

An applicant for a license shall have a medical examination by a physician. A licensee shall have a medical examination by a physician every two years. The physician shall determine that the applicant or licensee meets the requirements of § 55.33(a)(1).

§ 55.23 Certification.

[Top of File]

To certify the medical fitness of the applicant, an authorized representative of the facility licensee shall complete and sign NRC Form 396,

"Certification of Medical Examination by Facility Licensee," which can be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling (301) 415-5877, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(a) Form NRC-396 must certify that a physician has conducted the medical examination of the applicant as required in § 55.21.

(b) When the certification requests a conditional license based on medical evidence, the medical evidence must be submitted on NRC Form 396 to the Commission and the Commission then makes a determination in accordance with § 55.33.

[52 FR 9460, Mar. 25, 1987, as amended at 53 FR 43421, Oct. 27, 1988; 68 FR 58813, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005]

§ 55.25 Incapacitation because of disability or illness.

[Top of File]

If, during the term of the license, the licensee develops a permanent physical or mental condition that causes the licensee to fail to meet the requirements of § 55.21 of this part, the facility licensee shall notify the Commission, within 30 days of learning of the diagnosis, in accordance with § 50.74(c). For conditions for which a conditional license (as described in § 55.33(b) of this part) is requested, the facility licensee shall provide medical certification on Form NRC 396 to the Commission (as described in § 55.23 of this part).

[60 FR 13617, Mar. 14, 1995]

§ 55.27 Documentation.

[Top of File]

The facility licensee shall document and maintain the results of medical qualifications data, test results, and each operator's or senior operator's medical history for the current license period and provide the documentation to the Commission upon request. The facility licensee shall retain this documentation while an individual performs the functions of an operator or senior operator.

Subpart D--Applications

[Top of File]

§ 55.31 How to apply.

(a) The applicant shall:

(1) Complete NRC Form 398, "Personal Qualification Statement--Licensee," which can be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling (301) 415-5877, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page;

(2) File an original of NRC Form 398, together with the information required in paragraphs (a)(3), (4), (5) and (6) of this section, with the appropriate Regional Administrator;

(3) Submit a written request from an authorized representative of the facility licensee by which the applicant will be employed that the written examination and operating test be administered to the applicant;

(4) Provide evidence that the applicant has successfully completed the facility licensee's requirements to be licensed as an operator or senior operator and of the facility licensee's need for an operator or a senior operator to perform assigned duties. An authorized representative of the facility licensee shall certify this evidence on Form NRC-398. This certification must include details of the applicant's qualifications, and details on courses of instruction administered by the facility licensee, and describe the nature of the training received at the facility, and the startup and shutdown experience received. In lieu of these details, the Commission may accept certification that the applicant has successfully completed a Commission-approved training program that is based on a systems approach to training and that uses a simulation facility acceptable to the Commission under § 55.45(b) of this part;

(5) Provide evidence that the applicant, as a trainee, has successfully manipulated the controls of either the facility for which a license is sought or a plant-referenced simulator that meets the requirements of § 55.46(c). At a minimum, five significant control manipulations must be performed that affect reactivity or power level. Control manipulations performed on the plant-referenced simulator may be chosen from a representative sampling of the control manipulations and plant evolutions described in § 55.59(c)(3)(i)(A-F), (R), (T), (W), and (X) of this part, as applicable to the design of the plant for which the license application is submitted. For licensed operators applying for a senior operator license, certification that the operator has successfully operated the controls of the facility as a licensed operator shall be accepted; and

(6) Provide certification by the facility licensee of medical condition and general health on Form NRC - 396, to comply with §§ 55.21, 55.23 and 55.33(a)(1).

(b) The Commission may at any time after the application has been filed, and before the license has expired, require futher information

under oath or affirmation in order to enable it to determine whether to grant or deny the application or whether to revoke, modify, or suspend the license.

(c) An applicant whose application has been denied because of a medical condition or general health may submit a further medical report at any time as a supplement to the application.

(d) Each application and statement must contain complete and accurate disclosure as to all matters required to be disclosed. The applicant shall sign statements required by paragraphs (a)(1) and (2) of this section.

[52 FR 9460, Mar. 25, 1987, as amended at 53 FR 43421, Oct. 27, 1988; 66 FR 52667, Oct. 17, 2001; 68 FR 58813, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005]

§ 55.33 Disposition of an initial application.

[Top of File]

(a) Requirements for the approval of an initial application. The Commission will approve an initial application for a license pursuant to the regulations in this part, if it finds that --

(1) *Health*. The applicants medical condition and general health will not adversely affect the performance of assigned operator job duties or cause operational errors endangering public health and safety. The Commission will base its finding upon the certification by the facility licensee as detailed in § 55.23.

(2) Written examination and operating test. The applicant has passed the requisite written examination and operating test in accordance with §§ 55.41 and 55.45 or 55.43 and 55.45. These examinations and tests determine whether the applicant for an operator's license has learned to operate a facility competently and safely, and additionally, in the case of a senior operator, whether the applicant has learned to direct the licensed activities of licensed operators competently and safely.

(b) Conditional license. If an applicant's general medical condition does not meet the minimum standards under § 55.33(a)(1) of this part, the Commission may approve the application and include conditions in the license to accommodate the medical defect. The Commission will consider the recommendations and supporting evidence of the facility licensee and of the examining physician (provided on Form NRC-396) in arriving at its decision.

§ 55.35 Re-applications.

[Top of File]

(a) An applicant whose application for a license has been denied because of failure to pass the written examination or operating test, or both, may file a new application two months after the date of denial. The application must be submitted on Form NRC-398 and include a statement signed by an authorized representative of the facility licensee by whom the applicant will be employed that states in detail the extent of the applicant's additional training since the denial and certifies that the applicant is ready for re-examination. An applicant may file a third application six months after the date of denial of the second application, and may file further successive applications two years after the date of denial of each prior application. The applicant shall submit each successive application on Form NRC-398 and include a statement of additional training.

(b) An applicant who has passed either the written examination or operating test and failed the other may request in a new application on Form NRC-398 to be excused from re-examination on the portions of the examination or test which the applicant has passed. The Commission may in its discretion grant the request, if it determines that sufficient justification is presented.

Subpart E--Written Examinations and Operating Tests

[Top of File]

§ 55.40 Implementation.

(a) The Commission shall use the criteria in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors,"[1] in effect six months before the examination date to prepare the written examinations required by §§ 55.41 and 55.43 and the operating tests required by § 55.45. The Commission shall also use the criteria in NUREG-1021 to evaluate the written examinations and operating tests prepared by power reactor facility licensees pursuant to paragraph (b) of this section.

(b) Power reactor facility licensees may prepare, proctor, and grade the written examinations required by §§ 55.41 and 55.43 and may prepare the operating tests required by § 55.45, subject to the following conditions:

(1) Power reactor facility licensees shall prepare the required examinations and tests in accordance with the criteria in NUREG-1021 as described in paragraph (a) of this section;

(2) Pursuant to § 55.49, power reactor facility licensees shall establish, implement, and maintain procedures to control examination security and integrity;

(3) An authorized representative of the power reactor facility licensee shall approve the required examinations and tests before they are submitted to the Commission for review and approval; and

(4) Power reactor facility licensees must receive Commission approval of their proposed written examinations and operating tests.

(c) In lieu of paragraph (b) of this section and upon written request from a power reactor facility licensee pursuant to § 55.31(a)(3), the Commission shall, for that facility licensee, prepare, proctor, and grade, the written examinations required by §§ 55.41 and 55.43 and the operating tests required by § 55.45. In addition, the Commission may exercise its discretion and reject a power reactor facility licensee's determination to elect paragraph (b) of this section, in which case the Commission shall prepare, proctor, and grade the required written examinations and operating tests for that facility licensee.

(d) The Commission shall prepare, proctor, and grade the written examinations required by §§ 55.41 and 55.43 and the operating tests required by § 55.45 for non-power reactor facility licensees.

[64 FR 19878, Apr. 23, 1999 as amended at 69 FR 76600, December 22, 2004]

1. Copies of NUREGs may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 38082, Washington, DC 20402-9328. Copies are also available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. A copy is available for inspection and/or copying in the NRC Public Document Room, One White Flint North, 11555 Rockville Pike (0-1F23), Rockville, MD.

§ 55.41 Written examination: Operators.

[Top of File]

(a) *Content*. The written examination for an operator will contain a representative selection of questions on the knowledge, skills, and abilities needed to perform licensed operator duties. The knowledge, skills, and abilities will be identified, in part, from learning objectives derived from a systematic analysis of licensed operator duties performed by each facility licensee and contained in its training program and from information in the Final Safety Analysis Report, system description manuals and operating procedures, facility license and license amendments, Licensee Event Reports, and other materials requested from the facility licensee by the Commission.

(b) The written examination for an operator for a facility will include a representative sample from among the following 14 items, to the extent applicable to the facility.

(1) Fundamentals of reactor theory, including fission process, neutron multiplication, source effects, control rod effects, criticality indications, reactivity coefficients, and poison effects.

(2) General design features of the core, including core structure, fuel elements, control rods, core instrumentation, and coolant flow.

(3) Mechanical components and design features of the reactor primary system.

(4) Secondary coolant and auxiliary systems that affect the facility.

(5) Facility operating characteristics during steady state and transient conditions, including coolant chemistry, causes and effects of temperature, pressure and reactivity changes, effects of load changes, and operating limitations and reasons for these operating characteristics.

(6) Design, components, and functions of reactivity control mechanisms and instrumentation.

(7) Design, components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features.

(8) Components, capacity, and functions of emergency systems.

(9) Shielding, isolation, and containment design features, including access limitations.

(10) Administrative, normal, abnormal, and emergency operating procedures for the facility.

(11) Purpose and operation of radiation monitoring systems, including alarms and survey equipment.

(12) Radiological safety principles and procedures.

(13) Procedures and equipment available for handling and disposal of radioactive materials and effluents.

(14) Principles of heat transfer thermodynamics and fluid mechanics.

§ 55.43 Written examination: Senior operators.

[Top of File]

(a) *Content*. The written examination for a senior operator will contain a representative selection of questions on the knowledge, skills, and abilities needed to perform licensed senior operator duties. The knowledge, skills, and abilities will be identified, in part, from learning objectives derived from a systematic analysis of licensed senior operator duties performed by each facility licensee and contained in its training program and from information in the Final Safety Analysis Report, system description manuals and operating procedures, facility license and license amendments, Licensee Event Reports, and other materials requested from the facility licensee by the Commission.

(b) The written examination for a senior operator for a facility will include a representative sample from among the following seven items and the 14 items specified in § 55.41 of this part, to the extent applicable to the facility:

(1) Conditions and limitations in the facility license.

(2) Facility operating limitations in the technical specifications and their bases.

(3) Facility licensee procedures required to obtain authority for design and operating changes in the facility.

(4) Radiation hazards that may arise during normal and abnormal situations, including maintenance activities and various contamination conditions.

(5) Assessment of facility conditions and selection of appropriate procedures during normal, abnormal, and emergency situations.

(6) Procedures and limitations involved in initial core loading, alterations in core configuration, control rod programming, and determination of various internal and external effects on core reactivity.

(7) Fuel handling facilities and procedures.

§ 55.45 Operating tests.

[Top of File]

(a) *Content*. The operating tests administered to applicants for operator and senior operator licenses in accordance with paragraph (b)(1) of this section are generally similar in scope. The content will be identified, in part, from learning objectives derived from a systematic analysis of licensed operator or senior operator duties performed by each facility licensee and contained in its training program and from information in the Final Safety Analysis Report, system description manuals and operating procedures, facility license and license amendments, Licensee Event Reports, and other materials requested from the facility licensee by the Commission. The operating test, to the extent applicable, requires the applicant to demonstrate an understanding of and the ability to perform the actions necessary to accomplish a representative sample from among the following 13 items.

(1) Perform pre-startup procedures for the facility, including operating of those controls associated with plant equipment that could affect reactivity.

(2) Manipulate the console controls as required to operate the facility between shutdown and designated power levels.

(3) Identify annunciators and condition-indicating signals and perform appropriate remedial actions where appropriate.

(4) Identify the instrumentation systems and the significance of facility instrument readings.

(5) Observe and safely control the operating behavior characteristics of the facility.

(6) Perform control manipulations required to obtain desired operating results during normal, abnormal, and emergency situations.

(7) Safely operate the facility's heat removal systems, including primary coolant, emergency coolant, and decay heat removal systems, and identify the relations of the proper operation of these systems to the operation of the facility.

(8) Safely operate the facility's auxiliary and emergency systems, including operation of those controls associated with plant equipment that could affect reactivity or the release of radioactive materials to the environment.

(9) Demonstrate or describe the use and function of the facility's radiation monitoring systems, including fixed radiation monitors and alarms, portable survey instruments, and personnel monitoring equipment.

(10) Demonstrate knowledge of significant radiation hazards, including permissible levels in excess of those authorized, and ability to perform other procedures to reduce excessive levels of radiation and to guard against personnel exposure.

(11) Demonstrate knowledge of the emergency plan for the facility, including, as appropriate, the operator's or senior operator's

responsibility to decide whether the plan should be executed and the duties under the plan assigned.

(12) Demonstrate the knowledge and ability as appropriate to the assigned position to assume the responsibilities associated with the safe operation of the facility.

(13) Demonstrate the applicant's ability to function within the control room team as appropriate to the assigned position, in such a way that the facility licensee's procedures are adhered to and that the limitations in its license and amendments are not violated.

(b) *Implementation--Administration*. The operating test will be administered in a plant walkthrough and in either--

(1) A simulation facility that the Commission has approved for use after application has been made by the facility licensee under § 55.46(b);

(2) A plant-referenced simulator (§ 55.46(c)); or

(3) The plant, if approved for use in the administration of the operating test by the Commission under § 55.46(b).

[52 FR 9460, Mar. 25, 1987, as amended at 53 FR 43421, Oct. 27, 1988; 62 FR 59276, Nov. 3, 1997; 66 FR 52667, Oct. 17, 2001]

§ 55.46 Simulation facilities.

[Top of File]

(a) *General.* This section addresses the use of a simulation facility for the administration of the operating test and plant-referenced simulators to meet experience requirements for applicants for operator and senior operator licenses.

(b) *Commission-approved simulation facilities and Commission approval of use of the plant in the administration of the operating test.* (1) Facility licensees that propose to use a simulation facility, other than a plant-referenced simulator, or the plant in the administration of the operating test under §§ 55.45(b)(1) or 55.45(b)(3), shall request approval from the Commission. This request must include:

(i) A description of the components of the simulation facility intended to be used, or the way the plant would be used for each part of the operating test, unless previously approved; and

(ii) A description of the performance tests for the simulation facility as part of the request, and the results of these tests; and (iii) A description of the procedures for maintaining examination and test integrity consistent with the requirements of § 55.49.

(2) The Commission will approve a simulation facility or use of the plant for administration of operating tests if it finds that the simulation facility and its proposed use, or the proposed use of the plant, are suitable for the conduct of operating tests for the facility licensee's reference plant under § 55.45(a).

(c) *Plant-referenced simulators.* (1) A plant-referenced simulator used for the administration of the operating test or to meet experience requirements in § 55.31(a)(5) must demonstrate expected plant response to operator input and to normal, transient, and accident conditions to which the simulator has been designed to respond. The plant-referenced simulator must be designed and implemented so that it:

(i) Is sufficient in scope and fidelity to allow conduct of the evolutions listed in §§ 55.45(a)(1) through (13), and 55.59(c)(3)(i)(A) through (AA), as applicable to the design of the reference plant.

(ii) Allows for the completion of control manipulations for operator license applicants.

(2) Facility licensees that propose to use a plant-referenced simulator to meet the control manipulation requirements in § 55.31(a)(5) must ensure that:

(i) The plant-referenced simulator utilizes models relating to nuclear and thermal-hydraulic characteristics that replicate the most recent core load in the nuclear power reference plant for which a license is being sought; and

(ii) Simulator fidelity has been demonstrated so that significant control manipulations are completed without procedural exceptions, simulator performance exceptions, or deviation from the approved training scenario sequence.

(3) A simulation facility consisting solely of a plant-referenced simulator must meet the requirements of paragraph (c)(1) of this section and the criteria in paragraphs (d)(1) and (4) of this section for the Commission to accept the plant-referenced simulator for conducting operating tests as described in § 55.45(a) of this part, requalification training as described in § 55.59(c)(3) of this part, or for performing control manipulations that affect reactivity to establish eligibility for an operator's license as described in § 55.31(a)(5).

(d) *Continued assurance of simulator fidelity.* Facility licensees that maintain a simulation facility shall:

(1) Conduct performance testing throughout the life of the simulation facility in a manner sufficient to ensure that paragraphs (c)(2)(ii), as applicable, and (d)(3) of this section are met. The results of performance tests must be retained for four years after the completion of each performance test or until superseded by updated test results;

(2) Correct modeling and hardware discrepancies and discrepancies identified from scenario validation and from performance testing;

(3) Make results of any uncorrected performance test failures that may exist at the time of the operating test or requalification program inspection available for NRC review, prior to or concurrent with preparations for each operating test or requalification program inspection; and

(4) Maintain the provisions for license application, examination, and test integrity consistent with § 55.49.

[66 FR 52667, Oct. 17, 2001]

§ 55.47 Waiver of examination and test requirements.

[Top of File]

(a) On application, the Commission may waive any or all of the requirements for a written examination and operating test, if it finds that the applicant --

(1) Has had extensive actual operating experience at a comparable facility, as determined by the Commission, within two years before the date of application;

(2) Has discharged his or her responsibilities competently and safely and is capable of continuing to do so; and

(3) Has learned the operating procedures for and is qualified to operate competently and safely the facility designated in the application.

(b) The Commission may accept as proof of the applicant's past performance a certification of an authorized representative of the facility licensee or of a holder of an authorization by which the applicant was previously employed. The certification must contain a description of the applicant's operating experience, including an approximate number of hours the applicant operated the controls of the facility, the duties performed, and the extent of the applicant's responsibility.

(c) The Commission may accept as proof of the applicant's current qualifications a certification of an authorized representative of the facility licensee or of a holder of an authorization where the applicant's services will be utilized.

§ 55.49 Integrity of examinations and tests.

[Top of File]

Applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any application, test, or examination required by this part. The integrity of a test or examination is considered compromised if any activity, regardless of intent, affected, or, but for detection, would have affected the equitable and consistent administration of the test or examination. This includes activities related to the preparation and certification of license applications and all activities related to the preparation, administration, and grading of the tests and examinations required by this part.

Subpart F--Licenses

[Top of File]

§ 55.51 Issuance of licenses.

Operator and senior operator licenses. If the Commission determines that an applicant for an operator license or a senior operator license meets the requirements of the Act and its regulations, it will issue a license in the form and containing any conditions and limitations it considers appropriate and necessary.

§ 55.53 Conditions of licenses.

[Top of File]

Each license contains and is subject to the following conditions whether stated in the license or not:

(a) Neither the license nor any right under the license may be assigned or otherwise transferred.

(b) The license is limited to the facility for which it is issued.

(c) The license is limited to those controls of the facility specified in the license.

(d) The license is subject to, and the licensee shall observe, all applicable rules, regulations, and orders of the Commission.

(e) If a licensee has not been actively performing the functions of an operator or senior operator, the licensee may not resume activities authorized by a license issued under this part except as permitted by paragraph (f) of this section. To maintain active status, the licensee shall actively perform the functions of an operator or senior operator on a minimum of seven 8-hour or five 12-hour shifts per calendar quarter. For test and research reactors, the licensee shall actively perform the functions of an operator or senior operator for a minimum of four hours per calendar quarter.

(f) If paragraph (e) of this section is not met, before resumption of functions authorized by a license issued under this part, an authorized representative of the facility licensee shall certify the following:

(1) That the qualifications and status of the licensee are current and valid; and

(2) That the licensee has completed a minimum of 40 hours of shift functions under the direction of an operator or senior operator as appropriate and in the position to which the individual will be assigned. The 40 hours must have included a complete tour of the plant and all required shift turnover procedures. For senior operators limited to fuel handling under paragraph (c) of this section, one shift must have been completed. For test and research reactors, a minimum of six hours must have been completed.

(g) The licensee shall notify the Commission within 30 days about a conviction for a felony.

(h) The licensee shall complete a requalification program as described by § 55.59.

(i) The licensee shall have a biennial medical examination.

(j) The licensee shall not consume or ingest alcoholic beverages within the protected area of power reactors, or the controlled access area of non-power reactors. The licensee shall not use, possess, or sell any illegal drugs. The licensee shall not perform activities authorized by a license issued under this part while under the influence of alcohol or any prescription, over-the-counter, or illegal substance that could adversely affect his or her ability to safely and competently perform his or her licensed duties. For the purpose of this paragraph, with respect to alcoholic beverages and drugs, the term "under the influence" means the licensee exceeded, as evidenced by a confirmed positive test, the lower of the cutoff levels for drugs or alcohol contained in 10 CFR part 26, appendix A, of this chapter, or as established by the facility licensee. The term "under the influence" also means the licensee could be mentally or physically impaired as a result of substance use including prescription and over-the-counter drugs, as determined under the provisions, policies, and procedures established by the facility licensee for its fitness-for-duty program, in such a manner as to adversely affect his or her ability to safely and competently perform licensed duties.

(k) Each licensee at power reactors shall participate in the drug and alcohol testing programs established pursuant to 10 CFR part 26. Each licensee at non-power reactors shall participate in any drug and alcohol testing program that may be established for that non-power facility.

(l) The licensee shall comply with any other conditions that the Commission may impose to protect health or to minimize danger to life or property.

[52 FR 9460, Mar. 25, 1987, as amended at 56 FR 32070, July 15, 1991]

§ 55.55 Expiration.

[Top of File]

(a) Each operator license and senior operator license expires six years after the date of issuance, upon termination of employment with the facility licensee, or upon determination by the facility licensee that the licensed individual no longer needs to maintain a license.

(b) If a licensee files an application for renewal or an upgrade of an existing license on Form NRC-398 at least 30 days before the expiration of the existing license, it does not expire until disposition of the application for renewal or for an upgraded license has been finally determined by the Commission. Filing by mail or telegram will be deemed to be complete at the time the application is deposited in the mail or with a telegraph company.

§ 55.57 Renewal of licenses.

[Top of File]

(a) The applicant for renewal of a license shall --

(1) Complete and sign Form NRC-398 and include the number of the license for which renewal is sought.

(2) File an original of NRC Form 398 with the appropriate Regional Administrator specified in § 55.5(b).

(3) Provide written evidence of the applicant's experience under the existing license and the approximate number of hours that the licensee has operated the facility.

(4) Provide a statement by an authorized representative of the facility licensee that during the effective term of the current license the

applicant has satisfactorily completed the requalification program for the facility for which operator or senior operator license renewal is sought.

(5) Provide evidence that the applicant has discharged the license responsibilities competently and safely. The Commission may accept as evidence of the applicant's having met this requirement a certificate of an authorized representative of the facility licensee or holder of an authorization by which the licensee has been employed.

(6) Provide certification by the facility licensee of medical condition and general health on Form NRC-396, to comply with §§ 55.21, 55.23 and 55.27.

(b) The license will be renewed if the Commission finds that --

(1) The medical condition and the general health of the licensee continue to be such as not to cause operational errors that endanger public health and safety. The Commission will base this finding upon the certification by the facility licensee as described in § 55.23.

(2) The licensee --

(i) Is capable of continuing to competently and safely assume licensed duties;

(ii) Has successfully completed a requalification program that has been approved by the Commission as required by § 55.59; and

(iii) Has passed the requalification examinations and annual operating tests as required by § 55.59.

(3) There is a continued need for a licensee to operate or for a senior operator to direct operators at the facility designated in the application.

(4) The past performance of the licensee has been satisfactory to the Commission. In making its finding, the Commission will include in its evaluation information such as notices of violations or letters of reprimand in the licensee's docket.

[52 FR 9460, Mar. 25, 1987, as amended at 59 FR 5938, Feb. 9, 1994; 68 FR 58813, Oct. 10, 2003]

§ 55.59 Requalification.

[Top of File]

(a) *Requalification requirements*. Each licensee shall --

(1) Successfully complete a requalification program developed by the facility licensee that has been approved by the Commission. This program shall be conducted for a continuous period not to exceed 24 months in duration.

(2) Pass a comprehensive requalification written examination and an annual operating test.

(i) The written examination will sample the items specified in §§ 55.41 and 55.43 of this part, to the extent applicable to the facility, the licensee, and any limitation of the license under § 55.53(c) of this part.

(ii) The operating test will require the operator or senior operator to demonstrate an understanding of and the ability to perform the actions necessary to accomplish a comprehensive sample of items specified in § 55.45(a) (2) through (13) inclusive to the extent applicable to the facility.

(iii) In lieu of the Commission accepting a certification by the facility licensee that the licensee has passed written examinations and operating tests administered by the facility licensee within its Commission-approved program developed by using a systems approach to training under paragraph (c) of this section, the Commission may administer a comprehensive requalification written examination and an annual operating test.

(b) *Additional training*. If the requirements of paragraphs (a) (1) and (2) of this section are not met, the Commission may require the licensee to complete additional training and to submit evidence to the Commission of successful completion of this training before returning to licensed duties.

(c) *Requalification program requirements*. A facility licensee shall have a requalification program reviewed and approved by the Commission and shall, upon request consistent with the Commission's inspection program needs, submit to the Commission a copy of its comprehensive requalification written examinations or annual operating tests. The requalification program must meet the requirements of paragraphs (c) (1) through (7) of this section. In lieu of paragraphs (c) (2), (3), and (4) of this section, the Commission may approve a program developed by using a systems approach to training.

(1) *Schedule*. The requalification program must be conducted for a continuous period not to exceed two years, and upon conclusion must be promptly followed, pursuant to a continuous schedule, by successive requalification programs.

(2) *Lectures*. The requalification program must include preplanned lectures on a regular and continuing basis throughout the license period

in those areas where operator and senior operator written examinations and facility operating experience indicate that emphasis in scope and depth of coverage is needed in the following subjects:

(i) Theory and principles of operation.

(ii) General and specific plant operating characteristics.

(iii) Plant instrumentation and control systems.

(iv) Plant protection systems.

(v) Engineered safety systems.

(vi) Normal, abnormal, and emergency operating procedures.

(vii) Radiation control and safety.

(viii) Technical specifications.

(ix) Applicable portions of title 10, chapter I, Code of Federal Regulations.

(3) *On-the-job training*. The requalification program must include on-the-job training so that --

(i) Each licensed operator of a utilization facility manipulates the plant controls and each licensed senior operator either manipulates the controls or directs the activities of individuals during plant control manipulations during the term of the licensed operator's or senior operator's license. For reactor operators and senior operators, these manipulations must consist of the following control manipulations and plant evolutions if they are applicable to the plant design. Items described in paragraphs (c)(3)(i) (A) through (L) of this section must be performed annually; all other items must be performed on a two-year cycle. However, the requalification programs must contain a commitment that each individual shall perform or participate in a combination of reactivity control manipulations based on the availability of plant equipment and systems. Those control manipulations which are not performed at the plant may be performed on a simulator. The use of the Technical Specifications should be maximized during the simulator control manipulations. Senior operator licensees are credited with these activities if they direct control manipulations as they are performed.

(A) Plant or reactor startups to include a range that reactivity feedback from nuclear heat addition is noticeable and heatup rate is established.

(B) Plant shutdown.

(C) Manual control of steam generators or feedwater or both during startup and shutdown.

(D) Boration or dilution during power operation.

(E) Significant (¬10 percent) power changes in manual rod control or recirculation flow.

(F) Reactor power change of 10 percent or greater where load change is performed with load limit control or where flux, temperature, or speed control is on manual (for HTGR).

(G) Loss of coolant, including --

(1) Significant PWR steam generator leaks

(2) Inside and outside primary containment

(3) Large and small, including lead-rate determination

(4) Saturated reactor coolant response (PWR).

(H) Loss of instrument air (if simulated plant specific).

(I) Loss of electrical power (or degraded power sources).

(J) Loss of core coolant flow/natural circulation.

(K) Loss of feedwater (normal and emergency).

(L) Loss of service water, if required for safety.

(M) Loss of shutdown cooling.

(N) Loss of component cooling system or cooling to an individual component.

(O) Loss of normal feedwater or normal feedwater system failure.

(P) Loss of condenser vacuum.

(Q) Loss of protective system channel.

(R) Mispositioned control rod or rods (or rod drops).

(S) Inability to drive control rods.

(T) Conditions requiring use of emergency boration or standby liquid control system.

(U) Fuel cladding failure or high activity in reactor coolant or offgas.

(V) Turbine or generator trip.

(W) Malfunction of an automatic control system that affects reactivity.

(X) Malfunction of reactor coolant pressure/volume control system.

(Y) Reactor trip.

(Z) Main steam line break (inside or outside containment).

(AA) A nuclear instrumentation failure.

(ii) Each licensed operator and senior operator has demonstrated satisfactory understanding of the operation of the apparatus and mechanisms associated with the control manipulations in paragraph (c)(3)(i) of this section, and knows the operating procedures in each area for which the operator or senior operator is licensed.

(iii) Each licensed operator and senior operator is cognizant of facility design changes, procedure changes, and facility license changes.

(iv) Each licensed operator and senior operator reviews the contents of all abnormal and emergency procedures on a regularly scheduled basis.

(v) A simulator may be used in meeting the requirements of paragraphs (c) (3)(i) and (3)(ii) of this section, if it reproduces the general operating characteristics of the facility involved and the arrangement of the instrumentation and controls of the simulator is similar to that of the facility involved. If the simulator or simulation device is used to administer operating tests for a facility, as provided in § 55.45 (b) (1), the device approved to meet the requirements of § 55.45(b)(1) must be used for credit to be given for meeting the requirements of paragraphs (c)(3)(i) (G through AA) of this section.

(4) *Evaluation*. The requalification program must include --

(i) Comprehensive requalification written examinations and annual operating tests which determine areas in which retraining is needed to upgrade licensed operator and senior operator knowledge.

(ii) Written examinations which determine licensed operators' and senior operators' knowledge of subjects covered in the requalification program and provide a basis for evaluating their knowledge of abnormal and emergency procedures.

(iii) Systematic observation and evaluation of the performance and competency of licensed operators and senior operators by supervisors and/or training staff members, including evaluation of actions taken or to be taken during actual or simulated abnormal and emergency procedures.

(iv) Simulation of emergency or abnormal conditions that may be accomplished by using the control panel of the facility involved or by using a simulator. When the control panel of the facility is used for simulation, the actions taken or to be taken for the emergency or abnormal condition shall be discussed; actual manipulation of the plant controls is not required. If a simulator is used in meeting the requirements of paragraph (c)(4)(iii) of this section, it must accurately reproduce the operating characteristics of the facility involved and the arrangement of the instrumentation and controls of the simulator must closely parallel that of the facility involved. After the provisions of § 55.46 have been implemented at a facility, the Commission approved or plant-referenced simulator must be used to comply with this paragraph.

(v) Provisions for each licensed operator and senior operator to participate in an accelerated requalification program where performance evaluations conducted pursuant to paragraphs (c)(4) (i) through (iv) of this section clearly indicated the need.

(5) *Records*. The requalification program documentation must include the following:

(i) The facility licensee shall maintain records documenting the participation of each licensed operator and senior operator in the requalification program. The records must contain copies of written examinations administered, the answers given by the licensee, and the results of evaluations and documentation of operating tests and of any additional training administered in areas in which an operator or senior operator has exhibited deficiencies. The facility licensee shall retain these records until the operator's or senior operator's license is renewed.

(ii) Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period.

(iii) If there is a conflict between the Commission's regulations in this part, and any license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified for these records by the regulations in this part apply unless the Commission, pursuant to § 55.11, grants a specific exemption from this record retention requirement.

(6) *Alternative training programs*. The requirements of this section may be met by requalification programs conducted by persons other than the facility licensee if the requalification programs are similar to the program described in paragraphs (c) (1) through (5) of this section and the alternative program has been approved by the Commission.

(7) *Applicability to research and test reactor facilities*. To accommodate specialized modes of operation and differences in control, equipment, and operator skills and knowledge, the requalification program for each licensed operator and senior operator of a research reactor or test reactor facility must conform generally but need not be identical to the requalification program outlined in paragraphs (c) (1) through (6) of this section. Significant deviations from the requirements of paragraphs (c) (1) through (6) of this section will be permitted only if supported by written justification and approved by the Commission.

[52 FR 9460, Mar. 25, 1987, as amended at 59 FR 5938, Feb. 9, 1994; 66 FR 52668, Oct. 17, 2001]

Subpart G--Modification and Revocation of Licenses

[Top of File]

§ 55.61 Modification and revocation of licenses.

(a) The terms and conditions of all licenses are subject to amendment, revision, or modification by reason of rules, regulations, or orders issued in accordance with the Act or any amendments thereto.

(b) Any license may be revoked, suspended, or modified, in whole or in part:

(1) For any material false statement in the application or in any statement of fact required under section 182 of the Act,

(2) Because of conditions revealed by the application or statement of fact or any report, record, inspection or other means that would warrant the Commission to refuse to grant a license on an original application,

(3) For willful violation of, or failure to observe any of the terms and conditions of the Act, or the license, or of any rule, regulation, or order of the Commission, or

(4) For any conduct determined by the Commission to be a hazard to safe operation of the facility.

(5) For the sale, use or possession of illegal drugs, or refusal to participate in the facility drug and alcohol testing program, or a confirmed positive test for drugs, drug metabolites, or alcohol in violation of the conditions and cutoff levels established by § 55.53(j) or the consumption of alcoholic beverages within the protected area of power reactors or the controlled access area of non-power reactors, or a determination of unfitness for scheduled work as a result of the consumption of alcoholic beverages.

[52 FR 9460, Mar. 25, 1987, as amended at 56 FR 32070, July 15, 1991]

Subpart H--Enforcement

[Top of File]

§ 55.71 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of --

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of --

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55076, Nov. 24, 1992]

§ 55.73 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy of violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 55 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 55 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 55.1, 55.2, 55.4, 55.5, 55.6, 55.7, 55.8, 55.11. 55.13, 55.31, 55.33, 55.35, 55.41, 55.43, 55.47, 55.51, 55.55, 55.57, 55.61, 55.71, and 55.73.

[57 FR 55076, Nov. 24, 1992]

PART 60--DISPOSAL OF HIGH-LEVEL RADIOACTIVE WASTES IN GEOLOGIC REPOSITORIES

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 60.1 Purpose and scope.

This part prescribes rules governing the licensing (including issuance of a construction authorization) of the U.S. Department of Energy to receive and possess source, special nuclear, and byproduct material at a geologic repository operations area sited, constructed, or operated in accordance with the Nuclear Waste Policy Act of 1982, as amended. This part does not apply to any activity licensed under another part of this chapter. This part does not apply to the licensing of the U.S. Department of Energy to receive and possess source, special nuclear, and byproduct material at a geologic repository operations area sited, constructed, or operated at Yucca Mountain, Nevada, in accordance with the Nuclear Waste Policy Act of 1992, as amended, and the Energy Policy Act of 1992, subject to part 63 of this chapter. This part also gives notice to all persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 60.11.

[66 FR 55791, Nov. 2, 2001; 69 FR 2279, Jan. 14, 2004]

§ 60.2 Definitions.

[Top of File]

As used in this part:

Accessible environment means:

(1) The atmosphere;

(2) The land surface;

(3) Surface water;

(4) Oceans; and

(5) The portion of the lithosphere that is outside the postclosure controlled area.

Affected Indian Tribe means any Indian Tribe (1) within whose reservation boundaries a repository for high-level radioactive waste or spent fuel is proposed to be located; or (2) whose Federally defined possessory or usage rights to other lands outside of the reservation's boundaries arising out of Congressionally ratified treaties or other Federal law may be substantially and adversely affected by the locating of such a facility; *Provided*, That the Secretary of the Interior finds, upon the petition of the appropriate governmental officials of the Tribe, that such effects are both substantial and adverse to the Tribe.

Anticipated processes and events means those natural processes and events that are reasonably likely to occur during the period the intended performance objective must be achieved. To the extent reasonable in the light of the geologic record, it shall be assumed that those processes operating in the geologic setting during the Quaternary Period continue to operate but with the perturbations caused by the presence of emplaced radioactive waste superimposed thereon.

Barrier means any material or structure that prevents or substantially delays movement of water or radionuclides.

Candidate area means a geologic and hydrologic system within which a geologic repository may be located.

Commencement of construction means clearing of land, surface or subsurface excavation, or other substantial action that would adversely affect the environment of a site, but does not include changes desirable for the temporary use of the land for public recreational uses, site characterization activities, other preconstruction monitoring and investigation necessary to establish background information related to the suitability of a site or to the protection of environmental values, or procurement or manufacture of components of the geologic repository operations area.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Containment means the confinement of radioactive waste within a designated boundary.

Controlled area means a surface location, to be marked by suitable monuments, extending horizontally no more than 10 kilometers in any direction from the outer boundary of the underground facility, and the underlying subsurface, which area has been committed to use as a geologic repository and from which incompatible activities would be restricted following permanent closure.

Design bases means that information that identifies the specific functions to be performed by a structure, system, or component of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted "state-of-the-art" practices for achieving functional goals or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure, system, or component must meet its functional goals. The values for controlling parameters for external events include:

(1) Estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved; and

(2) Estimates of severe external man-induced events, to be used for deriving design bases, that will be based on analysis of human activity in the region, taking into account the site characteristics and the risks associated with the event.

Design basis events means:

(1)(i) Those natural and human-induced events that are reasonably likely to occur regularly, moderately frequently, or one or more times before permanent closure of the geologic repository operations area; and

(ii) Other natural and man-induced events that are considered unlikely, but sufficiently credible to warrant consideration, taking into account the potential for significant radiological impacts on public health and safety.

(2) The events described in paragraph (1)(i) of this definition are referred to as "Category 1" design basis events. The events described in paragraph (1)(ii) of this definition are referred to as "Category 2" design basis events.

Director means the Director of the Nuclear Regulatory Commission's Office of Nuclear Material Safety and Safeguards.

Disposal means the isolation of radioactive wastes from the accessible environment.

Disturbed zone means that portion of the postclosure controlled area, the physical or chemical properties of which have changed as a result of underground facility construction or as a result of heat generated by the emplaced radioactive wastes, such that the resultant change of properties may have a significant effect on the performance of the geologic repository.

DOE means the U.S. Department of Energy or its duly authorized representatives.

Engineered barrier system means the waste packages and the underground facility.

Geologic repository means a system which is intended to be used for, or may be used for, the disposal of radioactive wastes in excavated geologic media. A geologic repository includes: (1) The geologic repository operations area, and (2) the portion of the geologic setting that provides isolation of the radioactive waste.

Geologic repository operations area means a high-level radioactive waste facility that is part of a geologic repository, including both surface and subsurface areas, where waste handling activities are conducted.

Geologic setting means the geologic, hydrologic, and geochemical systems of the region in which a geologic repository operations area is or may be located.

Groundwater means all water which occurs below the land surface.

High-level radioactive waste or HLW means: (1) Irradiated reactor fuel, (2) liquid wastes resulting from the operation of the first cycle solvent extraction system, or equivalent, and the concentrated wastes from subsequent extraction cycles, or equivalent, in a facility for reprocessing irradiated reactor fuel, and (3) solids into which such liquid wastes have been converted.

HLW facility means a facility subject to the licensing and related regulatory authority of the Commission pursuant to Sections 202(3) and 202(4) of the Energy Reorganization Act of 1974 (88 Stat. 1244).[1]

Host rock means the geologic medium in which the waste is emplaced.

Important to safety, with reference to structures, systems, and components, means those engineered features of the repository whose function is:

(1) To provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the requirements of § 60.111(a) for Category 1 design basis events; or

(2) To prevent or mitigate Category 2 design basis events that could result in doses equal to or greater than the values specified in § 60.136 to any individual located on or beyond any point on the boundary of the preclosure controlled area.

Isolation means inhibiting the transport of radioactive material so that amounts and concentrations of this material entering the accessible environment will be kept within prescribed limits.

NRC Public Document Room means the facility at One White Flint North, 11555 Rockville Pike, Room 0-1F23, Rockville, Maryland, where certain public records of the NRC that were made available for public inspection in paper or microfiche prior to the implementation of the NRC Agency wide Documents Access and Management System, commonly referred to as ADAMS, will remain available for public inspection. It is also the place where computer terminals are available to access the Electronic Reading Room components of ADAMS on the NRC Website, *http://www.nrc.gov*, where copies can be made or ordered as set forth in § 9.35 of this chapter. The facility is staffed with reference librarians to assist the public in identifying and locating documents and in using the NRC Web site and ADAMS. The NRC Public Document Room is open from 7:30 am to 4:15 pm, Monday through Friday, except on Federal holidays, Reference service and access to documents may also be requested by telephone (1-800-397-4209) between 8:30 am and 4:15 pm, or by e-mail *PDR@nrc.gov*), fax (301-415-3548), or letter (NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Room 0-1F23, Rockville, Maryland 20852).

NRC Web site, *http://www.nrc.gov* is the Internet uniform resource locator name for the Internet address of the Web site where NRC will ordinarily make available its public records for inspection.

Permanent closure means final backfilling of the underground facility and the sealing of shafts and boreholes.

Performance confirmation means the program of tests, experiments, and analyses which is conducted to evaluate the accuracy and adequacy of the information used to determine with reasonable assurance that the performance objectives for the period after permanent closure will be met.

Postclosure controlled area means a surface location, to be marked by suitable monuments, extending horizontally no more than 10 kilometers in any direction from the outer boundary of the underground facility, and the underlying subsurface, which area has been committed to use as a geologic repository and from which incompatible activities would be restricted following permanent closure.

Preclosure controlled area means that surface area surrounding the geologic repository operations area for which the licensee exercises authority over its use, in accordance with the provisions of this part, until permanent closure has been completed.

Radioactive waste or *waste* means HLW and other radioactive materials other than HLW that are received for emplacement in a geologic repository.

Restricted area means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set aside as a restricted area.

Retrieval means the act of intentionally removing radioactive waste from the underground location at which the waste had been previously emplaced for disposal.

Saturated zone means that part of the earth's crust beneath the regional water table in which all voids, large and small, are ideally filled with water under pressure greater than atmospheric.

Site means the location of the preclosure controlled area, or of the postclosure controlled area, or both.

Site characterization means the program of exploration and research, both in the laboratory and in the field, undertaken to establish the geologic conditions and the ranges of those parameters of a particular site relevant to the procedures under this part. Site characterization includes borings, surface excavations, excavation of exploratory shafts, limited subsurface lateral excavations and borings, and in situ testing at depth needed to determine the suitability of the site for a geologic repository, but does not include preliminary borings and geophysical testing needed to decide whether site characterization should be undertaken.

Unanticipated processes and events means those processes and events affecting the geologic setting that are judged not to be reasonably likely to occur during the period the intended performance objective must be achieved, but which are nevertheless sufficiently credible to warrant consideration. Unanticipated processes and events may be either natural processes or events or processes and events initiated by human activities other than those activities licensed under this part. Processes and events initiated by human activities may only be found to be sufficiently credible to warrant consideration if it is assumed that: (1) The monuments provided for by this part are sufficiently permanent to serve their intended purpose; (2) the value to future generations of potential resources within the site can be assessed adequately under the applicable provisions of this part; (3) an understanding of the nature of radioactivity, and an appreciation of its hazards, have been retained in some functioning institutions; (4) institutions are able to assess risk and to take remedial action at a level of social organization and technological competence equivalent to, or superior to, that which was applied in initiating the processes or events concerned; and (5) relevant records are preserved, and remain accessible, for several hundred years after permanent closure.

Underground facility means the underground structure, including openings and backfill materials, but excluding shafts, boreholes, and their seals.

Unrestricted area means an area, access to which is neither limited nor controlled by the licensee.

Unsaturated zone means the zone between the land surface and the regional water table. Generally, fluid pressure in this zone is less than atmospheric pressure, and some of the voids may contain air or other gases at atmospheric pressure. Beneath flooded areas or in perched water bodies the fluid pressure locally may be greater than atmospheric.

Waste form means the radioactive waste materials and any encapsulating or stabilizing matrix.

Waste package means the waste form and any containers, shielding, packing and other absorbent materials immediately surrounding an individual waste container.

Water table means that surface in a groundwater body at which the water pressure is atmospheric.

[48 FR 28217, June 21, 1983, as amended at 50 FR 29647, July 22, 1985; 51 FR 27162, July 30, 1986; 53 FR 43421, Oct. 27, 1988; 61 FR 64267, Dec. 4, 1996; 64 FR 48953, Sept. 9, 1999; 69 FR 76601, Dec. 22, 2004]

1. These are DOE "facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from activities licensed under such Act [the Atomic Energy Act]" and "Retrievable Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive wastes generated by [DOE], which are not used for, or are part of, research and development activities."

§ 60.3 License required.

[Top of File]

(a) DOE shall not receive or possess source, special nuclear, or byproduct material at a geologic repository operations area except as authorized by a license issued by the Commission pursuant to this part.

(b) DOE shall not commence construction of a geologic repository operations area unless it has filed an application with the Commission and has obtained construction authorization as provided in this part. Failure to comply with this requirement shall be grounds for denial of a license.

§ 60.4 Communications and records.

[Top of File]

(a) Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent by mail addressed: ATTN: Document Control Desk: Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(b) Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[53 FR 19251, May 27, 1988, as amended at 53 FR 43421, Oct. 27, 1988; 68 FR 58813, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 60.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission, in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be considered binding upon the Commission.

§ 60.6 Exemptions.

[Top of File]

The Commission may, upon application by DOE, any interested person, or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law, will not endanger life or property or the common defense and security, and are otherwise in the public interest.

§ 60.7 License not required for certain preliminary activities.

[Top of File]

The requirement for a license set forth in § 60.3(a) of this part is not applicable to the extent that DOE receives and possesses source, special nuclear, and byproduct material at a geologic repository:

(a) For purposes of site characterization; or

(b) For use, during site characterization or construction, as components of radiographic, radiation monitoring, or similar equipment or instrumentation.

§ 60.8 Information collection requirements: Approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0127.

(b) The approved information collection requirements contained in this Part appear in §§ 60.47, 60.62, 60.63, 60.65.

(c) In § 60.47, Form N–71 and associated forms are approved under control number 3150–0056, and DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control number 0694–0135.

[61 FR 64268, Dec. 4, 1996, as amended at 62 FR 52188, Oct. 6, 1997; 73 FR 78605, Dec. 23, 2008]

§ 60.9 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in paragraph (a) introductory text of this section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) introductory text or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) introductory text.

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a), (e), or (f) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant may be grounds for--

(1) Denial, revocation, or suspension of the license.

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant.

(3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) Each licensee and each applicant for a license shall prominently post the revision of NRC Form 3, "Notice to Employees," referenced in 10 CFR 19.11(c). This form must be posted at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(2) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[58 FR 52411, Oct. 8, 1993, as amended at 60 FR 24552, May 9, 1995; 61 FR 6765, Feb. 22, 1996; 68 FR 58813, Oct. 10, 2003; 72 FR 63974, Nov. 14, 2007]

§ 60.10 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[52 FR 49372, Dec. 31, 1987]

§ 60.11 Deliberate misconduct.

[Top of File]

(a) Any licensee, applicant for a license, employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

[63 FR 1898, Jan. 13, 1998]

Subpart B--Licenses

[Top of File]

Preapplication Review

§ 60.15 Site characterization.

(a) Prior to submittal of an application for a license to be issued under this part DOE shall conduct a program of site characterization with respect to the site to be described in such application.

(b) Unless the Commission determines with respect to the site described in the application that it is not necessary, site characterization shall include a program of in situ exploration and testing at the depths that wastes would be emplaced.

(c) The program of site characterization shall be conducted in accordance with the following:

(1) Investigations to obtain the required information shall be conducted in such a manner as to limit adverse effects on the long-term performance of the geologic repository to the extent practical.

(2) The number of exploratory boreholes and shafts shall be limited to the extent practical consistent with obtaining the information needed for site characterization.

(3) To the extent practical, exploratory boreholes and shafts in the geologic repository operations area shall be located where shafts are planned for underground facility construction and operation or where large unexcavated pillars are planned.

(4) Subsurface exploratory drilling, excavation, and in situ testing before and during construction shall be planned and coordinated with geologic repository operations area design and construction.

[46 FR 13980, Feb. 25, 1981, as amended at 48 FR 28219, June 21, 1983. Redesignated and amended at 51 FR 27162, July 30, 1986; 54 FR 27871, July 3, 1989]

§ 60.16 Site characterization plan required.

[Top of File]

Before proceeding to sink shafts at any area which has been approved by the President for site characterization, DOE shall submit to the Director, for review and comment, a site characterization plan for such area. DOE shall defer the sinking of such shafts until such time as there has been an opportunity for Commission comments thereon to have been solicited and considered by DOE.

[51 FR 27162, July 30, 1986]

§ 60.17 Contents of site characterization plan.

[Top of File]

The site characterization plan shall contain--

(a) A general plan for site characterization activities to be conducted at the area to be characterized, which general plan shall include:

(1) A description of such area, including information on quality assurance programs that have been applied to the collection, recording, and retention of information used in preparing such description.

(2) A description of such site characterization activities, including the following--

(i) The extent of planned excavations;

(ii) Plans for any onsite testing with radioactive material, including radioactive tracers, or nonradioactive material;

(iii) Plans for any investigation activities that may affect the capability of such area to isolate high-level radioactive waste;

(iv) Plans to control any adverse impacts from such site characterization activities that are important to safety or that are important to waste isolation; and

(v) Plans to apply quality assurance to data collection, recording, and retention.

(3) Plans for the decontamination and decommissioning of such area, and for the mitigation of any significant adverse environmental impacts caused by site characterization activities, if such area is determined unsuitable for application for a construction authorization for a geologic repository operations area;

(4) Criteria, developed pursuant to section 112(a) of the Nuclear Waste Policy Act of 1982, to be used to determine the suitability of such area for the location of a geologic repository; and

(5) Any other information which the Commission, by rule or order, requires.

(b) A description of the possible waste form or waste package for the high-level radioactive waste to be emplaced in such geologic repository, a description (to the extent practicable) of the relationship between such waste form or waste package and the host rock at such area, and a description of the activities being conducted by DOE with respect to such possible waste form or waste package or their relationship; and

(c) A conceptual design for the geologic repository operations area that takes into account likely site-specific requirements.

[51 FR 27163, July 30, 1986]

§ 60.18 Review of site characterization activities.[2]

[Top of File]

(a) The Director shall cause to be published in the Federal Register a notice that a site characterization plan has been received from DOE and that a staff review of such plan has begun. The notice shall identify the area to be characterized and the NRC staff members to be consulted for further information.

(b) The Director shall make a copy of the site characterization plan available at the Public Document Room. The Director shall also transmit copies of the published notice of receipt to the Governor and legislature of the State in which the area to be characterized is located and to the governing body of any affected Indian Tribe. The Director shall provide an opportunity, with respect to any area to be characterized, for the State in which such area is located and for affected Indian Tribes to present their views on the site characterization plan and their suggestions with respect to comments thereon which may be made by NRC. In addition, the Director shall make NRC staff available to consult with States and affected Indian Tribes as provided in Subpart C of this part.

(c) The Director shall review the site characterization plan and prepare a site characterization analysis with respect to such plan. In the preparation of such site characterization analysis, the Director may invite and consider the views of interested persons on DOE's site characterization plan and may review and consider comments made in connection with public hearings held by DOE.

(d) The Director shall provide to DOE the site characterization analysis together with such additional comments as may be warranted. These comments shall include either a statement that the Director has no objection to the DOE's site characterization program, if such a statement is appropriate, or specific objections with respect to DOE's program for characterization of the area concerned. In addition, the Director may make specific recommendations pertinent to DOE's site characterization program.

(e) If DOE's planned site characterization activities include onsite testing with radioactive material, including radioactive tracers, the Director's comments shall include a determination regarding whether or not the Commission concurs that the proposed use of such radioactive material is necessary to provide data for the preparation of the environmental reports required by law and for an application to be submitted under § 60.22 of this part.

(f) The Director shall publish in the Federal Register a notice of availability of the site characterization analysis and a request for public comment within a reasonable period, as specified (not less than 90 days). The notice along with copies of the site characterization analysis shall be available at the *NRC Web site, http*://www.nrc.gov, and copies of any comments received will also be made available there.

(g) During the conduct of site characterization activities, DOE shall report not less than once every six months to the Commission on the nature and extent of such activities and the information that has been developed, and on the progress of waste form and waste package research and development. The semiannual reports shall include the results of site characterization studies, the identification of new issues, plans for additional studies to resolve new issues, elimination of planned studies no longer necessary, identification of decision points reached and modifications to schedules where appropriate. DOE shall also report its progress in developing the design of a geologic repository operations area appropriate for the area being characterized, noting when key design parameters or features which depend upon the results of site characterization will be established. Other topics related to site characterization shall also be covered if requested by the Director.

(h) During the conduct of site characterization activities, NRC staff shall be permitted to visit and inspect the locations at which such activities are carried out and to observe excavations, borings, and in situ tests as they are done.

(i) The Director may comment at any time in writing to DOE, expressing current views on any aspect of site characterization. In particular, such comments shall be made whenever the Director, upon review of comments invited on the site characterization analysis or upon review of DOE's semiannual reports, determines that there are substantial new grounds for making recommendations or stating objections to DOE's site characterization program. The Director shall invite public comment on any comments which the Director makes to DOE upon review of the DOE semiannual reports or on any other comments which the Director makes to DOE on site characterization.

(j) The Director shall transmit copies of the site characterization analysis and all comments to DOE made by the Director under this section to the Governor and legislature of the State in which the area to be characterized is located and to the governing body of any affected Indian Tribe. When transmitting the site characterization analysis under this paragraph, the Director shall invite the addressees to review and comment thereon.

(k) All correspondence between DOE and the NRC under this section, including the reports described in paragraph (g), shall be placed in the Public Document Room.

(l) The activities described in paragraphs (a) through (k) of this section constitute informal conference between a prospective applicant and the staff, as described in § 2.101(a)(1) of this chapter, and are not part of a proceeding under the Atomic Energy Act of 1954, as amended. Accordingly, neither the issuance of a site characterization analysis nor any other comments of the Director made under this section constitutes a commitment to issue any authorization or license or in any way affect the authority of the Commission, the Atomic Safety and Licensing Appeal Board, Atomic Safety and Licensing Boards, other presiding officers, or the Director, in any such proceeding.

[51 FR 27163, July 30, 1986, as amended at 64 FR 48954, Sept. 9, 1999]

2. In addition to the review of site characterization activities specified in this section, the Commission contemplates an ongoing review of other information on site investigation and site characterization, in order to allow early identification of potential licensing issues for timely resolution. This activity will include, for example, a review of the environmental assessments prepared by DOE at the time of site nomination, and review of issues related to long lead time exploratory shaft planning and procurement actions by DOE prior to issuance of site characterization plans.

License Applications

[Top of File]

§ 60.21 Content of application.

(a) An application shall consist of general information and a Safety Analysis Report. An environmental impact statement shall be prepared in accordance with the Nuclear Waste Policy Act of 1982, as amended, and shall accompany the application. Any Restricted Data or National Security Information shall be separated from unclassified information.

(b) The general information shall include:

(1) A general description of the proposed geologic repository identifying the location of the geologic repository operations area, the general character of the proposed activities, and the basis for the exercise of licensing authority by the Commission.

(2) Proposed schedules for construction, receipt of waste, and emplacement of wastes at the proposed geologic repository operations area.

(3) A detailed plan to provide physical protection of high-level radioactive waste in accordance with § 73.51 of this chapter. This plan must include the design for physical protection, the licensee's safeguards contingency plan, and security organization personnel training and qualification plan. The plan must list tests, inspections, audits, and other means to be used to demonstrate compliance with such requirements.

(4)A description of the program to meet the requirements of § 60.78.

(5) A description of site characterization work actually conducted by DOE at all sites considered in the application and, as appropriate, explanations of why such work differed from the description of the site characterization program described in the Site Characterization Report for each site.

(c) The Safety Analysis Report shall include:

(1) A description and assessment of the site at which the proposed geologic repository operations area is to be located with appropriate attention to those features of the site that might affect geologic repository operations area design and performance. The description of the site shall identify the location of the geologic repository operations area with respect to the boundary of the accessible environment.

(i) The description of the site shall also include the following information regarding subsurface conditions. This description shall, in all cases, include this information with respect to the postclosure controlled area. In addition, where subsurface conditions outside the postclosure controlled area may affect isolation within the postclosure controlled area, the description shall include information with respect to subsurface conditions outside the postclosure controlled area to the extent the information is relevant and material. The detailed information referred to in this paragraph shall include:

(A) The orientation, distribution, aperture in-filling and origin of fractures, discontinuities, and heterogeneities;

(B) The presence and characteristics of other potential pathways such as solution features, breccia pipes, or other potentially permeable features;

(C) The geomechanical properties and conditions, including pore pressure and ambient stress conditions;

(D) The hydrogeologic properties and conditions;

(E) The geochemical properties; and

(F) The anticipated response of the geomechanical, hydrogeologic, and geochemical systems to the maximum design thermal loading, given the pattern of fractures and other discontinuities and the heat transfer properties of the rock mass and groundwater.

(ii) The assessment shall contain:

(A) An analysis of the geology, geophysics, hydrogeology, geochemistry, climatology, and meteorology of the site,

(B) Analyses to determine the degree to which each of the favorable and potentially adverse conditions, if present, has been characterized, and the extent to which it contributes to or detracts from isolation. For the purpose of determining the presence of the potentially adverse conditions, investigations shall extend from the surface to a depth sufficient to determine critical pathways for radionuclide migration from the underground facility to the accessible environment. Potentially adverse conditions shall be investigated outside of the postclosure controlled area if they affect isolation within the postclosure controlled area.

(C) An evaluation of the performance of the proposed geologic repository for the period after permanent closure, assuming anticipated processes and events, giving the rates and quantities of releases of radionuclides to the accessible environment as a function of time; and a similar evaluation which assumes the occurrence of unanticipated processes and events.

(D) The effectiveness of engineered and natural barriers, including barriers that may not be themselves a part of the geologic repository operations area, against the release of radioactive material to the environment. The analysis shall also include a comparative evaluation of alternatives to the major design features that are important to waste isolation, with particular attention to the alternatives that would provide longer radionuclide containment and isolation.

(E) An analysis of the performance of the major design structures, systems, and components, both surface and subsurface, to identify those that are important to safety. For the purposes of this analysis, it shall be assumed that operations at the geologic repository operations area will be carried out at the maximum capacity and rate of receipt of radioactive waste stated in the application.

(F) An explanation of measures used to support the models used to perform the assessments required in paragraphs (A) through (D). Analyses and models that will be used to predict future conditions and changes in the geologic setting shall be supported by using an appropriate combination of such methods as field tests, in situ tests, laboratory tests which are representative of field conditions, monitoring data, and natural analog studies.

(2) A description and discussion of the design, both surface and subsurface, of the geologic repository operations area including: (i) the principal design criteria and their relationship to any general performance objectives promulgated by the Commission, (ii) the design bases and the relation of the design bases to the principal design criteria, (iii) information relative to materials of construction (including geologic media, general arrangement, and approximate dimensions), and (iv) codes and standards that DOE proposes to apply to the design and construction of the geologic repository operations area.

(3) A description and analysis of the design and performance requirements for structures, systems, and components of the geologic repository that are important to safety. The analysis must include a demonstration that--

(i) The requirements of § 60.111(a) will be met, assuming occurrence of Category 1 design basis events; and

(ii) The requirements of § 60.136 will be met, assuming occurrence of Category 2 design basis events.

(4) A description of the quality assurance program to be applied to the structures, systems, and components important to safety and to the engineered and natural barriers important to waste isolation.

(5) A description of the kind, amount, and specifications of the radioactive material proposed to be received and possessed at the geologic repository operations area.

(6) An identification and justification for the selection of those variables, conditions, or other items which are determined to be probable subjects of license specifications. Special attention shall be given to those items that may significantly influence the final design.

(7) A description of the program for control and monitoring of radioactive effluents and occupational radiation exposures to maintain such effluents and exposures in accordance with the requirements of part 20 of this chapter.

(8) A description of the controls that the applicant will apply to restrict access and to regulate land use at the site and adjacent areas, including a conceptual design of monuments which would be used to identify the postclosure controlled area after permanent closure.

(9) Plans for coping with radiological emergencies at any time prior to permanent closure and decontamination or dismantlement of surface facilities.

(10) A description of the program to be used to maintain the records described in §§ 60.71 and 60.72.

(11) A description of design considerations that are intended to facilitate permanent closure and decontamination or dismantlement of surface facilities.

(12) A description of plans for retrieval and alternate storage of the radioactive wastes should the geologic repository prove to be unsuitable for disposal of radioactive wastes.

(13) An identification and evaluation of the natural resources of the geologic setting, including estimates as to undiscovered deposits, the exploitation of which could affect the ability of the geologic repository to isolate radioactive wastes. Undiscovered deposits of resources characteristic of the area shall be estimated by reasonable inference based on geological and geophysical evidence. This evaluation of resources, including undiscoverd deposits, shall be conducted for the site and for areas of similar size that are representative of and are within the geologic setting. For natural resources with current markets the resources shall be assessed, with estimates provided of both gross and net value. The estimate of net value shall take into account current development, extraction and marketing costs. For natural resources without current markets, but which would be marketable given credible projected changes in economic or technological factors, the resources shall be described by physical factors such as tonnage or other amount, grade, and quality.

(14) An identification of those structures, systems, and components of the geologic repository, both surface and subsurface, which require research and development to confirm the adequacy of design. For structures, systems, and components important to safety and for the engineered and natural barriers important to waste isolation, DOE shall provide a detailed description of the programs designed to resolve safety questions, including a schedule indicating when these questions would be resolved.

(15) The following information concerning activities at the geologic repository operations area:

(i) The organizational structure of DOE as it pertains to construction and operation of the geologic repository operations area including a description of any delegations of authority and assignments of responsibilities, whether in the form of regulations, administrative directives, contract provisions, or otherwise.

(ii) Identification of key positions which are assigned responsibility for safety at and operation of the geologic repository operations area.

(iii) Personnel qualifications and training requirements.

(iv) Plans for startup activities and startup testing.

(v) Plans for conduct of normal activities, including maintenance, surveillance, and periodic testing of structures, systems, and components of the geologic repository operation area.

(vi) Plans for permanent closure and plans for the decontamination or dismantlement of surface facilities.

(vii) Plans for any uses of the geologic repository operations area for purposes other than disposal of radioactive wastes, with an analysis of the effects, if any, that such uses may have upon the operation of the structures, systems, and components important to safety and the engineered and natural barriers important to waste isolation.

(d) The applicant for a license to receive and possess source, special nuclear, and byproduct material at a geologic repository operations area sited, constructed, or operated in accordance with the Nuclear Waste Policy Act of 1982 shall protect Safeguards Information in accordance with the requirements in § 73.21 and the requirements in § 73.22 or § 73.23 of this chapter, as applicable, and shall protect classified information in accordance with the requirements of parts 25 and 95 of this chapter, as applicable.

[46 FR 13980, Feb. 25, 1981, as amended at 48 FR 28219, June 21, 1983; 54 FR 27871, July 3, 1989; 61 FR 64268, Dec. 4, 1996; 63 FR 26961, May 15, 1998; 73 FR 63571, Oct. 24, 2008]

§ 60.22 Filing and distribution of application.

[Top of File]

(a) An application for a construction authorization for a high-level radioactive waste repository at a geologic repository operations area, and an application for a license to receive and possess source, special nuclear, or byproduct material at a geologic repository operations area at a site which has been characterized, and any amendments thereto, and an accompanying environmental impact statement and any supplements, shall be signed by the Secretary of Energy or the Secretary's authorized representative and must be filed with the Director.

(b) DOE shall maintain the capability to generate additional copies for distribution in accordance with written instructions from the Director or the Director's designee.

(c) DOE shall, upon notification of the appointment of an Atomic Safety and Licensing Board, update the application, eliminating all superseded information, and supplement the environmental impact statement if necessary, and serve the updated application and environmental impact statement (as it may have been supplemented) as directed by the Board. At that time DOE shall also serve one such

copy of the application and environmental impact statement on the Atomic Safety and Licensing Appeal Panel. Any subsequent amendments to the application or supplements to the environmental impact statement shall be served in the same manner.

(d) At the time of filing of an application and any amendments thereto, one copy shall be made available in an appropriate location near the proposed geologic repository operations area (which shall be a public document room, if one has been established) for inspection by the public and updated as amendments to the application are made. The environmental impact statement and any supplements thereto shall be made available in the same manner. An updated copy of the application, and the environmental impact statement and supplements, shall be produced at any public hearing held by the Commission on the application, for use by any party to the proceeding.

(e) The DOE shall certify that the updated copies of the application, and the environmental impact statement as it may have been supplemented, as referred to in paragraphs (c) and (d) of this section, contain the current contents of such documents submitted in accordance with the requirements of this part.

[54 FR 27871, July 3, 1989; 68 FR 58814, Oct. 10, 2003; 69 FR 2279, Jan. 14, 2004]

§ 60.23 Elimination of repetition.

[Top of File]

In its application, environmental report, or Site Characterization Report, the DOE may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission: *Provided*, That such references are clear and specific and that copies of the information so incorporated are available in the public document room located near the site of the proposed geologic repository.

§ 60.24 Updating of application and environmental impact statement.

[Top of File]

(a) The application shall be as complete as possible in the light of information that is reasonably available at the time of docketing.

(b) The DOE shall update its application in a timely manner so as to permit the Commission to review, prior to issuance of a license:

(1) Additional geologic, geophysical, geochemical, hydrologic, meteorologic and other data obtained during construction.

(2) Conformance of construction of structures, systems, and components with the design.

(3) Results of research programs carried out to confirm the adequacy of designs.

(4) Other information bearing on the Commission's issuance of a license that was not available at the time a construction authorization was issued.

(c) The DOE shall supplement its environmental impact statement in a timely manner so as to take into account the environmental impacts of any substantial changes in its proposed actions or any significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts.

[46 FR 13980, Feb. 25, 1981, as amended at 54 FR 27872, July 3, 1989]

Construction Authorization

[Top of File]

§ 60.31 Construction authorization.

Upon review and consideration of an application and environmental impact statement submitted under this part, the Commission may authorize construction if it determines:

(a) *Safety.* That there is reasonable assurance that the types and amounts of radioactive materials described in the application can be received, possessed, and disposed of in a geologic repository operations area of the design proposed without unreasonable risk to the health and safety of the public. In arriving at this determination, the Commission shall consider whether:

(1) DOE has described the proposed geologic repository including but not limited to: (i) The geologic, geophysical, geochemical and hydrologic characteristics of the site; (ii) the kinds and quantities of radioactive waste to be received, possessed, stored, and disposed of in the geologic repository operations area; (iii) the principal architectural and engineering criteria for the design of the geologic repository operations area; (iv) construction procedures which may affect the capability of the geologic repository to serve its intended function; and (v) features or components incorporated in the design for the protection of the health and safety of the public.

(2) The site and design comply with the performance objectives and criteria contained in Subpart E of this part.

(3) The DOE's quality assurance program complies with the requirements of Subpart G of this part.

(4) The DOE's personnel training program complies with the criteria contained in Subpart H of this part.

(5) The DOE's emergency plan complies with the criteria contained in Subpart I of this part.

(6) The DOE's proposed operating procedures to protect health and to minimize danger to life or property are adequate.

(b) *Common defense and security.* That there is reasonable assurance that the activities proposed in the application will not be inimical to the common defense and security.

(c) *Environmental.* That, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, the action called for is issuance of the construction authorization, with any appropriate conditions to protect environmental values.

[46 FR 13980, Feb. 25, 1981, as amended at 48 FR 28220, June 21, 1983; 54 FR 27872, July 3, 1989; 63 FR 26961, May 15, 1998]

§ 60.32 Conditions of construction authorization.

[Top of File]

(a) A construction authorization shall include such conditions as the Commission finds to be necessary to protect the health and safety of the public, the common defense and security, or environmental values.

(b) The Commission will incorporate in the construction authorization provisions requiring DOE to furnish periodic or special reports regarding: (1) Progress of construction, (2) any data about the site obtained during construction which are not within the predicted limits upon which the facility design was based, (3) any deficiencies in design and construction which, if uncorrected, could adversely affect safety at any future time, and (4) results of research and development programs being conducted to resolve safety questions.

(c) The construction authorization will include restrictions on subsequent changes to the features of the geologic repository and the procedures authorized. The restrictions that may be imposed under this paragraph can include measures to prevent adverse effects on the geologic setting as well as measures related to the design and construction of the geologic repository operations area. These restrictions will fall into three categories of descending importance to public health and safety as follows: (1) Those features and procedures which may not be changed without: (i) 60 days prior notice to the Commission (ii) 30 days notice of opportunity for a prior hearing, and (iii) prior Commission approval; (2) those features and procedures which may not be changed without (i) 60 days prior notice to the Commission, and (ii) prior Commission approval; and (3) those features and procedures which may not be changed without 60 days notice to the Commission. Features and procedures falling in paragraph (c)(3) of this section may not be changed without prior Commission approval if the Commission, after having received the required notice, so orders.

(d) A construction authorization shall be subject to the limitation that a license to receive and possess source, special nuclear, or byproduct material at the geologic repository operations area shall not be issued by the Commission until (1) the DOE has updated its application as specified in § 60.24, and (2) the Commission has made the findings stated in § 60.41.

[46 FR 13980, Feb. 25, 1981, as amended at 48 FR 28221, June 21, 1983]

§ 60.33 Amendment of construction authorization.

[Top of File]

(a) An application for amendment of a construction authorization shall be filed with the Commission fully describing any changes desired and following as far as applicable the format prescribed in § 60.21.

(b) In determining whether an amendment of a construction authorization will be approved, the Commission will be guided by the considerations which govern the issuance of the initial construction authorization, to the extent applicable.

License Issuance and Amendment

[Top of File]

§ 60.41 Standards for issuance of a license.

A license to receive and possess source, special nuclear, or byproduct material at a geologic repository operations area may be issued by the Commission upon finding that:

(a) Construction of the geologic repository operations area has been substantially completed in conformity with the application as amended, the provisions of the Atomic Energy Act, and the rules and regulations of the Commission. Construction may be deemed to be substantially

complete for the purposes of this paragraph if the construction of (1) surface and interconnecting structures, systems, and components, and (2) any underground storage space required for initial operation are substantially complete.

(b) The activities to be conducted at the geologic repository operations area will be in conformity with the application as amended, the provisions of the Atomic Energy Act and the Energy Reorganization Act, and the rules and regulations of the Commission.

(c) The issuance of the license will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public.

(d) All applicable requirements of part 51 have been satisfied.

[46 FR 13980, Feb. 25, 1981, as amended at 63 FR 26961, May 15, 1998]

§ 60.42 Conditions of license.

[Top of File]

(a) A license issued pursuant to this part shall include such conditions, including license specifications, as the Commission finds to be necessary to protect the health and safety of the public, the common defense and security, and environmental values.

(b) Whether stated therein or not, the following shall be deemed conditions in every license issued:

(1) The license shall be subject to revocation, suspension, modification, or amendment for cause as provided by the Atomic Energy Act and the Commission's regulations.

(2) The DOE shall at any time while the license is in effect, upon written request of the Commission, submit written statements to enable the Commission to determine whether or not the license should be modified, suspended or revoked.

(3) The license shall be subject to the provisions of the Atomic Energy Act now or hereafter in effect and to all rules, regulations, and orders of the Commission. The terms and conditions of the license shall be subject to amendment, revision, or modification, by reason of amendments to or by reason of rules, regulations, and orders issued in accordance with the terms of the Atomic Energy Act.

(c) Each license shall be deemed to contain the provisions set forth in Section 183 b-d, inclusive, of the Atomic Energy Act, whether or not these provisions are expressly set forth in the license.

(d) The licensee (Department of Energy) shall ensure that Safeguards Information is protected against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements in § 73.22 or § 73.23 of this chapter, as applicable. The licensee (Department of Energy) shall ensure that classified information is protected in accordance with the requirements of parts 25 and 95 of this chapter, as applicable.

[73 FR 63571, Oct. 24, 2008]

§ 60.43 License specification.

[Top of File]

(a) A license issued under this part shall include license conditions derived from the analyses and evaluations included in the application, including amendments made before a license is issued, together with such additional conditions as the Commission finds appropriate.

(b) License conditions shall include items in the following categories:

(1) Restrictions as to the physical and chemical form and radioisotopic content of radioactive waste.

(2) Restrictions as to size, shape, and materials and methods of construction of radioactive waste packaging.

(3) Restrictions as to the amount of waste permitted per unit volume of storage space considering the physical characteristics of both the waste and the host rock.

(4) Requirements relating to test, calibration, or inspection to assure that the foregoing restrictions are observed.

(5) Controls to be applied to restricted access and to avoid disturbance to the postclosure controlled area and to areas outside the controlled area where conditions may affect isolation within the controlled area.

(6) Administrative controls, which are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure that activities at the facility are conducted in a safe manner and in conformity with the other license specifications.

[46 FR 13980, Feb. 25, 1981, as amended at 48 FR 28221, June 21, 1983; 61 FR 64268, Dec. 4, 1996]

§ 60.44 Changes, tests, and experiments.

[Top of File]

(a)(1) Following authorization to receive and possess source, special nuclear, or byproduct material at a geologic repository operations area, the DOE may (i) make changes in the geologic repository operations area as described in the application, (ii) make changes in the procedures as described in the application, and (iii) conduct tests or experiments not described in the application, without prior Commission approval, provided the change, test, or experiment involves neither a change in the license conditions incorporated in the license nor an unreviewed safety question.

(2) A proposed change, test, or experiment shall be deemed to involve an unreviewed safety question if (i) the likelihood of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the application is increased, (ii) the possibility of an accident or malfunction of a different type than any previously evaluated in the application is created, or (iii) the margin of safety as defined in the basis for any license condition is reduced.

(b) The DOE shall maintain records of changes in the geologic repository operations area and of changes in procedures made pursuant to this section, to the extent that such changes constitute changes in the geologic repository operations area or procedures as described in the application. Records of tests and experiments carried out pursuant to paragraph (a) of this section shall also be maintained. These records shall include a written safety evaluation which provides the basis for the determination that the change, test, or experiment does not involve an unreviewed safety question. The DOE shall prepare annually, or at such shorter intervals as may be specified in the license, a report containing a brief description of such changes, tests, and experiments, including a summary of the safety evaluation of each. The DOE shall furnish the report to the appropriate NRC Regional Office shown in appendix D to part 20 of this chapter, by an appropriate method listed in § 60.4(a), with a copy to the Director of the NRC's Office of Nuclear Material Safety and Safeguards. Any report submitted pursuant to this paragraph shall be made a part of the public record of the licensing proceedings.

[46 FR 13980, Feb. 25, 1981, as amended at 52 FR 31612, Aug. 21, 1987; 68 FR 58814, Oct. 10, 2003]

§ 60.45 Amendment of license.

[Top of File]

(a) An application for amendment of a license may be filed with the Commission fully describing the changes desired and following as far as applicable the format prescribed for license applications.

(b) In determining whether an amendment of a license will be approved, the Commission will be guided by the considerations that govern the issuance of the initial license, to the extent applicable.

§ 60.46 Particular activities requiring license amendment.

[Top of File]

(a) Unless expressly authorized in the license, an amendment of the license shall be required with respect to any of the following activities:

(1) Any action which would make emplaced high-level radioactive waste irretrievable or which would substantially increase the difficulty of retrieving such emplaced waste.

(2) Dismantling of structures.

(3) Removal or reduction of controls applied to restrict access to or avoid disturbance of the controlled area and to areas outside the postclosure controlled area where conditions may affect isolation within the controlled area.

(4) Destruction or disposal of records required to be maintained under the provisions of this part.

(5) Any substantial change to the design or operating procedures from that specified in the license.

(6) Permanent closure.

(7) Any other activity involving an unreviewed safety question.

(b) An application for such an amendment shall be filed, and shall be reviewed, in accordance with the provisions of § 60.45.

[46 FR 13980, Feb. 25, 1981, as amended at 48 FR 28221, June 21, 1983; 61 FR 64268, Dec. 4, 1996]

US / IAEA Safeguards Agreement

§ 60.47 Facility information and verification.

[Top of File]

(a) In response to a written request by the Commission, each applicant for a construction authorization or license and each recipient of a construction authorization or a license shall submit facility information, as described in § 75.10 of this chapter, on Form N–71 and associated forms, and site information on DOC/NRC Form AP–A and associated forms;

(b) As required by the Additional Protocol, applicants and licensees specified in paragraph (a) of this section shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms;

(c) Shall permit verification thereof by the International Atomic Energy Agency (IAEA) and take other action as necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

[73 FR 78605, Dec. 23, 2008]

Permanent Closure

[Top of File]

§ 60.51 License amendment for permanent closure.

(a) DOE shall submit an application to amend the license prior to permanent closure. The submission shall consist of an update of the license application submitted under §§ 60.21 and 60.22, including:

(1) A description of the program for post-permanent closure monitoring of the geologic repository.

(2) A detailed description of the measures to be employed--such as land use controls, construction of monuments, and preservation of records--to regulate or prevent activities that could impair the long-term isolation of emplaced waste within the geologic repository and to assure that relevant information will be preserved for the use of future generations. As a minimum, such measures shall include:

(i) Identification of the postclosure controlled area and geologic repository operations area by monuments that have been designed, fabricated, and emplaced to be as permanent as is practicable; and

(ii) Placement of records in the archives and land record systems of local State, and Federal government agencies, and archives elsewhere in the world, that would be likely to be consulted by potential human intruders--such records to identify the location of the geologic repository operations area, including the underground facility, boreholes and shafts, and the boundaries of the postclosure controlled area, and the nature and hazard of the waste.

(3) Geologic, geophysical, geochemical, hydrologic, and other site data that are obtained during the operational period pertinent to the long-term isolation of emplaced radioactive wastes.

(4) The results of tests, experiments, and any other analyses relating to backfill of excavated areas, shaft sealing, waste interaction with the host rock, and any other tests, experiments, or analyses pertinent to the long-term isolation of emplaced wastes within the geologic repository.

(5) Any substantial revision of plans for permanent closure.

(6) Other information bearing upon permanent closure that was not available at the time a license was issued.

(b) If necessary, so as to take into account the environmental impact of any substantial changes in the permanent closure activities proposed to be carried out or any significant new information regarding the environmental impacts of such closure, DOE shall also supplement its environmental impact statement and submit such statement, as supplemented, with the application for license amendment.

[46 FR 13980, Feb. 25, 1981, as amended at 48 FR 28221, June 21, 1983; 54 FR 27872, July 3, 1989; 61 FR 64268, Dec. 4, 1996]

§ 60.52 Termination of license.

[Top of File]

(a) Following permanent closure and the decontamination or dismantlement of surface facilities, DOE may apply for an amendment to terminate the license.

(b) Such application shall be filed, and will be reviewed, in accordance with the provisions of § 60.45 and this section.

(c) A license shall be terminated only when the Commission finds with respect to the geologic repository:

(1) That the final disposition of radioactive wastes has been made in conformance with the DOE's plan, as amended and approved as part of the license.

(2) That the final state of the geologic repository operations area conforms to DOE's plans for permanent closure and DOE's plans for the decontamination or dismantlement of surface facilities, as amended and approved as part of the license.

(3) That the termination of the license is authorized by law, including sections 57, 62, and 81 of the Atomic Energy Act, as amended.

[46 FR 13980, Feb. 25, 1981, as amended at 48 FR 28222, June 21, 1983]

Subpart C--Participation by State Governments and Affected Indian Tribes

[Top of File]

Source: 51 FR 27164, July 30, 1986, unless otherwise noted.

§ 60.61 Provision of information.

(a) The Director shall provide to the Governor and legislature of any State in which a geologic repository operations area is or may be located, and to the governing body of any affected Indian Tribe, timely and complete information regarding determinations or plans made by the Commission with respect to the site characterization, siting, development, design, licensing, construction, operation, regulation, permanent closure, or decontamination and dismantlement of surface facilities, of such geologic repository operations area.

(b) For purposes of this section, a geologic repository operations area shall be considered to be one which "may be located" in a State if the location thereof in such State has been described in a site characterization plan submitted to the Commission under this part.

(c) Notwithstanding paragraph (a) of this section, the Director is not required to distribute any document to any entity if, with respect to such document, that entity or its counsel is included on a service list prepared pursuant to part 2 of this chapter.

(d) Copies of all communications by the Director under this section are available at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room, and copies are furnished to DOE.

[51 FR 27164, July 30, 1986, as amended at 64 FR 48954, Sept. 9, 1999]

§ 60.62 Site review.

[Top of File]

(a) Whenever an area has been approved by the President for site characterization, and upon request of a State or an affected Indian Tribe, the Director shall make NRC staff available to consult with representatives of such States and Tribes.

(b) Requests for consultation shall be made in writing to the Director.

(c) Consultation under this section may include:

(1) Keeping the parties informed of the Director's views on the progress of site characterization.

(2) Review of applicable NRC regulations, licensing procedures, schedules, and opportunities for State and Tribe participation in the Commission's regulatory activities.

(3) Cooperation in development of proposals for State and Tribe participation in license reviews.

§ 60.63 Participation in license reviews.

[Top of File]

(a) State, local governmental bodies, and affected, Federally-recognized Indian Tribes may participate in license reviews as provided in subpart J of part 2 of this chapter. A State in which a repository for high-level radioactive waste is proposed to be located and any affected, Federally-recognized Indian Tribe shall have an unquestionable legal right to participate as a party in such proceedings.

(b) In addition, whenever an area has been approved by the President for site characterization, a State or an affected Indian Tribe may submit to the Director a proposal to facilitate its participation in the review of a site characterization plan and/or license application. The proposal may be submitted at any time and must contain a description and schedule of how the State or affected Indian Tribe wishes to participate in the review, or what services or activities the State or affected Indian Tribe wishes NRC to carry out, and how the services or activities proposed to be carried out by NRC would contribute to such participation. The proposal may include educational or information services (seminars, public meetings) or other actions on the part of NRC, such as employment or exchange of State personnel under the

Intergovernmental Personnel Act.

(c) The Director shall arrange for a meeting between the representatives of the State or affected Indian Tribe and the NRC staff to discuss any proposal submitted under paragraph (b) of this section, with a view to identifying any modifications that may contribute to the effective participation by such State or Tribe.

(d) Subject to the availability of funds, the Director shall approve all or any part of a proposal, as it may be modified through the meeting described above, if it is determined that:

(1) The proposed activities are suitable in light of the type and magnitude of impacts which the State or affected Indian Tribe may bear;

(2) The proposed activities:

(i) Will enhance communications between NRC and the State or affected Indian Tribe;

(ii) Will make a productive and timely contribution to the review; and

(iii) Are authorized by law.

(e) The Director will advise the State or affected Indian Tribe whether its proposal has been accepted or denied, and if all or any part of proposal is denied, the Director shall state the reason for the denial.

(f) Proposals submitted under this section, and responses thereto, shall be made available at the *NRC Web site, http://www.nrc.gov*, and/or at the NRC Public Document Room.

[51 FR 27164, July 30, 1986, as amended at 64 FR 48954, Sept. 9, 1999; 69 FR 2279, Jan. 14, 2004]

§ 60.64 Notice to States.

[Top of File]

If the Governor and legislature of a State have jointly designated on their behalf a single person or entity to receive notice and information from the Commission under this part, the Commission will provide such notice and information to the jointly designated person or entity instead of the Governor and legislature separately.

§ 60.65 Representation.

[Top of File]

Any person who acts under this subpart as a representative for a State (or for the Governor or legislature thereof) or for an affected Indian Tribe shall include in the request or other submission, or at the request of the Commission, a statement of the basis of his or her authority to act in such representative capacity.

Subpart D--Records, Reports, Tests, and Inspections

[Top of File]

§ 60.71 Records and reports.

(a) DOE shall maintain such records and make such reports in connection with the licensed activity as may be required by the conditions of the license or by rules, regulations, and orders of the Commission as authorized by the Atomic Energy Act and the Energy Reorganization Act.

(b) Records of the receipt, handling, and disposition of radioactive waste at a geologic repository operations area shall contain sufficient information to provide a complete history of the movement of the waste from the shipper through all phases of storage and disposal. DOE shall retain these records in a manner that ensures their useability for future generations in accordance with § 60.51(a)(2).

[48 FR 28222, June 21, 1983, as amended at 53 FR 19251, May 27, 1988]

§ 60.72 Construction records.

[Top of File]

(a) DOE shall maintain records of construction of the geologic repository operations area in a manner that ensures their useability for future generations in accordance with § 60.51(a)(2).

(b) The records required under paragraph (a) shall include at least the following:

(1) Surveys of the underground facility excavations, shafts, and boreholes referenced to readily identifiable surface features or monuments;

(2) A description of the materials encountered;

(3) Geologic maps and geologic cross sections;

(4) Locations and amount of seepage;

(5) Details of equipment, methods, progress, and sequence of work;

(6) Construction problems;

(7) Anomalous conditions encountered;

(8) Instrument locations, readings, and analysis;

(9) Location and description of structural support systems;

(10) Location and description of dewatering systems; and

(11) Details, methods of emplacement, and location of seals used.

[48 FR 28222, June 21, 1983, as amended at 53 FR 19251, May 27, 1988]

§ 60.73 Reports of deficiencies.

[Top of File]

DOE shall promptly notify the Commission of each deficiency found in the characteristics of the site, and design and construction of the geologic repository operations area which, were it to remain uncorrected, could: (a) Be a substantial safety hazard, (b) represent a significant deviation from the design criteria and design bases stated in the application, or (c) represent a deviation from the conditions stated in the terms of a construction authorization or the license, including license specifications. The notification shall be in the form of a written report, copies of which shall be sent to the Director and to the appropriate Nuclear Regulatory Commission Regional Office listed in appendix D of part 20 of this chapter.

[48 FR 28222, June 21, 1983]

§ 60.74 Tests.

[Top of File]

(a) DOE shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part. These may include tests of:

(1) Radioactive waste,

(2) The geologic repository including its structures, systems, and components,

(3) Radiation detection and monitoring instruments, and

(4) Other equipment and devices used in connection with the receipt, handling, or storage of radioactive waste.

(b) The tests required under this section shall include a performance confirmation program carried out in accordance with subpart F of this part.

[48 FR 28222, June 21, 1983]

§ 60.75 Inspections.

[Top of File]

(a) DOE shall allow the Commission to inspect the premises of the geologic repository operations area and adjacent areas to which DOE has rights of access.

(b) DOE shall make available to the Commission for inspection, upon reasonable notice, records kept by DOE pertaining to activities under this part.

(c)(1) DOE shall upon requests by the Director, Office of Nuclear Material Safety and Safeguards, provide rent-free office space for the exclusive use of the Commission inspection personnel. Heat, air-conditioning, light, electrical outlets and janitorial services shall be furnished by DOE. The office shall be convenient to and have full access to the facility and shall provide the inspector both visual and acoustic privacy.

(2) The space provided shall be adequate to accommodate a full-time inspector, a part-time secretary and transient NRC personnel and will be generally commensurate with other office facilities at the geologic repository operations area. A space of 250 square feet either within the geologic repository operations area's office complex or in an office trailer or other onsite space at the geologic repository operations area is suggested as a guide. For locations at which activities are carried out under licenses issued under other parts of this chapter, additional space may be requested to accomodate additional full-time inspectors. The Office space that is provided shall be subject to the approval of the Director, Office of Nuclear Material Safety and Safeguards. All furniture, supplies and communication equipment will be furnished by the Commission.

(3) DOE shall afford any NRC resident inspector assigned to that location, or other NRC inspectors identified by the Regional Administrator as likely to inspect the facility, immediate unfettered access, equivalent to access provided regular employees, following proper identification and compliance with applicable access control measures for security, radiological protection and personal safety.

[48 FR 28222, June 21, 1983, as amended at 52 FR 31612, Aug. 21, 1987]

§ 60.78 Material control and accounting records and reports.

[Top of File]

DOE shall implement a program of material control and accounting (and accidental criticality reporting) that is the same as that specified in §§ 72.72, 72.74, 72.76, and 72.78 of this chapter.

[63 FR 26961, May 15, 1998]

Subpart E--Technical Criteria

[Top of File]

Source: 48 FR 28222, June 21, 1983, unless otherwise noted.

§ 60.101 Purpose and nature of findings.

(a)(1) Subpart B of this part prescribes the standards for issuance of a license to receive and possess source, special nuclear, or byproduct material at a geologic repository operations area. In particular, § 60.41(c) requires a finding that the issuance of a license will not constitute an unreasonable risk to the health and safety of the public. The purpose of this subpart is to set out performance objectives and site and design criteria which, if satisfied, will support such a finding of no unreasonable risk.

(2) While these performance objectives and criteria are generally stated in unqualified terms, it is not expected that complete assurance that they will be met can be presented. A reasonable assurance, on the basis of the record before the Commission, that the objectives and criteria will be met is the general standard that is required. For § 60.112, and other portions of this subpart that impose objectives and criteria for repository performance over long times into the future, there will inevitably be greater uncertainties. Proof of the future performance of engineered barrier systems and the geologic setting over time periods of many hundreds or many thousands of years is not to be had in the ordinary sense of the word. For such long-term objectives and criteria, what is required is reasonable assurance, making allowance for the time period, hazards, and uncertainties involved, that the outcome will be in conformance with those objectives and criteria. Demonstration of compliance with such objectives and criteria will involve the use of data from accelerated tests and predictive models that are supported by such measures as field and laboratory tests, monitoring data and natural analog studies.

(b) Subpart B of this part also lists findings that must be made in support of an authorization to construct a geologic repository operations area. In particular, § 60.31(a) requires a finding that there is reasonable assurance that the types and amounts of radioactive materials described in the application can be received, possessed, and disposed of in a geologic repository operations area of the design proposed without unreasonable risk to the health and safety of the public. As stated in that paragraph, in arriving at this determination, the Commission will consider whether the site and design comply with the criteria contained in this subpart. Once again, while the criteria may be written in unqualified terms, the demonstration of compliance may take uncertainties and gaps in knowledge into account, provided that the Commission can make the specified finding of reasonable assurance as specified in paragraph (a) of this section.

§ 60.102 Concepts.

[Top of File]

This section provides a functional overview of subpart E. In the event of any inconsistency with definitions found in § 60.2, those definitions shall prevail.

(a) The HLW facility. NRC exercises licensing and related regulatory authority over those facilities described in section 202 (3) and (4) of the Energy Reorganization Act of 1974. Any of these facilities is designated a HLW facility.

(b) The geologic repository operations area. (1) This part deals with the exercise of authority with respect to a particular class of HLW facility--namely a geologic repository operations area.

(2) A geologic repository operations area consists of those surface and subsurface areas that are part of a geologic repository where radioactive waste handling activities are conducted. The underground structure, including openings and backfill materials, but excluding shafts, boreholes, and their seals, is designated the underground facility.

(3) The exercise of Commission authority requires that the geologic repository operations area be used for storage (which includes disposal) of high-level radioactive wastes (HLW).

(4) HLW includes irradiated reactor fuel as well as reprocessing wastes. However, if DOE proposes to use the geologic repository operations area for storage of radioactive waste other than HLW, the storage of this radioactive waste is subject to the requirements of this part.

(c) Areas related to isolation. Although the activities subject to regulation under this part are those to be carried out at the geologic repository operations area, the licensing process also considers characteristics of adjacent areas that are defined in other ways. There is to be an area surrounding the underground facility referred to above, which is designated the postclosure controlled area, within which DOE is to exercise specified controls to prevent adverse human actions following permanent closure. The location of the controlled area is the site. The accessible environment is the atmosphere, land surface, surface water, oceans, and the portion of the lithosphere that is outside the controlled area. There is an area, designated the geologic setting, which includes the geologic, hydrologic, and geochemical systems of the region in which a geologic repository operations area is or may be located. The geologic repository operations area plus the portion of the geologic setting that provides isolation of the radioactive waste make up the geologic repository.

(d) Stages in the licensing process. There are several stages in the licensing process. The site characterization stage, though begun before submission of a license application, may result in consequences requiring evaluation in the license review. The construction stage would follow, after issuance of a construction authorization. A period of operations follows the issuance of a license by the Commission. The period of operations includes the time during which emplacement of wastes occurs; any subsequent period before permanent closure during which the emplaced wastes are retrievable; and permanent closure, which includes sealing of shafts. Permanent closure represents the end of active human intervention with respect to the engineered barrier system.

(e) Isolation of waste. (1) During the first several hundred years following permanent closure of a geologic repository, when radiation and thermal levels are high and the uncertainties in assessing repository performance are large, special emphasis is placed upon the ability to contain the wastes by waste packages within an engineered barrier system. This is known as the containment period. The engineered barrier system includes the waste packages and the underground facility. A waste package is composed of the waste form and any containers, shielding, packing, and absorbent materials immediately surrounding an individual waste container. The underground facility means the underground structure, including openings and backfill materials, but excluding, shafts, boreholes, and their seals.

(2) Following the containment period special emphasis is placed upon the ability to achieve isolation of the wastes by virtue of the characteristics of the geologic repository. The engineered barrier system works to control the release of radioactive material to the geologic setting and the geologic setting works to control the release of radioactive material to the accessible environment. Isolation means inhibiting the transport of radioactive material so that amounts and concentrations of the materials entering the accessible environment will be kept within prescribed limits.

[48 FR 28222, June 21, 1983, as amended at 61 FR 64268, Dec. 4, 1996]

Performance Objectives

[Top of File]

§ 60.111 Performance of the geologic repository operations area through permanent closure.

(a) *Protection against radiation exposures and releases of radioactive material*. The geologic repository operations area shall be designed so that until permanent closure has been completed, radiation exposures and radiation levels, and releases of radioactive to unrestricted areas, will be maintained within the limits specified in part 20 of this chapter and such generally applicable environmental standards for radioactivity as may have been established by the Environmental Protection Agency.

(b) *Retrievability of waste*. (1) The geologic repository operations area shall be designed to preserve the option of waste retrieval throughout the period during which wastes are being emplaced and, thereafter, until the completion of a performance confirmation program and Commission review of the information obtained from the such a program. To satisfy this objective, the geologic repository operations area shall be designed so that any or all of the emplaced waste could be retrieved on a reasonable schedule starting at any time up to 50 years after the waste emplacement operations are initiated, unless a different time period is approved or specified by the Commission. This different time period may be established on a case-by-case basis consistent with the emplacement schedule and the planned performance confirmation program.

(2) This requirement shall not preclude decisions by the Commission to allow backfilling part or all of, or permanent closure of, the geologic repository operations area prior to the end of the period of design for retrievability.

(3) For the purposes of this paragraph, a reasonable schedule is one that would permit retrieval in about the same time as that devoted to construction of the geologic repository operations area and the emplacement of wastes.

[48 FR 28222, June 21, 1983, as amended at 61 FR 64268, Dec. 4, 1996; 62 FR 59276, Nov. 3, 1997]

§ 60.112 Overall system performance objective for the geologic repository after permanent closure.

[Top of File]

The geologic setting shall be selected and the engineered barrier system and the shafts, boreholes and their seals shall be designed to assure that releases of radioactive materials to the accessible environment following permanent closure conform to such generally applicable environmental standards for radioactivity as may have been established by the Environmental Protection Agency with respect to both anticipated processes and events and unanticipated processes and events.

§ 60.113 Performance of particular barriers after permanent closure.

[Top of File]

(a) *General provisions*--(1) *Engineered barrier system*. (i) The engineered barrier system shall be designed so that assuming anticipated processes and events: (A) Containment of HLW will be substantially complete during the period when radiation and thermal conditions in the engineered barrier system are dominated by fission product decay; and (B) any release of radionuclides from the engineered barrier system shall be a gradual process which results in small fractional releases to the geologic setting over long times. For disposal in the saturated zone, both the partial and complete filling with groundwater of available void spaces in the underground facility shall be appropriately considered and analysed among the anticipated processes and events in designing the engineered barrier system.

(ii) In satisfying the preceding requirement, the engineered barrier system shall be designed, assuming anticipated processes and events, so that:

(A) Containment of HLW within the waste packages will be substantially complete for a period to be determined by the Commission taking into account the factors specified in § 60.113(b) provided, that such period shall be not less than 300 years nor more than 1,000 years after permanent closure of the geologic repository; and

(B) The release rate of any radionuclide from the engineered barrier system following the containment period shall not exceed one part in 100,000 per year of the inventory of that radionuclide calculated to be present at 1,000 years following permanent closure, or such other fraction of the inventory as may be approved or specified by the Commission; provided, that this requirement does not apply to any radionuclide which is released at a rate less than 0.1% of the calculated total release rate limit. The calculated total release rate limit shall be taken to be one part in 100,000 per year of the inventory of radioactive waste, originally emplaced in the underground facility, that remains after 1,000 years of radioactive decay.

(2) *Geologic setting*. The geologic repository shall be located so that pre-waste-emplacement groundwater travel time along the fastest path of likely radionuclide travel from the disturbed zone to the accessible environment shall be at least 1,000 years or such other travel time as may be approved or specified by the Commission.

(b) On a case-by-case basis, the Commission may approve or specify some other radionuclide release rate, designed containment period or pre-waste-emplacement groundwater travel time, provided that the overall system performance objective, as it relates to anticipated processes and events, is satisfied. Among the factors that the Commission may take into account are:

(1) Any generally applicable environmental standard for radioactivity established by the Environmental Protection Agency;

(2) The age and nature of the waste, and the design of the underground facility, particularly as these factors bear upon the time during which the thermal pulse is dominated by the decay heat from the fission products;

(3) The geochemical characteristics of the host rock, surrounding strata and groundwater; and

(4) Particular sources of uncertainty in predicting the performance of the geologic repository.

(c) Additional requirements may be found to be necessary to satisfy the overall system performance objective as it relates to unanticipated processes and events.

Land Ownership and Control

[Top of File]

§ 60.121 Requirements for ownership and control of interests in land.

(a) *Ownership of land*. (1) Both the geologic repository operations area and the postclosure controlled area shall be located in and on lands that are either acquired lands under the jurisdiction and control of DOE, or lands permanently withdrawn and reserved for its use.

(2) These lands shall be held free and clear of all encumbrances, if significant, such as: (i) Rights arising under the general mining laws; (ii) easements for right-of-way; and (iii) all other rights arising under lease, rights of entry, deed, patent, mortgage, appropriation, prescription, or otherwise.

(b) *Additional controls*. Appropriate controls shall be established outside of the postclosure controlled area. DOE shall exercise any jurisdiction and control over surface and subsurface estates necessary to prevent adverse human actions that could significantly reduce the geologic repository's ability to achieve isolation. The rights of DOE may take the form of appropriate possessory interests, servitudes, or withdrawals from location or patent under the general mining laws.

(c) *Water rights*. (1) DOE shall also have obtained such water rights as may be needed to accomplish the purpose of the geologic repository operations area.

(2) Water rights are included in the additional controls to be established under paragraph (b) of this section.

[48 FR 28222, June 21, 1983, as amended at 61 FR 64268, Dec. 4, 1996]

Siting Criteria

[Top of File]

§ 60.122 Siting criteria.

(a)(1) A geologic setting shall exhibit an appropriate combination of the conditions specified in paragraph (b) of this section so that, together with the engineered barriers system, the favorable conditions present are sufficient to provide reasonable assurance that the performance objectives relating to isolation of the waste will be met.

(2) If any of the potentially adverse conditions specified in paragraph (c) of this section is present, it may compromise the ability of the geologic repository to meet the performance objectives relating to isolation of the waste. In order to show that a potentially adverse condition does not so compromise the performance of the geologic repository the following must be demonstrated:

(i) The potentially adverse human activity or natural condition has been adequately investigated, including the extent to which the condition may be present and still be undetected taking into account the degree of resolution achieved by the investigations; and

(ii) The effect of the potentially adverse human activity or natural condition on the site has been adequately evaluated using analyses which are sensitive to the potentially adverse human activity or natural condition and assumptions which are not likely to underestimate its effect; and

(iii)(A) The potentially adverse human activity or natural condition is shown by analysis pursuant to paragraph (a)(2)(ii) of this section not to affect significantly the ability of the geologic repository to meet the performance objectives relating to isolation of the waste, or

(B) The effect of the potentially adverse human activity or natural condition is compensated by the presence of a combination of the favorable characteristics so that the performance objectives relating to isolation of the waste are met, or

(C) The potentially adverse human activity or natural condition can be remedied.

(b) *Favorable conditions*. (1) The nature and rates of tectonic, hydrogeologic, geochemical, and geomorphic processes (or any of such processes) operating within the geologic setting during the Quaternary Period, when projected, would not affect or would favorably affect the ability of the geologic repository to isolate the waste.

(2) For disposal in the saturated zone, hydrogeologic conditions that provide:

(i) A host rock with low horizontal and vertical permeability;

(ii) Downward or dominantly horizontal hydraulic gradient in the host rock and immediately surrounding hydrogeologic units; and

(iii) Low vertical permeability and low hydraulic gradient between the host rock and the surrounding hydrogeologic units.

(3) Geochemical conditions that:

(i) Promote precipitation or sorption of radionuclides;

(ii) Inhibit the formation of particulates, colloids, and inorganic and organic complexes that increase the mobility of radionuclides; or

(iii) Inhibit the transport of radionuclides by particulates, colloids, and complexes.

(4) Mineral assemblages that, when subjected to anticipated thermal loading, will remain unaltered or alter to mineral assemblages having equal or increased capacity to inhibit radionuclide migration.

(5) Conditions that permit the emplacement of waste at a minimum depth of 300 meters from the ground surface. (The ground surface shall be deemed to be the elevation of the lowest point on the surface above the disturbed zone.)

(6) A low population density within the geologic setting and a postclosure controlled area that is remote from population centers.

(7) Pre-waste-emplacement groundwater travel time along the fastest path of likely radionuclide travel from the disturbed zone to the accessible environment that substantially exceeds 1,000 years.

(8) For disposal in the unsaturated zone, hydrogeologic conditions that provide--

(i) Low moisture flux in the host rock and in the overlying and underlying hydrogeologic units;

(ii) A water table sufficiently below the underground facility such that fully saturated voids contiguous with the water table do not encounter the underground facility;

(iii) A laterally extensive low-permeability hydrogeologic unit above the host rock that would inhibit the downward movement of water or divert downward moving water to a location beyond the limits of the underground facility;

(iv) A host rock that provides for free drainage; or

(v) A climatic regime in which the average annual historic precipitation is a small percentage of the average annual potential evapotranspiration.

(c) *Potentially adverse conditions*. The following conditions are potentially adverse conditions if they are characteristic of the postclosure controlled area or may affect isolation within the controlled area.

(1) Potential for flooding of the underground facility, whether resulting from the occupancy and modification of floodplains or from the failure of existing or planned man-made surface water impoundments.

(2) Potential for foreseeable human activity to adversely affect the groundwater flow system, such as groundwater withdrawal, extensive irrigation, subsurface injection of fluids, underground pumped storage, military activity or construction of large scale surface water impoundments.

(3) Potential for natural phenomena such as landslides, subsidence, or volcanic activity of such a magnitude that large-scale surface water impoundments could be created that could change the regional groundwater flow system and thereby adversely affect the performance of the geologic repository.

(4) Structural deformation, such as uplift, subsidence, folding, or faulting that may adversely affect the regional groundwater flow system.

(5) Potential for changes in hydrologic conditions that would affect the migration of radionuclides to the accessible environment, such as changes in hydraulic gradient, average interstitial velocity, storage coefficient, hydraulic conductivity, natural recharge, potentiometric levels, and discharge points.

(6) Potential for changes in hydrologic conditions resulting from reasonably foreseeable climatic changes.

(7) Groundwater conditions in the host rock, including chemical composition, high ionic strength or ranges of Eh-pH, that could increase the solubility or chemical reactivity of the engineered barrier system.

(8) Geochemical processes that would reduce sorption of radionuclides, result in degradation of the rock strength, or adversely affect the performance of the engineered barrier system.

(9) Groundwater conditions in the host rock that are not reducing.

(10) Evidence of dissolutioning such as breccia pipes, dissolution cavities, or brine pockets.

(11) Structural deformation such as uplift, subsidence, folding, and faulting during the Quaternary Period.

(12) Earthquakes which have occurred historically that if they were to be repeated could affect the site significantly.

(13) Indications, based on correlations of earthquakes with tectonic processes and features, that either the frequency of occurrence or magnitude of earthquakes may increase.

(14) More frequent occurrence of earthquakes or earthquakes of higher magnitude than is typical of the area in which the geologic setting is located.

(15) Evidence of igneous activity since the start of the Quaternary Period.

(16) Evidence of extreme erosion during the Quaternary Period.

(17) The presence of naturally occurring materials, whether identified or undiscovered, within the site, in such form that:

(i) Economic extraction is currently feasible or potentially feasible during the foreseeable future; or

(ii) Such materials have greater gross value or net value than the average for other areas of similar size that are representative of and located within the geologic setting.

(18) Evidence of subsurface mining for resources within the site.

(19) Evidence of drilling for any purpose within the site.

(20) Rock or groundwater conditions that would require complex engineering measures in the design and construction of the underground facility or in the sealing of boreholes and shafts.

(21) Geomechanical properties that do not permit design of underground opening that will remain stable through permanent closure.

(22) Potential for the water table to rise sufficiently so as to cause saturation of an underground facility located in the unsaturated zone.

(23) Potential for existing or future perched water bodies that may saturate portions of the underground facility or provide a faster flow path from an underground facility located in the unsaturated zone to the accessible environment.

(24) Potential for the movement of radionuclides in a gaseous state through air-filled pore spaces of an unsaturated geologic medium to the accessible environment.

[48 FR 28222, June 21, 1983, as amended at 50 FR 29647, July 22, 1985; 61 FR 64269, Dec. 4, 1996]

Design Criteria for the Geological Repository Operations Area

[Top of File]

§ 60.130 General considerations.

(a) Pursuant to the provisions of § 60.21(c)(2)(i), an application for construction authorization for a high-level radioactive waste repository at a geologic repository operations area, and an application for a license to receive, possess, store, and dispose of high-level radioactive waste in the geologic repository operations area, must include the principal design criteria for a proposed facility. The principal design criteria establish the necessary design, fabrication, construction, testing, maintenance, and performance requirements for structures, systems, and components important to safety and/or important to waste isolation. Sections 60.131 through 60.134 specify minimum requirements for the principal design criteria for the geologic repository operations area.

(b) These design criteria are not intended to be exhaustive. However, omissions in §§ 60.131 through 60.134 do not relieve DOE from any obligation to provide such features in a specific facility needed to achieve the performance objectives.

[61 FR 64269, Dec. 4, 1996; 69 FR 2280, Jan. 14, 2004]

§ 60.131 General design criteria for the geologic repository operations area.

[Top of File]

(a) *Radiological protection*. The geologic repository operations area shall be designed to maintain radiation doses, levels, and concentrations of radioactive material in air in restricted areas within the limits specified in part 20 of this chapter. Design shall include:

(1) Means to limit concentrations of radioactive material in air;

(2) Means to limit the time required to perform work in the vicinity of radioactive materials, including, as appropriate, designing equipment for ease of repair and replacement and providing adequate space for ease of operation;

(3) Suitable shielding;

(4) Means to monitor and control the dispersal of radioactive contamination;

(5) Means to control access to high radiation areas or airborne radioactivity areas; and

(6) A radiation alarm system to warn of significant increases in radiation levels, concentrations of radioactive material in air, and of increased radioactivity released in effluents. The alarm system shall be designed with provisions for calibration and for testing its operability.

(b) *Protection against design basis events*. The structures, systems, and components important to safety shall be designed so that they will perform their necessary safety functions, assuming occurrence of design basis events.

(c) *Protection against dynamic effects of equipment failure and similar events*. The structures, systems, and components important to safety shall be designed to withstand dynamic effects such as missile impacts, that could result from equipment failure, and similar events and conditions that could lead to loss of their safety functions.

(d) *Protection against fires and explosions*. (1) The structures, systems, and components important to safety shall be designed to perform their safety functions during and after credible fires or explosions in the geologic repository operations area.

(2) To the extent practicable, the geologic repository operations area shall be designed to incorporate the use of noncombustible and heat resistant materials.

(3) The geologic repository operations area shall be designed to include explosion and fire detection alarm systems and appropriate suppression systems with sufficient capacity and capability to reduce the adverse effects of fires and explosions on structures, systems, and components important to safety.

(4) The geologic repository operations area shall be designed to include means to protect systems, structures, and components important to safety against the adverse effects of either the operation or failure of the fire suppression systems.

(e) *Emergency capabilit*y. (1) The structures, systems, and components important to safety shall be designed to maintain control of radioactive waste and radioactive effluents, and permit prompt termination of operations and evacuation of personnel during an emergency.

(2) The geologic repository operations area shall be designed to include onsite facilities and services that ensure a safe and timely response to emergency conditions and that facilitate the use of available offsite services (such as fire, police, medical, and ambulance service) that may aid in recovery from emergencies.

(f) *Utility services*. (1) Each utility service system that is important to safety shall be designed so that essential safety functions can be performed, assuming occurrence of the design basis events.

(2) The utility services important to safety shall include redundant systems to the extent necessary to maintain, with adequate capacity, the ability to perform their safety functions.

(3) Provisions shall be made so that, if there is a loss of the primary electric power source or circuit, reliable and timely emergency power can be provided to instruments, utility service systems, and operating systems, including alarm systems, important to safety.

(g) *Inspection, testing, and maintenance.* The structures, systems, and components important to safety shall be designed to permit periodic inspection, testing, and maintenance, as necessary, to ensure their continued functioning and readiness.

(h) *Criticality control*. All systems for processing, transporting, handling, storage, retrieval, emplacement, and isolation of radioactive waste shall be designed to ensure that nuclear criticality is not possible unless at least two unlikely, independent, and concurrent or sequential changes have occurred in the conditions essential to nuclear criticality safety. Each system must be designed for criticality safety assuming occurrence of design basis events. The calculated effective multiplication factor (keff) must be sufficiently below unity to show at least a 5 percent margin, after allowance for the bias in the method of calculation and the uncertainty in the experiments used to validate the method of calculation.

(i) *Instrumentation and control systems*. The design shall include provisions for instrumentation and control systems to monitor and control the behavior of systems important to safety, assuming occurrence of design basis events.

(j) *Compliance with mining regulations*. To the extent that DOE is not subject to the Federal Mine Safety and Health Act of 1977, as to the construction and operation of the geologic repository operations area, the design of the geologic repository operations area shall nevertheless include provisions for worker protection necessary to provide reasonable assurance that all structures, systems, and components important to safety can perform their intended functions. Any deviation from relevant design requirements in 30 CFR, chapter I, subchapters D, E, and N will give rise to a rebuttable presumption that this requirement has not been met.

(k) *Shaft conveyances used in radioactive waste handling*. (1) Hoists important to safety shall be designed to preclude cage free fall.

(2) Hoists important to safety shall be designed with a reliable cage location system.

(3) Loading and unloading systems for hoists important to safety shall be designed with a reliable system of interlocks that will fail safely upon malfunction.

(4) Hoists important to safety shall be designed to include two independent indicators to indicate when waste packages are in place and ready for transfer.

[48 FR 28222, June 21, 1983, as amended at 61 FR 64269, Dec. 4, 1996]

§ 60.132 Additional design criteria for surface facilities in the geologic repository operations area.

[Top of File]

(a) *Facilities for receipt and retrieval of waste*. Surface facilities in the geologic repository operations area shall be designed to allow safe handling and storage of wastes at the geologic repository operations area, whether these wastes are on the surface before emplacement or as a result of retrieval from the underground facility.

(b) *Surface facility ventilation*. Surface facility ventilation systems supporting waste transfer, inspection, decontamination, processing, or packaging shall be designed to provide protection against radiation exposures and offsite releases as provided in § 60.111(a).

(c) *Radiation control and monitoring*--(1) *Effluent control*. The surface facilities shall be designed to control the release of radioactive materials in effluents during Category 1 design basis events so as to meet the performance objectives of § 60.111(a).

(2) *Effluent monitoring*. The effluent monitoring systems shall be designed to measure the amount and concentration of radionuclides in any effluent with sufficient precision to determine whether releases conform to the design requirement for effluent control. The monitoring systems shall be designed to include alarms that can be periodically tested.

(d) *Waste treatment*. Radioactive waste treatment facilities shall be designed to process any radioactive wastes generated at the geologic repository operations area into a form suitable to permit safe disposal at the geologic repository operations area or to permit safe transportation and conversion to a form suitable for disposal at an alternative site in accordance with any regulations that are applicable.

(e) *Consideration of decommissioning*. The surface facility shall be designed to facilitate decontamination or dismantlement to the same extent as would be required, under other parts of this chapter, with respect to equivalent activities licensed thereunder.

[48 FR 28222, June 21, 1983, as amended at 61 FR 64270, Dec. 4, 1996]

§ 60.133 Additional design criteria for the underground facility.

[Top of File]

(a) General criteria for the underground facility. (1) The orientation, geometry, layout, and depth of the underground facility, and the design of any engineered barriers that are part of the underground facility shall contribute to the containment and isolation of radionuclides.

(2) The underground facility shall be designed so that the effects of credible disruptive events during the period of operations, such as flooding, fires and explosions, will not spread through the facility.

(b) Flexibility of design. The underground facility shall be designed with sufficient flexibility to allow adjustments where necessary to accommodate specific site conditions identified through in situ monitoring, testing, or excavation.

(c) Retrieval of waste. The underground facility shall be designed to permit retrieval of waste in accordance with the performance objectives of § 60.111.

(d) Control of water and gas. The design of the underground facility shall provide for control of water or gas intrusion.

(e) Underground openings. (1) Openings in the underground facility shall be designed so that operations can be carried out safely and the retrievability option maintained.

(2) Openings in the underground facility shall be designed to reduce the potential for deleterious rock movement or fracturing of overlying or surrounding rock.

(f) Rock excavation. The design of the underground facility shall incorporate excavation methods that will limit the potential for creating a preferential pathway for groundwater to contact the waste packages or radionuclide migration to the accessible environment.

(g) Underground facility ventilation. The ventilation system shall be designed to:

(1) Control the transport of radioactive particulates and gases within and releases from the underground facility in accordance with the performance objectives of § 60.111(a),

(2) Assure the ability to perform essential safety functions assuming occurrence of design basis events.

(3) Separate the ventilation of excavation and waste emplacement areas.

(h) Engineered barriers. Engineered barriers shall be designed to assist the geologic setting in meeting the performance objectives for the period following permanent closure.

(i) Thermal loads. The underground facility shall be designed so that the performance objectives will be met taking into account the predicted thermal and thermomechanical response of the host rock, and surrounding strata, groundwater system.

[48 FR 28222, June 21, 1983, as amended at 50 FR 29648, July 22, 1985; 61 FR 64270, Dec. 4, 1996]

§ 60.134 Design of seals for shafts and boreholes.

[Top of File]

(a) *General design criterion*. Seals for shafts and boreholes shall be designed so that following permanent closure they do not become pathways that compromise the geologic repository's ability to meet the performance objectives or the period following permanent closure.

(b) *Selection of materials and placement methods*. Materials and placement methods for seals shall be selected to reduce, to the extent practicable:

(1) The potential for creating a preferential pathway for groundwater to contact the waste packages or

(2) For radionuclide migration through existing pathways.

[48 FR 28222, June 21, 1983, as amended at 50 FR 29648, July 22, 1985]

Design Criteria for the Waste Package

[Top of File]

§ 60.135 Criteria for the waste package and its components.

(a) *High-level-waste package design in general*. (1) Packages for HLW shall be designed so that the in situ chemical, physical, and nuclear properties of the waste package and its interactions with the emplacement environment do not compromise the function of the waste packages or the performance of the underground facility or the geologic setting.

(2) The design shall include but not be limited to consideration of the following factors: solubility, oxidation/reduction reactions, corrosion, hydriding, gas generation, thermal effects, mechanical strength, mechanical stress, radiolysis, radiation damage, radionuclide retardation, leaching, fire and explosion hazards, thermal loads, and synergistic interactions.

(b) *Specific criteria for HLW package design*--(1) *Explosive, pyrophoric, and chemically reactive materials*. The waste package shall not contain explosive or pyrophoric materials or chemically reactive materials in an amount that could compromise the ability of the underground facility to contribute to waste isolation or the ability of the geologic repository to satisfy the performance objectives.

(2) *Free liquids*. The waste package shall not contain free liquids in an amount that could compromise the ability of the waste packages to achieve the performance objectives relating to containment of HLW (because of chemical interactions or formation of pressurized vapor) or result in spillage and spread of contamination in the event of waste package perforation during the period through permanent closure.

(3) *Handling*. Waste packages shall be designed to maintain waste containment during transportation, emplacement, and retrieval.

(4) *Unique identification*. A label or other means of identification shall be provided for each waste package. The identification shall not impair the integrity of the waste package and shall be applied in such a way that the information shall be legible at least to the end of the period of retrievability. Each waste package identification shall be consistent with the waste package's permanent written records.

(c) Waste form criteria for HLW. High-level radioactive waste that is emplaced in the underground facility shall be designed to meet the following criteria:

(1) *Solidification*. All such radioactive wastes shall be in solid form and placed in sealed containers.

(2) *Consolidation*. Particulate waste forms shall be consolidated (for example, by incorporation into an encapsulating matrix) to limit the availability and generation of particulates.

(3) *Combustibles*. All combustible radioactive wastes shall be reduced to a noncombustible form unless it can be demonstrated that a fire involving the waste packages containing combustibles will not compromise the integrity of other waste packages, adversely affect any structures, systems, or components important to safety, or compromise the ability of the underground facility to contribute to waste isolation.

(d) *Design criteria for other radioactive wastes*. Design criteria for waste types other than HLW will be addressed on an individual basis if and when they are proposed for disposal in a geologic repository.

Preclosure Controlled Area

[Top of File]

§ 60.136 Preclosure controlled area.

(a) A preclosure controlled area must be established for the geologic repository operations area.

(b) The geologic repository operations area shall be designed so that, for Category 2 design basis events, no individual located on or beyond any point on the boundary of the preclosure controlled area will receive the more limiting of a total effective dose equivalent of 0.05 Sv (5 rem), or the sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue (other than the lens of the eye) of 0.5 Sv (50 rem). The eye dose equivalent shall not exceed 0.15 Sv (15 rem), and the shallow dose equivalent to skin shall not exceed 0.5 Sv (50 rem). The minimum distance from the surface facilities in the geologic repository operations area to the boundary of the preclosure controlled area must be at least 100 meters.

(c) The preclosure controlled area may be traversed by a highway, railroad, or waterway, so long as appropriate and effective arrangements are made to control traffic and to protect public health and safety.

[61 FR 64270, Dec. 4, 1996]

Performance Confirmation Requirements

[Top of File]

§ 60.137 General requirements for performance confirmation.

The geologic repository operations area shall be designed so as to permit implementation of a performance confirmation program that meets the requirements of subpart F of this part.

Subpart F--Performance Confirmation Program

[Top of File]

Source: 48 FR 28228, June 21, 1983, unless otherwise noted.

§ 60.140 General requirements.

(a) The performance confirmation program shall provide data which indicates, where practicable, whether:

(1) Actual subsurface conditions encountered and changes in those conditions during construction and waste emplacement operations are within the limits assumed in the licensing review; and

(2) Natural and engineered systems and components required for repository operation, or which are designed or assumed to operate as barriers after permanent closure, are functioning as intended and anticipated.

(b) The program shall have been started during site characterization and it will continue until permanent closure.

(c) The program shall include in situ monitoring, laboratory and field testing, and in situ experiments, as may be appropriate to accomplish the objective as stated above.

(d) The program shall be implemented so that:

(1) It does not adversely affect the ability of the natural and engineered elements of the geologic repository to meet the performance objectives.

(2) It provides baseline information and analysis of that information on those parameters and natural processes pertaining to the geologic setting that may be changed by site characterization, construction, and operational activities.

(3) It monitors and analyzes changes from the baseline condition of parameters that could affect the performance of a geologic repository.

(4) It provides an established plan for feedback and analysis of data, and implementation of appropriate action.

§ 60.141 Confirmation of geotechnical and design parameters.

[Top of File]

(a) During repository construction and operation, a continuing program of surveillance, measurement, testing, and geologic mapping shall be conducted to ensure that geotechnical and design parameters are confirmed and to ensure that appropriate action is taken to inform the Commission of changes needed in design to accommodate actual field conditions encountered.

(b) Subsurface conditions shall be monitored and evaluated against design assumptions.

(c) As a minimum, measurements shall be made of rock deformations and displacement, changes in rock stress and strain, rate and location of water inflow into subsurface areas, changes in groundwater conditions, rock pore water pressures including those along fractures and joints, and the thermal and thermomechanical response of the rock mass as a result of development and operations of the geologic repository.

(d) These measurements and observations shall be compared with the original design bases and assumptions. If significant differences exist between the measurements and observations and the original design bases and assumptions, the need for modifications to the design or in construction methods shall be determined and these differences and the recommended changes reported to the Commission.

(e) In situ monitoring of the thermomechanical response of the underground facility shall be conducted until permanent closure to ensure that the performance of the natural and engineering features are within design limits.

§ 60.142 Design testing.

[Top of File]

(a) During the early or developmental stages of construction, a program for in situ testing of such features as borehole and shaft seals, backfill, and the thermal interaction effects of the waste packages, backfill, rock, and groundwater shall be conducted.

(b) The testing shall be initiated as early as is practicable.

(c) A backfill test section shall be constructed to test the effectiveness of backfill placement and compaction procedures against design requirements before permanent backfill placement is begun.

(d) Test sections shall be established to test the effectiveness of borehole and shaft seals before full-scale operation proceeds to seal boreholes and shafts.

§ 60.143 Monitoring and testing waste packages.

[Top of File]

(a) A program shall be established at the geologic repository operations area for monitoring the condition of the waste packages. Waste packages chosen for the program shall be representative of those to be emplaced in the underground facility.

(b) Consistent with safe operation at the geologic repository operations area, the environment of the waste packages selected for the waste package monitoring program shall be representative of the environment in which the wastes are to be emplaced.

(c) The waste package monitoring program shall include laboratory experiments which focus on the internal condition of the waste packages. To the extent practical, the environment experienced by the emplaced waste packages within the underground facility during the waste package monitoring program shall be duplicated in the laboratory experiments.

(d) The waste package monitoring program shall continue as long as practical up to the time of permanent closure.

Subpart G--Quality Assurance

[Top of File]

Source: 48 FR 28228, June 21, 1983, unless otherwise noted.

§ 60.150 Scope.

As used in this part, *quality assurance* comprises all those planned and systematic actions necessary to provide adequate confidence that the geologic repository and its subsystems or components will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to the physical characteristics of a material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

§ 60.151 Applicability.

[Top of File]

The quality assurance program applies to all systems, structures and components important to safety, to design and characterization of barriers important to waste isolation and to activities related thereto. These activities include: site characterization, facility and equipment construction, facility operation, performance confirmation, permanent closure, and decontamination and dismantling of surface facilities.

§ 60.152 Implementation.

[Top of File]

DOE shall implement a quality assurance program based on the criteria of appendix B of 10 CFR part 50 as applicable, and appropriately supplemented by additional criteria as required by § 60.151.

Subpart H--Training and Certification of Personnel

[Top of File]

Source: 48 FR 28229, June 21, 1983, unless otherwise noted.

§ 60.160 General requirements.

Operations of systems and components that have been identified as important to safety in the Safety Analysis Report and in the license shall be performed only by trained and certified personnel or by personnel under the direct visual supervision of an individual with training and certification in such operation. Supervisory personnel who direct operations that are important to safety must also be certified in such operations.

§ 60.161 Training and certification program.

[Top of File]

DOE shall establish a program for training, proficiency testing, certification and requalification of operating and supervisory personnel.

§ 60.162 Physical requirements.

[Top of File]

The physical condition and the general health of personnel certified for operations that are important to safety shall not be such as might cause operational errors that could endanger the public health and safety. Any condition which might cause impaired judgment or motor coordination must be considered in the selection of personnel for activities that are important to safety. These conditions need not categorically disqualify a person, so long as appropriate provisions are made to accommodate such conditions.

Subpart I--Emergency Planning Criteria [Reserved]

[Top of File]

Subpart J--Violations

§ 60.181 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55076, Nov. 24, 1992]

§ 60.183 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 60 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 60 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 60.1, 60.2, 60.3, 60.5, 60.6, 60.7, 60.8, 60.15, 60.16, 60.17, 60.18, 60.21, 60.22, 60.23, 60.24, 60.31, 60.32, 60.33, 60.41, 60.42, 60.43, 60.44, 60.45, 60.46, 60.51, 60.52, 60.61, 60.62, 60.63, 60.64, 60.65, 60.101, 60.102, 60.111, 60.112, 60.113, 60.121, 60.122, 60.130, 60.131, 60.132, 60.133, 60.134, 60.135, 60.137, 60.140, 60.141, 60.142, 60.143, 60.150, 60.151, 60.152, 60.162, 60.181, and 60.183.

[57 FR 55076, Nov. 24, 1992]

PART 61--LICENSING REQUIREMENTS FOR LAND DISPOSAL OF RADIOACTIVE WASTE

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 61.1 Purpose and scope.

(a) The regulations in this part establish, for land disposal of radioactive waste, the procedures, criteria, and terms and conditions upon which the Commission issues licenses for the disposal of radioactive wastes containing byproduct, source and special nuclear material received from other persons. Disposal of waste by an individual licensee is set forth in part 20 of this chapter. Applicability of the requirements in this part to Commission licenses for waste disposal facilities in effect on the effective date of this rule will be determined on a case-by-case basis and implemented through terms and conditions of the license or by orders issued by the Commission.

(b) Except as provided in part 150 of this chapter, which addresses assumption of certain regulatory authority by Agreement States, and § 61.6 "Exemptions," the regulations in this part apply to all persons in the United States. The regulations in this part do not apply to--

(1) Disposal of high-level waste as provided for in part 60 or 63 of this chapter;

(2) Disposal of uranium or thorium tailings or wastes (byproduct material as defined in § 40.4 (a-1) as provided for in part 40 of this chapter in quantities greater than 10,000 kilograms and containing more than 5 millicuries of radium-226; or

(3) Disposal of licensed material as provided for in part 20 of this chapter.

(c) This part also gives notice to all persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 61.9b.

[47 FR 57463, Dec. 27, 1982, as amended at 56 FR 40690, Aug. 15, 1991; 63 FR 1898, Jan. 13, 1998; 66 FR 55791, Nov. 2, 2001]

§ 61.2 Definitions.

[Top of File]

As used in this part:

Active maintenance means any significant remedial activity needed during the period of institutional control to maintain a reasonable assurance that the performance objectives in §§ 61.41 and 61.42 are met. Such active maintenance includes ongoing activities such as the pumping and treatment of water from a disposal unit or one-time measures such as replacement of a disposal unit cover. Active maintenance does not include custodial activities such as repair of fencing, repair or replacement of monitoring equipment, revegetation, minor additions to soil cover, minor repair of disposal unit covers, and general disposal site upkeep such as mowing grass.

Buffer zone is a portion of the disposal site that is controlled by the licensee and that lies under the disposal units and between the disposal units and the boundary of the site.

Chelating agent means amine polycarboxylic acids (e.g., EDTA, DTPA), hydroxy-carboxylic acids, and polycarboxylic acids (e.g., citric acid, carbolic acid, and glucinic acid).

Commencement of construction means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a land disposal facility. The term does not mean disposal site exploration, necessary roads for disposal site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the disposal site or the protection of environmental values.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Custodial Agency means an agency of the government designated to act on behalf of the government owner of the disposal site.

Director means the Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission.

Disposal means the isolation of radioactive wastes from the biosphere inhabited by man and containing his food chains by emplacement in a land disposal facility.

Disposal site means that portion of a land disposal facility which is used for disposal of waste. It consists of disposal units and a buffer zone.

Disposal unit means a discrete portion of the disposal site into which waste is placed for disposal. For near-surface disposal the unit is usually a trench.

Engineered barrier means a man-made structure or device that is intended to improve the land disposal facility's ability to meet the performance objectives in subpart C.

Explosive material means any chemical compound, mixture, or device, which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

Government agency means any executive department, commission, independent establishment, or corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States; or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the government.

Hazardous waste means those wastes designated as hazardous by Environmental Protection Agency regulations in 40 CFR part 261.

Hydrogeologic unit means any soil or rock unit or zone which by virtue of its porosity or permeability, or lack thereof, has a distinct influence on the storage or movement of groundwater.

Inadvertent intruder means a person who might occupy the disposal site after closure and engage in normal activities, such as agriculture, dwelling construction, or other pursuits in which the person might be unknowingly exposed to radiation from the waste.

Indian Tribe means an Indian tribe as defined in the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450).

Intruder barrier means a sufficient depth of cover over the waste that inhibits contact with waste and helps to ensure that radiation exposures to an inadvertent intruder will meet the performance objectives set forth in this part, or engineered structures that provide equivalent protection to the inadvertent intruder.

Land disposal facility means the land, building, and structures, and equipment which are intended to be used for the disposal of radioactive wastes. For purposes of this chapter, a "geologic repository" as defined in part 60 or 63 is not considered a land disposal facility.

License means a license issued under the regulations in part 61 of this chapter. Licensee means the holder of such a license.

Monitoring means observing and making measurements to provide data to evaluate the performance and characteristics of the disposal site.

Near-surface disposal facility means a land disposal facility in which radioactive waste is disposed of in or within the upper 30 meters of the earth's surface.

Person means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the Department of Energy (except that the Department of Energy is considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to law), any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

Pyrophoric liquid means any liquid that ignites spontaneously in dry or moist air at or below 130F (54.5C). A pyrophoric solid is any solid material, other than one classed as an explosive, which under normal conditions is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and when ignited burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

Site closure and stablization means those actions that are taken upon completion of operations that prepare the disposal site for custodial care and that assure that the disposal site will remain stable and will not need ongoing active maintenance.

State means any State, Territory, or possession of the United States, Puerto Rico, and the District of Columbia.

Stability means structural stabillity.

Surveillance means observation of the disposal site for purposes of visual detection of need for maintenance, custodial care, evidence of intrusion, and compliance with other license and regulatory requirements.

Tribal Governing Body means a Tribal organization as defined in the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450).

Waste means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level radioactive waste means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in paragraphs (2), (3), and (4) of the definition of *Byproduct material* set forth in § 20.1003 of this chapter.

[47 FR 57463, Dec. 27, 1982, as amended at 54 FR 22583, May 25, 1989; 58 FR 33891, June 22, 1993; 66 FR 55792, Nov. 2, 2001; 72 FR 55933 Oct. 1, 2007; 73 FR 5725, Jan. 31, 2008]

§ 61.3 License required.

[Top of File]

(a) No person may receive, possess, and dispose of radioactive waste containing source, special nuclear, or byproduct material at a land disposal facility unless authorized by a license issued by the Commission pursuant to this part, or unless exemption has been granted by the Commission under § 61.6 of this part.

(b) Each person shall file an application with the Commission and obtain a license as provided in this part before commencing construction of a land disposal facility. Failure to comply with this requirement may be grounds for denial of a license.

§ 61.4 Communications.

[Top of File]

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent by mail addressed: ATTN: Document Control Desk; Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's Offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/eie.html*, by calling (301) 415–6030, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[53 FR 4111, Feb. 12, 1988, as amended at 53 FR 43421, Oct. 27, 1988; 68 FR 58814, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 73 FR 5725, Jan. 31, 2008]

§ 61.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be considered binding upon the Commission.

§ 61.6 Exemptions.

[Top of File]

The Commission may, upon application by any interested person, or upon its own initiative, grant any exemption from the requirements of the regulations in this part as it determines is authorized by law, will not endanger life or property or the common defense and security, and is otherwise in the public interest.

§ 61.7 Concepts.

[Top of File]

(a) The disposal facility. (1) Part 61 is intended to apply to land disposal of radioactive waste and not to other methods such as sea or extraterrestrial disposal. Part 61 contains procedural requirements and performance objectives applicable to any method of land disposal. It contains specific technical requirements for near-surface disposal of radioactive waste, a subset of land disposal, which involves disposal in the uppermost portion of the earth, approximately 30 meters. Near-surface disposal includes disposal in engineered facilities which may be built totally or partially above-grade provided that such facilities have protective earthen covers. Near-surface disposal does not include disposal facilities which are partially or fully above-grade with no protective earthen cover, which are referred to as "above-ground disposal." Burial deeper than 30 meters may also be satisfactory. Technical requirements for alternative methods may be added in the future.

(2) Near-surface disposal of radioactive waste takes place at a near-surface disposal facility, which includes all of the land and buildings necessary to carry out the disposal. The disposal site is that portion of the facility which is used for disposal of waste and consists of disposal units and a buffer zone. A disposal unit is a discrete portion of the disposal site into which waste is placed for disposal. For near-surface disposal, the disposal unit is usually a trench. A buffer zone is a portion of the disposal site that is controlled by the licensee and that lies under the site and between the boundary of the disposal site and any disposal unit. It provides controlled space to establish monitoring locations which are intended to provide an early warning of radionuclide movement, and to take mitigative measures if needed. In choosing a disposal site, site characteristics should be considered in terms of the indefinite future and evaluated for at least a 500 - year

timeframe.

(b) Waste classification and near-surface disposal. (1) Disposal of radioactive waste in near-surface disposal facilities has the following safety objectives: protection of the general population from releases of radioactivity, protection of individuals from inadvertent intrusion, and protection of individuals during operations. A fourth objective is to ensure stability of the site after closure.

(2) A cornerstone of the system is stability--stability of the waste and the disposal site so that once emplaced and covered, the access of water to the waste can be minimized. Migration of radionuclides is thus minimized, long-term active maintenance can be avoided, and potential exposures to intruders reduced. While stability is a desirable characteristic for all waste much radioactive waste does not contain sufficient amounts of radionuclides to be of great concern from these standpoints; this waste, however, tends to be unstable, such as ordinary trash type wastes. If mixed with the higher activity waste, their deterioration could lead to failure of the system and permit water to penetrate the disposal unit and cause problems with the higher activity waste. Therefore, in order to avoid placing requirements for a stable waste form on relatively innocuous waste, these wastes have been classed as Class A waste. The Class A waste will be disposed of in separate disposal units at the disposal site. However, Class A waste that is stable may be mixed with other classes of waste. Those higher activity wastes that should be stable for proper disposal are classed as Class B and C waste. To the extent that it is practicable, Class B and C waste forms or containers should be designed to be stable, i.e., maintain gross physical properties and identity, over 300 years. For certain radionuclides prone to migration, a maximum disposal site inventory based on the characteristics of the disposal site may be established to limit potential exposure.

(3) It is possible but unlikely that persons might occupy the site in the future and engage in normal pursuits without knowing that they were receiving radiation exposure. These persons are referred to as inadvertent intruders. Protection of such intruders can involve two principal controls: institutional control over the site after operations by the site owner to ensure that no such occupation or improper use of the site occurs; or, designating which waste could present an unacceptable risk to an intruder, and disposing of this waste in a manner that provides some form of intruder barrier that is intended to prevent contact with the waste. This regulation incorporates both types of protective controls.

(4) Institutional control of access to the site is required for up to 100 years. This permits the disposal of Class A and Class B waste without special provisions for intrusion protection, since these classes of waste contain types and quantities of radioisotopes that will decay during the 100-year period and will present an acceptable hazard to an intruder. The government landowner administering the active institutional control program has flexibility in controlling site access which may include allowing productive uses of the land provided the integrity and long-term performance of the site are not affected.

(5) Waste that will not decay to levels which present an acceptable hazard to an intruder within 100 years is designated as Class C waste. This waste is disposed of at a greater depth than the other classes of waste so that subsequent surface activities by an intruder will not disturb the waste. Where site conditions prevent deeper disposal, intruder barriers such as concrete covers may be used. The effective life of these intruder barriers should be 500 years. A maximum concentration of radionuclides is specified for all wastes so that at the end of the 500 year period, remaining radioactivity will be at a level that does not pose an unacceptable hazard to an intruder or public health and safety. Waste with concentrations above these limits is generally unacceptable for near-surface disposal. There may be some instances where waste with concentrations greater than permitted for Class C would be acceptable for near-surface disposal with special processing or design. These will be evaluated on a case-by-case basis. Class C waste must also be stable.

(c) The licensing process. (1) During the preoperational phase, the potential applicant goes through a process of disposal site selection by selecting a region of interest, examining a number of possible disposal sites within the area of interest and narrowing the choice to the proposed site. Through a detailed investigation of the disposal site characteristics the potential applicant obtains data on which to base an analysis of the disposal site's suitability. Along with these data and analyses, the applicant submits other more general information to the Commission in the form of an application for a license for land disposal. The Commission's review of the application is in accordance with administrative procedures established by rule and may involve participation by affected State governments or Indian tribes. While the proposed disposal site must be owned by a State or the Federal government before the Commission will issue a license, it may be privately owned during the preoperational phase if suitable arrangements have been made with a State or the Federal government to take ownership in fee of the land before the license is issued.

(2) During the operational phase, the licensee carries out disposal activities in accordance with the requirements of this regulation and any conditions on the license. Periodically, the authority to conduct the above ground operations and dispose of waste will be subject to a license renewal, at which time the operating history will be reviewed and a decision made to permit or deny continued operation. When disposal operations are to cease, the licensee applies for an amendment to his license to permit site closure. After final review of the licensee's site closure and stabilization plan, the Commission may approve the final activities necessary to prepare the disposal site so that ongoing active maintenance of the site is not required during the period of institutional control.

(3) During the period when the final site closure and stabilization activities are being carried out, the licensee is in a disposal site closure phase. Following that, for a period of 5 years, the licensee must remain at the disposal site for a period of post-closure observation and maintenance to assure that the disposal site is stable and ready for institutional control. The Commission may approve shorter or require longer periods if conditions warrant. At the end of this period, the licensee applies for a license transfer to the disposal site owner.

(4) After a finding of satisfactory disposal site closure, the Commission will transfer the license to the State or Federal government that owns the disposal site. If the Department of Energy is the Federal agency administering the land on bahalf of the Federal government the license will be terminated because the Commission lacks regulatory authority over the Department for this activity. Under the conditions of the transferred license, the owner will carry out a program of monitoring to assure continued satisfactory disposal site performance, physical surveillance to restrict access to the site and carry out minor custodial activities. During this period, productive uses of the land might be permitted if those uses do not affect the stability of the site and its ability to meet the performance objectives. At the end of the prescribed period of institutional control, the license will be terminated by the Commission.

[47 FR 57463, Dec. 27, 1982, as amended at 58 FR 33891, June 22, 1993]

§ 61.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0135.

(b) The approved information collection requirements contained in this Part appear in §§ 61.3, 61.6, 61.9, 61.10, 61.11, 61.12, 61.13, 61.14, 61.15, 61.16, 61.20, 61.22, 61.24, 61.26, 61.27, 61.28, 61.30, 61.31, 61.32, 61.53, 61.55, 61.57, 61.58, 61.61, 61.62, 61.63, 61.72, and 61.80.

(c) In § 61.32, Form N–71 and associated forms are approved under control number 3150–0056, and DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control numbers 0694–0135.

[58 FR 33891, June 22, 1993 as amended at 62 FR 52188, Oct. 6, 1997; 73 FR 78606, Dec. 23, 2008]

§ 61.9 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in paragraph (a) introductory text of the section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) introductory text or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) introductory text.

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a), (e), or (f) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant may be grounds for--

(1) Denial, revocation, or suspension of the license.

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant.

(3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse

action dictated by nonprohibited considerations.

(e)(1) Each licensee and each applicant for a license shall prominently post the revision of NRC Form 3, "Notice to Employees," referenced in 10 CFR 19.11(c). This form must be posted at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(2) Copies of NRC Form 3 can be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[58 FR 52412, Oct. 8, 1993, as amended at 60 FR 24552, May 9, 1995; 61 FR 6765, Feb. 22, 1996; 68 FR 58814, Oct. 10, 2003; 72 FR 63974, Nov. 14, 2007]

§ 61.9a Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[52 FR 49372, Dec. 31, 1987]

§ 61.9b Deliberate misconduct.

[Top of File]

(a) Any licensee, applicant for a license, employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

[63 FR 1898, Jan. 13, 1998]

Subpart B--Licenses

[Top of File]

§ 61.10 Content of application.

An application to receive from others, possess and dispose of wastes containing or contaminated with source, byproduct or special nuclear material by land disposal must consist of general information, specific technical information, institutional information, and financial information as set forth in §§ 61.11 through 61.16. An environmental report prepared in accordance with subpart A of part 51 of this chapter must accompany the application.

[49 FR 9405, Mar. 12, 1984]

§ 61.11 General information.

[Top of File]

The general information must include each of the following:

(a) Identity of the applicant including:

(1) The full name, address, telephone number and description of the business or occupation of the applicant;

(2) If the applicant is a partnership, the name, and address of each partner and the principal location where the partnership does business;

(3) If the applicant is a corporation or an unincorporated association, (i) the state where it is incorporated or organized and the principal location where it does business, and (ii) the names and addresses of its directors and principal officers; and

(4) If the applicant is acting as an agent or representative of another person in filing the application, all information required under this paragraph must be supplied with respect to the other person.

(b) Qualifications of the applicant:

(1) The organizational structure of the applicant, both offsite and onsite, including a description of lines of authority and assignments of responsibilities, whether in the form of administrative directives, contract provisions, or otherwise;

(2) The technical qualifications, including training and experience, of the applicant and members of the applicant's staff to engage in the proposed activities. Minimum training and experience requirements for personnel filling key positions described in paragraph (b)(1) of this section must be provided;

(3) A description of the applicant's personnel training program; and

(4) The plan to maintain an adequate complement of trained personnel to carry out waste receipt, handling, and disposal operations in a safe manner.

(c) A description of:

(1) The location of the proposed disposal site;

(2) The general character of the proposed activities;

(3) The types and quantities of radioactive waste to be received, possessed, and disposed of;

(4) Plans for use of the land disposal facility for purposes other than disposal of radioactive wastes; and

(5) The proposed facilities and equipment.

(d) Proposed schedules for construction, receipt of waste, and first emplacement of waste at the proposed land disposal facility.

§ 61.12 Specific technical information.

[Top of File]

The specific technical information must include the following information needed for demonstration that the performance objectives of subpart C of this part and the applicable technical requirements of subpart D of this part will be met:

(a) A description of the natural and demographic disposal site characteristics as determined by disposal site selection and characterization activities. The description must include geologic, geotechnical, hydrologic, meteorologic, climatologic, and biotic features of the disposal site

and vicinity.

(b) A description of the design features of the land disposal facility and the disposal units. For near-surface disposal, the description must include those design features related to infiltration of water; integrity of covers for disposal units; structural stability of backfill, wastes, and covers; contact of wastes with standing water; disposal site drainage; disposal site closure and stabilization; elimination to the extent practicable of long-term disposal site maintenance; inadvertent intrusion; occupational exposures; disposal site monitoring; and adequacy of the size of the buffer zone for monitoring and potential mitigative measures.

(c) A description of the principal design criteria and their relationship to the performance objectives.

(d) A description of the design basis natural events or phenomena and their relationship to the principal design criteria.

(e) A description of codes and standards which the applicant has applied to the design and which will apply to construction of the land disposal facilities.

(f) A description of the construction and operation of the land disposal facility. The description must include as a minimum the methods of construction of disposal units; waste emplacement; the procedures for and areas of waste segregation; types of intruder barriers; onsite traffic and drainage systems; survey control program; methods and areas of waste storage; and methods to control surface water and groundwater access to the wastes. The description must also include a description of the methods to be employed in the handling and disposal of wastes containing chelating agents or other non-radiological substances that might affect meeting the performance objectives in subpart C of this part.

(g) A description of the disposal site closure plan, including those design features which are intended to facilitate disposal site closure and to eliminate the need for ongoing active maintenance.

(h) An identification of the known natural resources at the disposal site, the exploitation of which could result in inadvertent intrusion into the low-level wastes after removal of active institutional control.

(i) A description of the kind, amount, classification and specifications of the radioactive material proposed to be received, possessed, and disposed of at the land disposal facility.

(j) A description of the quality assurance program, tailored to LLW disposal, developed and applied by the applicant for the determination of natural disposal site characteristics and for quality assurance during the design, construction, operation, and closure of the land disposal facility and the receipt, handling, and emplacement of waste.

(k) A description of the radiation safety program for control and monitoring of radioactive effluents to ensure compliance with the performance objective in § 61.41 of this part and occupational radiation exposure to ensure compliance with the requirements of part 20 of this chapter and to control contamination of personnel, vehicles, equipment, buildings, and the disposal site. Both routine operations and accidents must be addressed. The program description must include procedures, instrumentation, facilities, and equipment.

(l) A description of the environmental monitoring program to provide data to evaluate potential health and environmental impacts and the plan for taking corrective measures if migration of radionuclides is indicated.

(m) A description of the administrative procedures that the applicant will apply to control activities at the land disposal facility.

(n) A description of the facility electronic recordkeeping system as required in § 61.80.

[47 FR 57463, Dec. 27, 1982, as amended at 58 FR 33891, June 22, 1993; 60 FR 15666, Mar. 27, 1995]

§ 61.13 Technical analyses.

[Top of File]

The specific technical information must also include the following analyses needed to demonstrate that the performance objectives of subpart C of this part will be met:

(a) Pathways analyzed in demonstrating protection of the general population from releases of radioactivity must include air, soil, groundwater, surface water, plant uptake, and exhumation by burrowing animals. The analyses must clearly identify and differentiate between the roles performed by the natural disposal site characteristics and design features in isolating and segregating the wastes. The analyses must clearly demonstrate that there is reasonable assurance that the exposure to humans from the release of radioactivity will not exceed the limits set forth in § 61.41.

(b) Analyses of the protection of individuals from inadvertent intrusion must include demonstration that there is reasonable assurance the waste classification and segregation requirements will be met and that adequate barriers to inadvertent intrusion will be provided.

(c) Analyses of the protection of individuals during operations must include assessments of expected exposures due to routine operations and likely accidents during handling, storage, and disposal of waste. The analyses must provide reasonable assurance that exposures will be controlled to meet the requirements of part 20 of this chapter.

(d) Analyses of the long-term stability of the disposal site and the need for ongoing active maintenance after closure must be based upon analyses of active natural processes such as erosion, mass wasting, slope failure, settlement of wastes and backfill, infiltration through covers over disposal areas and adjacent soils, and surface drainage of the disposal site. The analyses must provide reasonable assurance that there will not be a need for ongoing active maintenance of the disposal site following closure.

§ 61.14 Institutional information.

[Top of File]

The institutional information must include:

(a) A certification by the Federal or State government which owns the disposal site that the Federal or State government is prepared to accept transfer of the license when the provisions of § 61.30 are met, and will assume responsibility for custodial care after site closure and postclosure observation and maintenance.

(b) Where the proposed disposal site is on land not owned by the Federal or a State government, the applicant must submit evidence that arrangements have been made for assumption of ownership in fee by the Federal or a State government before the Commission issues a license.

§ 61.15 Financial information.

[Top of File]

The financial information must be sufficient to demonstrate that the financial qualifications of the applicant are adequate to carry out the activities for which the license is sought and meet other financial assurance requirements as specified in subpart E of this part.

§ 61.16 Other information.

[Top of File]

Depending upon the nature of the wastes to be disposed of, and the design and proposed operation of the land disposal facility, additional information may be requested by the Commission including the following:

(a) Physical security measures, if appropriate. Any application to receive and possess special nuclear material in quantities subject to the requirements of part 73 of this chapter shall demonstrate how the physical security requirements of part 73 will be met. In determining whether receipt and possession will be subject to the requirements of part 73, the applicant shall not consider the quantity of special nuclear material that has been disposed of.

(b) Safety information concerning criticality, if appropriate. (1) Any application to receive and possess special nuclear material in quantities that would be subject to the requirements of § 70.24, "Criticality accident requirements" of part 70 of this chapter shall demonstrate how the requirements of that section will be met, unless the applicant requests an exemption pursuant to § 70.24(d). In determining whether receipt and possession would be subject to the requirements of § 70.24, the applicant shall not consider the quantity of special nuclear material that has been disposed of.

(2) Any application to receive and possess special nuclear material shall describe proposed procedures for avoiding accidental criticality, which address both storage of special nuclear material prior to disposal and waste emplacement for disposal.

§ 61.20 Filing and distribution of application.

[Top of File]

(a) An application for a license under this part, and any amendments thereto, must be filed with the Director, must be signed by the applicant or the applicant's authorized representative under oath or affirmation, and, if the document is in paper form, must be the signed original.

(b) The applicant shall maintain the capability to generate additional copies of the application for distribution in accordance with written instructions from the Director or the Director's designee.

(c) *Fees*. Application, amendment, and inspection fees applicable to a license covering the receipt and disposal of radioactive wastes in a land disposal facility are required by part 170 of this chapter.

[47 FR 57463, Dec. 27, 1982, as amended at 49 FR 9405, Mar. 12, 1984; 68 FR 58814, Oct. 10, 2003]

§ 61.21 Elimination of repetition.

[Top of File]

In its application, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission if these references are clear and specific.

[49 FR 9405, Mar. 12, 1984]

§ 61.22 Updating of application.

[Top of File]

(a) The application must be as complete as possible in the light of information that is available at the time of submittal.

(b) The applicant shall supplement its application in a timely manner, as necessary, to permit the Commission to review, prior to issuance of a license, any changes in the activities proposed to be carried out or new information regarding the proposed activities.

[49 FR 9405, Mar. 12, 1984]

§ 61.23 Standards for issuance of a license.

[Top of File]

A license for the receipt, possession, and disposal of waste containing or contaminated with source, special nuclear, or byproduct material will be issued by the Commission upon finding that the issuance of the license will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public, and:

(a) The applicant is qualified by reason of training and experience to carry out the disposal operations requested in a manner that protects health and minimizes danger to life or property.

(b) The applicant's proposed disposal site, disposal design, land disposal facility operations (including equipment, facilities, and procedures), disposal site closure, and postclosure institutional control are adequate to protect the public health and safety in that they provide reasonable assurance that the general population will be protected from releases of radioactivity as specified in the performance objective in § 61.41, Protection of the general population from releases of radioactivity.

(c) The applicant's proposed disposal site, disposal site design, land disposal facility operations (including equipment, facilities, and procedures), disposal site closure, and postclosure institutional control are adequate to protect the public health and safety in that they will provide reasonable assurance that individual inadvertent intruders are protected in accordance with the performance objective in § 61.42, Protection of individuals from inadvertent intrusion.

(d) The applicant's proposed land disposal facility operations, including equipment, facilities, and procedures, are adequate to protect the public health and safety in that they will provide reasonable assurance that the standards for radiation protection set out in part 20 of this chapter will be met.

(e) The applicant's proposed disposal site, disposal site design, land disposal facility operations, disposal site closure, and postclosure institutional control are adequate to protect the public health and safety in that they will provide reasonable assurance that long-term stability of the disposed waste and the disposal site will be achieved and will eliminate to the extent practicable the need for ongoing active maintenance of the disposal site following closure.

(f) The applicant's demonstration provides reasonable assurance that the applicable technical requirements of subpart D of this part will be met.

(g) The applicant's proposal for institutional control provides reasonable assurance that institutional control will be provided for the length of time found necessary to ensure the findings in paragraphs (b) through (e) of this section and that the institutional control meets the requirements of § 61.59, Institutional requirements.

(h) The information on financial assurances meets the requirements of subpart E of this part.

(i) The applicant's physical security information provides reasonable assurance that the requirements of part 73 of this chapter will be met, insofar as they are applicable to special nuclear material to be possessed before disposal under the license.

(j) The applicant's criticality safety procedures are adequate to protect the public health and safety and provide reasonable assurance that the requirements of § 70.24, Criticality accident requirements, of part 70 of this chapter will be met, insofar as they are applicable to special nuclear material to be possessed before disposal under the license.

(k) Any additional information submitted as requested by the Commission pursuant to § 61.16, Other information, is adequate.

(l) The requirements of subpart A of part 51 of this chapter have been met.

[47 FR 57463, Dec. 27, 1982, as amended at 49 FR 9405, Mar. 12, 1984]

§ 61.24 Conditions of licenses.

[Top of File]

(a) A license issued under this part, or any right thereunder, may be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, only if the Commission finds, after securing full information, that the transfer is in accordance with the provisions of the Atomic Energy Act and gives its consent in writing in the form of a license amendment.

(b) The licensee shall submit written statements under oath upon request of the Commission, at any time before termination of the license, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.

(c) The license will be transferred to the site owner only on the full implementation of the final closure plan as approved by the Commission, including post-closure observation and maintenance.

(d) The licensee shall be subject to the provisions of the Atomic Energy Act now or hereafter in effect, and to all rules, regulations, and orders of the Commission. The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to, or by reason of rules, regulations, and orders issued in accordance with the terms of the Atomic Energy Act.

(e) Any license may be revoked, suspended or modified in whole or in part for any material false statement in the application or any statement of fact required under Section 182 of the Act, or because of conditions revealed by any application or statement of fact or any report, record, or inspection or other means which would warrant the Commission to refuse to grant a license to the original application, or for failure to operate the facility in accordance with the terms of the license, or for any violation of, or failure to observe any of the terms and conditions of the Act, or any rule, regulation, license or order of the Commission.

(f) Each person licensed by the Commission pursuant to the regulations in this part shall confine possession and use of materials to the locations and purposes authorized in the license.

(g) No radioactive waste may be disposed of until the Commission has inspected the land disposal facility and has found it to be in conformance with the description, design, and construction described in the application for a license.

(h) The Commission may incorporate in any license at the time of issuance, or thereafter, by appropriate rule, regulation or order, additional requirements and conditions with respect to the licensee's receipt, possession, and disposal of source, special nuclear or byproduct material as it deems appropriate or necessary in order to:

(1) Promote the common defense and security;

(2) Protect health or to minimize danger to life or property;

(3) Require reports and the keeping of records, and to provide for inspections of activities under the license that may be necessary or appropriate to effectuate the purposes of the Act and regulations thereunder.

(i) Any licensee who receives and possesses special nuclear material under this part in quantities that would be subject to the requirements of § 70.24 of part 70 of this chapter shall comply with the requirements of that section. The licensee shall not consider the quantity of special nuclear material that has been disposed of.

(j) The authority to dispose of wastes expires on the date stated in the license except as provided in § 61.27(a) of this part.

(k)(1) Each licensee shall notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any Chapter of Title 11 (Bankruptcy) of the United States Code by or against:

(i) The licensee;

(ii) An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or

(iii) An affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.

(2) This notification must indicate:

(i) The bankruptcy court in which the petition for bankruptcy was filed; and

(ii) The date of the filing of the petition.

[47 FR 57463, Dec. 27, 1982, as amended at 52 FR 1295, Jan. 12, 1987]

§ 61.25 Changes.

[Top of File]

(a) Except as provided for in specific license conditions, the licensee shall not make changes in the land disposal facility or procedures described in the license application. The license will include conditions restricting subsequent changes to the facility and the procedures authorized which are important to public health and safety. These license restrictions will fall into three categories of descending importance to public health and safety as follows: (1) those features and procedures which may not be changed without (i) 60 days prior notice to the Commission, (ii) 30 days notice of opportunity for a prior hearing, and (iii) prior Commission approval; (2) those features and procedures which may not be changed without (i) 60 days prior notice to the Commisson, and (ii) prior Commission approval; and (3) those features and procedures which may not be changed without 60 days prior notice to the Commission. Features and procedures falling in paragraph (a)(3) of this section may not be changed without prior Commission approval if the Commission, after having received the required notice, so orders.

(b) Amendments authorizing site closure, license transfer, or license termination shall be included in paragraph (a)(1) of this section.

(c) The Commission shall provide a copy of the notice for opportunity for hearings provided in paragraph (a)(1) of this section to State and local officials or tribal governing bodies specified in § 2.104(e) of part 2 of this chapter.

§ 61.26 Amendment of license.

[Top of File]

(a) An application for amendment of a license must be filed in accordance with § 61.20 and shall fully describe the changes desired.

(b) In determining whether an amendment to a license will be approved, the Commission will apply the criteria set forth in § 61.23.

§ 61.27 Application for renewal or closure.

[Top of File]

(a) Any expiration date on a license applies only to the above ground activities and to the authority to dispose of waste. Failure to renew the license shall not relieve the licensee of responsibility for carrying out site closure, postclosure observation and transfer of the license to the site owner. An application for renewal or an application for closure under § 61.28 must be filed at least 30 days prior to license expiration.

(b) Applications for renewal of a license must be filed in accordance with §§ 61.10 through 61.16 and § 61.20. Applications for closure must be filed in accordance with §§ 61.20 and 61.28. Information contained in previous applications, statements or reports filed with the Commission under the license may be incorporated by reference if the references are clear and specific.

(c) In any case in which a licensee has timely filed an application for renewal of a license, the license for continued receipt and disposal of licensed materials does not expire until the Commission has taken final action on the application for renewal.

(d) In determining whether a license will be renewed, the Commission will apply the criteria set forth in § 61.23.

§ 61.28 Contents of application for closure.

[Top of File]

(a) Prior to final closure of the disposal site, or as otherwise directed by the Commission, the applicant shall submit an application to amend the license for closure. This closure application must include a final revision and specific details of the disposal site closure plan included as part of the license application submitted under § 61.12(g) that includes each of the following:

(1) Any additional geologic, hydrologic, or other disposal site data pertinent to the long-term containment of emplaced radioactive wastes obtained during the operational period.

(2) The results of tests, experiments, or any other analyses relating to backfill of excavated areas, closure and sealing, waste migration and interaction with emplacement media, or any other tests, experiments, or analysis pertinent to the long-term containment of emplaced waste within the disposal site.

(3) Any proposed revision of plans for:

(i) Decontamination and/or dismantlement of surface facilities;

(ii) Backfilling of excavated areas; or

(iii) Stabilization of the disposal site for post-closure care.

(b) An environmental report or a supplement to an environmental report prepared in accordance with subpart A of part 51 of this chapter must accompany the application.

(c) Upon review and consideration of an application to amend the license for closure submitted in accordance with paragraph (a) of this section, the Commission shall issue an amendment authorizing closure if there is reasonable assurance that the long-term performance objectives of subpart C of this part will be met.

[47 FR 57463, Dec. 27, 1982, as amended at 49 FR 9406, Mar. 12, 1984]

§ 61.29 Post-closure observation and maintenance.

[Top of File]

Following completion of closure authorized in § 61.28, the licensee shall observe, monitor, and carry out necessary maintenance and repairs at the disposal site until the license is transferred by the Commission in accordance with § 61.30. Responsibility for the disposal site must be maintained by the licensee for 5 years. A shorter or longer time period for post-closure observation and maintenance may be established and approved as part of the site closure plan, based on site-specific conditions.

§ 61.30 Transfer of license.

[Top of File]

(a) Following closure and the period of post-closure observation and maintenance, the licensee may apply for an amendment to transfer the license to the disposal site owner. The license shall be transferred when the Commission finds:

(1) That the closure of the disposal site has been made in conformance with the licensee's disposal site closure plan, as amended and approved as part of the license;

(2) That reasonable assurance has been provided by the licensee that the performance objectives of subpart C of this part are met;

(3) That any funds for care and records required by §§ 61.80 (e) and (f) have been transferred to the disposal site owner;

(4) That the post-closure monitoring program is operational for implementation by the disposal site owner; and

(5) That the Federal or State government agency which will assume responsibility for institutional control of the disposal site is prepared to assume responsibility and ensure that the institutional requirements found necessary under § 61.23(g) will be met.

[47 FR 57463, Dec. 27, 1982, as amended at 61 FR 24674, May 16, 1996]

§ 61.31 Termination of license.

[Top of File]

(a) Following any period of institutional control needed to meet the requirements found necessary under § 61.23, the licensee may apply for an amendment to terminate the license.

(b) This application must be filed, and will be reviewed, in accordance with the provision of § 61.20 and of this section.

(c) A license is terminated only when the Commission finds:

(1) That the institutional control requirements found necessary under § 61.23(g) have been met; and

(2) That any additional requirements resulting from new information developed during the institutional control period have been met, and that permanent monuments or markers warning against intrusion have been installed.

(3) That the records required by §§ 61.80(e) and (f) have been sent to the party responsible for institutional control of the disposal site and a copy has been sent to the Commission immediately prior to license termination.

[47 FR 57463, Dec. 27, 1982, as amended at 61 FR 24674, May 16, 1996]

US/IAEA Safeguards Agreement

[Top of File]

§ 61.32 Facility information and verification.

(a) In response to a written request by the Commission, each applicant for a license and each recipient of a license shall submit facility information, as described in § 75.10 of this chapter, on Form N–71 and associated forms and site information on DOC/NRC Form AP–A, and associated forms;

(b) As required by the Additional Protocol, applicants and licensees specified in paragraph (a) of this section shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms; and

(c) Shall permit verification thereof by the International Atomic Energy Agency (IAEA) and take other action as necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

[73 FR 78606, Dec. 23, 2008]

Subpart C--Performance Objectives

[Top of File]

§ 61.40 General requirement.

Land disposal facilities must be sited, designed, operated, closed, and controlled after closure so that reasonable assurance exists that exposures to humans are within the limits established in the performance objectives in §§ 61.41 through 61.44.

§ 61.41 Protection of the general population from releases of radioactivity.

[Top of File]

Concentrations of radioactive material which may be released to the general environment in ground water, surface water, air, soil, plants, or animals must not result in an annual dose exceeding an equivalent of 25 millirems to the whole body, 75 millirems to the thyroid, and 25 millirems to any other organ of any member of the public. Reasonable effort should be made to maintain releases of radioactivity in effluents to the general environment as low as is reasonably achievable.

§ 61.42 Protection of individuals from inadvertent intrusion.

[Top of File]

Design, operation, and closure of the land disposal facility must ensure protection of any individual inadvertently intruding into the disposal site and occupying the site or contacting the waste at any time after active institutional controls over the disposal site are removed.

§ 61.43 Protection of individuals during operations.

[Top of File]

Operations at the land disposal facility must be conducted in compliance with the standards for radiation protection set out in part 20 of this chapter, except for releases of radioactivity in effluents from the land disposal facility, which shall be governed by § 61.41 of this part. Every reasonable effort shall be made to maintain radiation exposures as low as is reasonably achievable.

§ 61.44 Stability of the disposal site after closure.

[Top of File]

The disposal facility must be sited, designed, used, operated, and closed to achieve long-term stability of the disposal site and to eliminate to the extent practicable the need for ongoing active maintenance of the disposal site following closure so that only surveillance, monitoring, or minor custodial care are required.

Subpart D--Technical Requirements for Land Disposal Facilities

[Top of File]

§ 61.50 Disposal site suitability requirements for land disposal.

(a) Disposal site suitability for near-surface disposal. (1) The purpose of this section is to specify the minimum characteristics a disposal site must have to be acceptable for use as a near-surface disposal facility. The primary emphasis in disposal site suitability is given to isolation of wastes, a matter having long-term impacts, and to disposal site features that ensure that the long-term performance objectives of subpart C of this part are met, as opposed to short-term convenience or benefits.

(2) The disposal site shall be capable of being characterized, modeled, analyzed and monitored.

(3) Within the region or state where the facility is to be located, a disposal site should be selected so that projected population growth and future developments are not likely to affect the ability of the disposal facility to meet the performance objectives of subpart C of this part.

(4) Areas must be avoided having known natural resources which, if exploited, would result in failure to meet the performance objectives of subpart C of this part.

(5) The disposal site must be generally well drained and free of areas of flooding or frequent ponding. Waste disposal shall not take place in a 100-year flood plain, coastal high-hazard area or wetland, as defined in Executive Order 11988, "Floodplain Management Guidelines."

(6) Upstream drainage areas must be minimized to decrease the amount of runoff which could erode or inundate waste disposal units.

(7) The disposal site must provide sufficient depth to the water table that ground water intrusion, perennial or otherwise, into the waste will not occur. The Commission will consider an exception to this requirement to allow disposal below the water table if it can be conclusively shown that disposal site characteristics will result in molecular diffusion being the predominant means of radionuclide movement and the rate of movement will result in the performance objectives of subpart C of this part being met. In no case will waste disposal be permitted in the zone of fluctuation of the water table.

(8) The hydrogeologic unit used for disposal shall not discharge ground water to the surface within the disposal site.

(9) Areas must be avoided where tectonic processes such as faulting, folding, seismic activity, or vulcanism may occur with such frequency and extent to significantly affect the ability of the disposal site to meet the performance objectives of subpart C of this part, or may preclude defensible modeling and prediction of long-term impacts.

(10) Areas must be avoided where surface geologic processes such as mass wasting, erosion, slumping, landsliding, or weathering occur with such frequency and extent to significantly affect the ability of the disposal site to meet the performance objectives of subpart C of this part, or may preclude defensible modeling and prediction of long-term impacts.

(11) The disposal site must not be located where nearby facilities or activities could adversely impact the ability of the site to meet the performance objectives of subpart C of this part or significantly mask the environmental monitoring program.

(b) Disposal site suitability requirements for land disposal other than near-surface (reserved).

§ 61.51 Disposal site design for land disposal.

[Top of File]

(a) Disposal site design for near-surface disposal. (1) Site design features must be directed toward long-term isolation and avoidance of the need for continuing active maintenance after site closure.

(2) The disposal site design and operation must be compatible with the disposal site closure and stabilization plan and lead to disposal site closure that provides reasonable assurance that the performance objectives of subpart C of this part will be met.

(3) The disposal site must be designed to complement and improve, where appropriate, the ability of the disposal site's natural characteristics to assure that the performance objectives of subpart C of this part will be met.

(4) Covers must be designed to minimize to the extent practicable water infiltration, to direct percolating or surface water away from the disposed waste, and to resist degradation by surface geologic processes and biotic activity.

(5) Surface features must direct surface water drainage away from disposal units at velocities and gradients which will not result in erosion that will require ongoing active maintenance in the future.

(6) The disposal site must be designed to minimize to the extent practicable the contact of water with waste during storage, the contact of standing water with waste during disposal, and the contact of percolating or standing water with wastes after disposal.

(b) Disposal site design for other than near-surface disposal (reserved).

§ 61.52 Land disposal facility operation and disposal site closure.

[Top of File]

(a) Near-surface disposal facility operation and disposal site closure. (1) Wastes designated as Class A pursuant to § 61.55, must be segregated from other wastes by placing in disposal units which are sufficiently separated from disposal units for the other waste classes so that any interaction between Class A wastes and other wastes will not result in the failure to meet the performance objectives in subpart C of this Part. This segregation is not necessary for Class A wastes if they meet the stability requirements in § 61.56(b) of this part.

(2) Wastes designated as Class C pursuant to § 61.55, must be disposed of so that the top of the waste is a minimum of 5 meters below

the top surface of the cover or must be disposed of with intruder barriers that are designed to protect against an inadvertent intrusion for a least 500 years.

(3) All wastes shall be disposed of in accordance with the requirements of paragraphs (a)(4) through (11) of this section.

(4) Wastes must be emplaced in a manner that maintains the package integrity during emplacement, minimizes the void spaces between packages, and permits the void spaces to be filled.

(5) Void spaces between waste packages must be filled with earth or other material to reduce future subsidence within the fill.

(6) Waste must be placed and covered in a manner that limits the radiation dose rate at the surface of the cover to levels that at a minimum will permit the licensee to comply with all provisions of §§ 20.1301 and 20.1302 of this chapter at the time the license is transferred pursuant to § 61.30 of this part.

(7) The boundaries and locations of each disposal unit (e.g., trenches) must be accurately located and mapped by means of a land survey. Near-surface disposal units must be marked in such a way that the boundaries of each unit can be easily defined. Three permanent survey marker control points, referenced to United States Geological Survey (USGS) or National Geodetic Survey (NGS) survey control stations, must be established on the site to facilitate surveys. The USGS or NGS control stations must provide horizontal and vertical controls as checked against USGS or NGS record files.

(8) A buffer zone of land must be maintained between any buried waste and the disposal site boundary and beneath the disposed waste. The buffer zone shall be of adequate dimensions to carry out environmental monitoring activities specified in § 61.53(d) of this part and take mitigative measures if needed.

(9) Closure and stabilization measures as set forth in the approved site closure plan must be carried out as each disposal unit (e.g., each trench) is filled and covered.

(10) Active waste disposal operations must not have an adverse effect on completed closure and stabilization measures.

(11) Only wastes containing or contaminated with radioactive materials shall be disposed of at the disposal site.

(b) Facility operation and disposal site closure for land disposal facilities other than near-surface (reserved).

[47 FR 57463, Dec. 27, 1982, as amended at 56 FR 23474, May 21, 1991; 56 FR 61352, Dec. 3, 1991; 58 FR 67662, Dec. 22, 1993]

§ 61.53 Environmental monitoring.

[Top of File]

(a) At the time a license application is submitted, the applicant shall have conducted a preoperational monitoring program to provide basic environmental data on the disposal site characteristics. The applicant shall obtain information about the ecology, meteorology, climate, hydrology, geology, geochemistry, and seismology of the disposal site. For those characteristics that are subject to seasonal variation, data must cover at least a twelve month period.

(b) The licensee must have plans for taking corrective measures if migration of radionuclides would indicate that the performance objectives of subpart C may not be met.

(c) During the land disposal facility site construction and operation, the licensee shall maintain a monitoring program. Measurements and observations must be made and recorded to provide data to evaluate the potential health and environmental impacts during both the construction and the operation of the facility and to enable the evaluation of long-term effects and the need for mitigative measures. The monitoring system must be capable of providing early warning of releases of radionuclides from the disposal site before they leave the site boundary.

(d) After the disposal site is closed, the licensee responsible for post-operational surveillance of the disposal site shall maintain a monitoring system based on the operating history and the closure and stabilization of the disposal site. The monitoring system must be capable of providing early warning of releases of radionuclides from the disposal site before they leave the site boundary.

§ 61.54 Alternative requirements for design and operations.

[Top of File]

The Commission may, upon request or on its own initiative, authorize provisions other than those set forth in §§ 61.51 through 61.53 for the segregation and disposal of waste and for the design and operation of a land disposal facility on a specific basis, if it finds reasonable assurance of compliance with the performance objectives of subpart C of this part.

§ 61.55 Waste classification.

(a) Classification of waste for near surface disposal. (1) *Considerations*. Determination of the classification of radioactive waste involves two considerations. First, consideration must be given to the concentration of long-lived radionuclides (and their shorter-lived precursors) whose potential hazard will persist long after such precautions as institutional controls, improved waste form, and deeper disposal have ceased to be effective. These precautions delay the time when long-lived radionuclides could cause exposures. In addition, the magnitude of the potential dose is limited by the concentration and availability of the radionuclide at the time of exposure. Second, consideration must be given to the concentration of shorter-lived radionuclides for which requirements on institutional controls, waste form, and disposal methods are effective.

(2) *Classes of waste*. (i) Class A waste is waste that is usually segregated from other waste classes at the disposal site. The physical form and characteristics of Class A waste must meet the minimum requirements set forth in § 61.56(a). If Class A waste also meets the stability requirements set forth in § 61.56(b), it is not necessary to segregate the waste for disposal.

(ii) Class B waste is waste that must meet more rigorous requirements on waste form to ensure stability after disposal. The physical form and characteristics of Class B waste must meet both the minimum and stability requirements set forth in § 61.56.

(iii) Class C waste is waste that not only must meet more rigorous requirements on waste form to ensure stability but also requires additional measures at the disposal facility to protect against inadvertent intrusion. The physical form and characteristics of Class C waste must meet both the minimum and stability requirements set forth in § 61.56.

(iv) Waste that is not generally acceptable for near-surface disposal is waste for which form and disposal methods must be different, and in general more stringent, than those specified for Class C waste. In the absence of specific requirements in this part, such waste must be disposed of in a geologic repository as defined in part 60 or 63 of this chapter unless proposals for disposal of such waste in a disposal site licensed pursuant to this part are approved by the Commission.

(3) Classification determined by long-lived radionuclides. If radioactive waste contains only radionuclides listed in Table 1, classification shall be determined as follows:

(i) If the concentration does not exceed 0.1 times the value in Table 1, the waste is Class A.

(ii) If the concentration exceeds 0.1 times the value in Table 1 but does not exceed the value in Table 1, the waste is Class C.

(iii) If the concentration exceeds the value in Table 1, the waste is not generally acceptable for near-surface disposal.

(iv) For wastes containing mixtures of radionuclides listed in Table 1, the total concentration shall be determined by the sum of fractions rule described in paragraph (a)(7) of this section.

Table 1

Radionuclide	Concentration curies per cubic meter
C-14	8
C-14 in activated metal	80
Ni-59 in activated metal	220
Nb-94 in activated metal	0.2
Tc-99	3
I-129	0.08
Alpha emitting transuranic nuclides with half-life greater than 5 years	[1]100
Pu-241	[1]3,500
Cm-242	[1]20,000

[1]Units are nanocuries per gram.

(4) Classification determined by short-lived radionuclides. If radioactive waste does not contain any of the radionuclides listed in Table 1, classification shall be determined based on the concentrations shown in Table 2. However, as specified in paragraph (a)(6) of this section, if radioactive waste does not contain any nuclides listed in either Table 1 or 2, it is Class A.

(i) If the concentration does not exceed the value in Column 1, the waste is Class A.

(ii) If the concentration exceeds the value in Column 1, but does not exceed the value in Column 2, the waste is Class B.

(iii) If the concentration exceeds the value in Column 2, but does not exceed the value in Column 3, the waste is Class C.

(iv) If the concentration exceeds the value in Column 3, the waste is not generally acceptable for near-surface disposal.

(v) For wastes containing mixtures of the nuclides listed in Table 2, the total concentration shall be determined by the sum of fractions rule

Table 2

Radionuclide	Concentration, curies per cubic meter		
	Col. 1	Col. 2	Col. 3
Total of all nuclides with less than 5 year half-life	700	([1])	([1])
H-3	40	([1])	([1])
Co-60	700	([1])	([1])
Ni-63	3.5	70	700
Ni-63 in activated metal	35	700	7000
Sr-90	0.04	150	7000
Cs-137	1	44	4600

[1] There are no limits established for these radionuclides in Class B or C wastes. Practical considerations such as the effects of external radiation and internal heat generation on transportation, handling, and disposal will limit the concentrations for these wastes. These wastes shall be Class B unless the concentrations of other nuclides in Table 2 determine the waste to the Class C independent of these nuclides.

(5) Classification determined by both long- and short-lived radionuclides. If radioactive waste contains a mixture of radionuclides, some of which are listed in Table 1, and some of which are listed in Table 2, classification shall be determined as follows:

(i) If the concentration of a nuclide listed in Table 1 does not exceed 0.1 times the value listed in Table 1, the class shall be that determined by the concentration of nuclides listed in Table 2.

(ii) If the concentration of a nuclide listed in Table 1 exceeds 0.1 times the value listed in Table 1 but does not exceed the value in Table 1, the waste shall be Class C, provided the concentration of nuclides listed in Table 2 does not exceed the value shown in Column 3 of Table 2.

(6) Classification of wastes with radionuclides other than those listed in Tables 1 and 2. If radioactive waste does not contain any nuclides listed in either Table 1 or 2, it is Class A.

(7) The sum of the fractions rule for mixtures of radionuclides. For determining classification for waste that contains a mixture of radionuclides, it is necessary to determine the sum of fractions by dividing each nuclide's concentration by the appropriate limit and adding the resulting values. The appropriate limits must all be taken from the same column of the same table. The sum of the fractions for the column must be less than 1.0 if the waste class is to be determined by that column. Example: A waste contains Sr-90 in a concentration of 50 Ci/m^3. and Cs-137 in a concentration of 22 Ci/m^3. Since the concentrations both exceed the values in Column 1, Table 2, they must be compared to Column 2 values. For Sr-90 fraction 50/150=0.33; for Cs-137 fraction, 22/44=0.5; the sum of the fractions=0.83. Since the sum is less than 1.0, the waste is Class B.

(8) *Determination of concentrations in wastes*. The concentration of a radionuclide may be determined by indirect methods such as use of scaling factors which relate the inferred concentration of one radionuclide to another that is measured, or radionuclide material accountability, if there is reasonable assurance that the indirect methods can be correlated with actual measurements. The concentration of a radionuclide may be averaged over the volume of the waste, or weight of the waste if the units are expressed as nanocuries per gram.

[47 FR 57463, Dec. 27, 1982, as amended at 54 FR 22583, May 25, 1989; 66 FR 55792, Nov. 2, 2001]

§ 61.56 Waste characteristics.

[Top of File]

(a) The following requirements are minimum requirements for all classes of waste and are intended to facilitate handling at the disposal site and provide protection of health and safety of personnel at the disposal site.

(1) Waste must not be packaged for disposal in cardboard or fiberboard boxes.

(2) Liquid waste must be solidified or packaged in sufficient absorbent material to absorb twice the volume of the liquid.

(3) Solid waste containing liquid shall contain as little free standing and noncorrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1% of the volume.

(4) Waste must not be readily capable of detonation or of explosive decomposition or reaction at normal pressures and temperatures, or of explosive reaction with water.

(5) Waste must not contain, or be capable of generating, quantities of toxic gases, vapors, or fumes harmful to persons transporting, handling, or disposing of the waste. This does not apply to radioactive gaseous waste packaged in accordance with paragraph (a)(7) of this

section.

(6) Waste must not be pyrophoric. Pyrophoric materials contained in waste shall be treated, prepared, and packaged to be nonflammable.

(7) Waste in a gaseous form must be packaged at a pressure that does not exceed 1.5 atmospheres at 20ºC. Total activity must not exceed 100 curies per container.

(8) Waste containing hazardous, biological, pathogenic, or infectious material must be treated to reduce to the maximum extent practicable the potential hazard from the non-radiological materials.

(b) The requirements in this section are intended to provide stability of the waste. Stability is intended to ensure that the waste does not structurally degrade and affect overall stability of the site through slumping, collapse, or other failure of the disposal unit and thereby lead to water infiltration. Stability is also a factor in limiting exposure to an inadvertent intruder, since it provides a recognizable and nondispersible waste.

(1) Waste must have structural stability. A structurally stable waste form will generally maintain its physical dimensions and its form, under the expected disposal conditions such as weight of overburden and compaction equipment, the presence of moisture, and microbial activity, and internal factors such as radiation effects and chemical changes. Structural stability can be provided by the waste form itself, processing the waste to a stable form, or placing the waste in a disposal container or structure that provides stability after disposal.

(2) Notwithstanding the provisions in § 61.56(a) (2) and (3), liquid wastes, or wastes containing liquid, must be converted into a form that contains as little free standing and noncorrosive liquid as is reasonably achievable, but in no case shall the liquid exceed 1% of the volume of the waste when the waste is in a disposal container designed to ensure stability, or 0.5% of the volume of the waste for waste processed to a stable form.

(3) Void spaces within the waste and between the waste and its package must be reduced to the extent practicable.

§ 61.57 Labeling.

[Top of File]

Each package of waste must be clearly labeled to identify whether it is Class A waste, Class B waste, or Class C waste, in accordance with § 61.55.

§ 61.58 Alternative requirements for waste classification and characteristics.

[Top of File]

The Commission may, upon request or on its own initiative, authorize other provisions for the classification and characteristics of waste on a specific basis, if, after evaluation, of the specific characteristics of the waste, disposal site, and method of disposal, it finds reasonable assurance of compliance with the performance objectives in subpart C of this part.

§ 61.59 Institutional requirements.

[Top of File]

(a) *Land ownership*. Disposal of radioactive waste received from other persons may be permitted only on land owned in fee by the Federal or a State government.

(b) *Institutional control*. The land owner or custodial agency shall carry out an institutional control program to physically control access to the disposal site following transfer of control of the disposal site from the disposal site operator. The institutional control program must also include, but not be limited to, carrying out an environmental monitoring program at the disposal site, periodic surveillance, minor custodial care, and other requirements as determined by the Commission; and administration of funds to cover the costs for these activities. The period of institutional controls will be determined by the Commission, but institutional controls may not be relied upon for more than 100 years following transfer of control of the disposal site to the owner.

Subpart E--Financial Assurances

[Top of File]

§ 61.61 Applicant qualifications and assurances.

Each applicant shall show that it either possesses the necessary funds or has reasonable assurance of obtaining the necessary funds, or by a combination of the two, to cover the estimated costs of conducting all licensed activities over the planned operating life of the project, including costs of construction and disposal.

§ 61.62 Funding for disposal site closure and stabilization.

[Top of File]

(a) The applicant shall provide assurance that sufficient funds will be available to carry out disposal site closure and stabilization, including: (1) Decontamination or dismantlement of land disposal facility structures; and (2) closure and stabilization of the disposal site so that following transfer of the disposal site to the site owner, the need for ongoing active maintenance is eliminated to the extent practicable and only minor custodial care, surveillance, and monitoring are required. These assurances shall be based on Commission-approved cost estimates reflecting the Commission-approved plan for disposal site closure and stabilization. The applicant's cost estimates must take into account total capital costs that would be incurred if an independent contractor were hired to perform the closure and stabilization work.

(b) In order to avoid unnecessary duplication and expense, the Commission will accept financial sureties that have been consolidated with earmarked financial or surety arrangements established to meet requirements of other Federal or State agencies and/or local governing bodies for such decontamination, closure and stabilization. The Commission will accept this arrangement only if they are considered adequate to satisfy these requirements and that the portion of the surety which covers the closure of the disposal site is clearly identified and committed for use in accomplishing these activities.

(c) The licensee's surety mechanism will be annually reviewed by the Commission to assure that sufficient funds are available for completion of the closure plan, assuming that the work has to be performed by an independent contractor.

(d) The amount of surety liability should change in accordance with the predicted cost of future closure and stabilization. Factors affecting closure and stabilization cost estimates include: inflation; increases in the amount of disturbed land; changes in engineering plans; closure and stabilization that has already been accomplished and any other conditions affecting costs. This will yield a surety that is at least sufficient at all times to cover the costs of closure of the disposal units that are expected to be used before the next license renewal.

(e) The term of the surety mechanism must be open ended unless it can be demonstrated that another arrangement would provide an equivalent level of assurance. This assurance could be provided with a surety mechanism which is written for a specified period of time (e. g., five years) yet which must be automatically renewed unless the party who issues the surety notifies the Commission and the beneficiary (the site owner) and the principal (the licensee) not less than 90 days prior to the renewal date of its intention not to renew. In such a situation the licensee must submit a replacement surety within 30 days after notification of cancellation. If the licensee fails to provide a replacement surety acceptable to the Commission, the site owner may collect on the original surety.

(f) Proof of forfeiture must not be necessary to collect the surety so that in the event that the licensee could not provide an acceptable replacement surety within the required time, the surety shall be automatically collected prior to its expiration. The conditions described above would have to be clearly stated on any surety instrument which is not open-ended, and must be agreed to by all parties. Liability under the surety mechanism must remain in effect until the closure and stabilization program has been completed and approved by the Commission and the license has been transferred to the site owner.

(g) Financial surety arrangements generally acceptable to the Commission include: surety bonds, cash deposits, certificates of deposits, deposits of government securities, escrow accounts, irrevocable letters or lines of credit, trust funds, and combinations of the above or such other types of arrangements as may be approved by the Commission. However, self-insurance, or any arrangement which essentially constitutes pledging the assets of the licensee, will not satisfy the surety requirement for private sector applicants since this provides no additional assurance other than that which already exists through license requirements.

§ 61.63 Financial assurances for institutional controls.

[Top of File]

(a) Prior to the issuance of the license, the applicant shall provide for Commission review and approval a copy of a binding arrangement, such as a lease, between the applicant and the disposal site owner that ensures that sufficient funds will be available to cover the costs of monitoring and any required maintenance during the institutional control period. The binding arrangement will be reviewed periodically by the Commission to ensure that changes in inflation, technology and disposal facility operations are reflected in the arrangements.

(b) Subsequent changes to the binding arrangement specified in paragraph (a) of this section relevant to institutional control shall be submitted to the Commission for approval.

Subpart F--Participation by State Governments and Indian Tribes

[Top of File]

§ 61.70 Scope.

This subpart describes mechanisms through which the Commission will implement a formal request from a State or tribal government to participate in the review of a license application for a land disposal facility. Nothing in this subpart may be construed to bar the State or tribal governing body from participating in subsequent Commission proceedings concerning the license application as provided under Federal law and regulations.

§ 61.71 State and Tribal government consultation.

[Top of File]

Upon request of a State or tribal governing body, the Director shall make available Commission staff to discuss with representatives of the State or tribal governing body information submitted by the applicant, applicable Commission regulations, licensing procedures, potential schedules, and the type and scope of State activities in the license review permitted by law. In addition, staff shall be made available to consult and cooperate with the State or tribal governing body in developing proposals for participation in the license review.

§ 61.72 Filing of proposals for State and Tribal participation.

[Top of File]

(a) A State or tribal governing body whose interest is affected by a near-surface disposal facility at the proposed site may submit to the Director a proposal for participation in the review of a license application. Proposals must be submitted within the following time periods:

(1) For the State in which the disposal facility will be located, or any State that is member of an interstate compact that includes the State in which the disposal facility is located, no later than 45 days following publication in the Federal Register of the notice of tendering of an application submitted under § 61.20.

(2) For any other State, or for a tribal governing body, no later than 120 days following publication in the Federal Register of the notice of tendering of an application submitted under § 61.20.

(b) Proposals for participation in the licensing process must be made in writing and must be signed by the Governor of the State or the official otherwise provided for by State or tribal law.

(c) At a minimum, proposals must contain each of the following items of information:

(1) A general description of how the State or tribe wishes to participate in the licensing process specifically identifying those issues it wishes to review.

(2) A description of material and information which the State or tribe plans to submit to the Commission for consideration in the licensing process. A tentative schedule referencing steps in the review and calendar dates for planned submittals should be included.

(3) A description of any work that the State or tribe proposes to perform for the Commission in support of the licensing process.

(4) A description of State or tribal plans to facilitate local government and citizen participation.

(5) A preliminary estimate of the types and extent of impacts which the State expects, should a disposal facility be located as proposed.

(6) If desired, any requests for educational or information services (seminars, public meetings) or other actions from the Commission such as establishment of additional Public Document Rooms or exchange of State personnel under the Intergovernmental Personnel Act.

§ 61.73 Commission approval of proposals.

[Top of File]

(a) Upon receipt of a proposal submitted in accordance with § 61.72, the Director shall arrange for a meeting between the representatives of the State or tribal governing body and the Commission staff to discuss the proposal and to ensure full and effective participation by the State or tribe in the Commission's license review.

(b) If requested by a State or tribal governing body, the Director may approve all or any part of a proposal if the Director determines that:

(1) The proposed activities are within the scope of Commission statutory responsibility and the type and magnitude of impacts which the State or tribe may bear are sufficient to justify their participation; and

(2) The proposed activities will contribute productively to the licensing review.

(c) The decision of the Director will be transmitted in writing to the governor or the designated official of the tribal governing body.

(d) Participation by a State or Indian tribe shall not affect their rights to participate in an adjudicatory hearing as provided by part 2 of this chapter.

Subpart G--Records, Reports, Tests, and Inspections

[Top of File]

§ 61.80 Maintenance of records, reports, and transfers.

(a) Each licensee shall maintain any records and make any reports in connection with the licensed activities as may be required by the conditions of the license or by the rules, regulations, and orders of the Commission.

(b) Records which are required by the regulations in this part or by license conditions must be maintained for a period specified by the appropriate regulations in this chapter or by license condition. If a retention period is not otherwise specified, these records must be maintained and transferred to the officials specified in paragraph (e) of this section as a condition of license termination unless the Commission otherwise authorizes their disposition.

(c) Records which must be maintained pursuant to this part may be the original or a reproduced copy or a microform if this reproduced copy or microform is capable of producing copy that is clear and legible at the end of the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

(d) If there is a conflict between the Commission's regulations in this part, license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the longest retention period specified takes precedence.

(e) Notwithstanding paragraphs (a) through (d) of this section, the licensee shall record the location and the quantity of radioactive wastes contained in the disposal site and transfer these records upon license termination to the chief executive of the nearest municipality, the chief executive of the county in which the facility is located, the county zoning board or land development and planning agency, the State governor and other State, local, and Federal governmental agencies as designated by the Commission at the time of license termination.

(f) Following receipt and acceptance of a shipment of radioactive waste, the licensee shall record the date that the shipment is received at the disposal facility, the date of disposal of the waste, a traceable shipment manifest number, a description of any engineered barrier or structural overpack provided for disposal of the waste, the location of disposal at the disposal site, the containment integrity of the waste disposal containers as received, any discrepancies between materials listed on the manifest and those received, the volume of any pallets, bracing, or other shipping or onsite generated materials that are contaminated, and are disposed of as contaminated or suspect materials, and any evidence of leaking or damaged disposal containers or radiation or contamination levels in excess of limits specified in Department of Transportation and Commission regulations. The licensee shall briefly describe any repackaging operations of any of the disposal containers included in the shipment, plus any other information required by the Commission as a license condition. The licensee shall retain these records until the Commission transfers or terminates the license that authorizes the activities described in this section.

(g) Each licensee shall comply with the safeguards reporting requirements of §§ 30.55, 40.64, 74.13, and 74.15 of this chapter if the quantities or activities of materials received or transferred exceed the limits of these sections. Inventory reports required by these sections are not required for materials after disposal.

(h) Each licensee authorized to dispose of radioactive waste received from other persons shall file a copy of its financial report or a certified financial statement annually with the Commission in order to update the information base for determining financial qualifications.

(i)(1) Each licensee authorized to dispose of waste materials received from other persons under this part shall submit annual reports to the Director, Office of Federal and State Materials and Environmental Management Programs, by an appropriate method listed in § 60.4 of this chapter, with a copy to the appropriate NRC Regional Office shown in appendix D to part 20 of this chapter. Reports must be submitted by the end of the first calendar quarter of each year for the preceding year.

(2) The reports shall include (i) specification of the quantity of each of the principal radionuclides released to unrestricted areas in liquid and in airborne effluents during the preceding year, (ii) the results of the environmental monitoring program, (iii) a summary of licensee disposal unit survey and maintenance activities, (iv) a summary, by waste class, of activities and quantities of radionuclides disposed of, (v) any instances in which observed site characteristics were significantly different from those described in the application for a license; and (vi) any other information the Commission may require. If the quantities of radioactive materials released during the reporting period, monitoring results, or maintenance performed are significantly different from those expected in the materials previously reviewed as part of the licensing action, the report must cover this specifically.

(j) Each licensee shall report in accordance with the requirements of § 70.52 of this chapter.

(k) Any transfer of byproduct, source, and special nuclear materials by the licensee is subject to the requirements in §§ 30.41, 40.51, and 70.42 of this chapter. Byproduct, source and special nuclear material means materials as defined in these parts, respectively.

(l) In addition to the other requirements of this section, the licensee shall store, or have stored, manifest and other information pertaining to receipt and disposal of radioactive waste in an electronic recordkeeping system.

(1) The manifest information that must be electronically stored is--

(i) That required in 10 CFR part 20, appendix G, with the exception of shipper and carrier telephone numbers and shipper and consignee certifications; and

(ii) That information required in paragraph (f) of this section.

(2) As specified in facility license conditions, the licensee shall report the stored information, or subsets of this information, on a computer-readable medium.

[47 FR 57463, Dec. 27, 1982, as amended at 52 FR 31612, Aug. 21, 1987; 53 FR 19251, May 27, 1988; 58 FR 33891, June 22, 1993; 60

FR 15666, Mar. 27, 1995; 67 FR 78141, Dec. 23. 2002; 68 FR 58814, Oct. 10, 2003; 73 FR 5725, Jan. 31, 2008]

§ 61.81 Tests at land disposal facilities.

[Top of File]

(a) Each licensee shall perform, or permit the Commission to perform, any tests as the Commission deems appropriate or necessary for the administration of the regulations in this part, including tests of:

(1) Radioactive wastes and facilities used for the receipt, storage, treatment, handling and disposal of radioactive wastes.

(2) Radiation detection and monitoring instruments; and

(3) Other equipment and devices used in connection with the receipt, possession, handling, treatment, storage, or disposal of radioactive waste.

§ 61.82 Commission inspections of land disposal facilities.

[Top of File]

(a) Each licensee shall afford to the Commission at all reasonable times opportunity to inspect radioactive waste not yet disposed of, and the premises, equipment, operations, and facilities in which radioactive wastes are received, possessed, handled, treated, stored, or disposed of.

(b) Each licensee shall make available to the Commission for inspection, upon reasonable notice, records kept by it pursuant to the regulations in this chapter. Authorized representatives of the Commission may copy and take away copies of, for the Commission's use, any record required to be kept pursuant to this part.

§ 61.83 Violations.

[Top of File]

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55077, Nov. 24, 1992]

§ 61.84 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 61 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 61 that are not issued under sections 161b, 161i, or 161o for the purposes of Section 223 are as follows: §§ 61.1, 61.2, 61.4, 61.5, 61.6, 61.7, 61.8, 61.10, 61.11, 61.12, 61.13, 61.14, 61.15, 61.16, 61.20, 61.21, 61.22, 61.23, 61.26, 61.30, 61.31, 61.50, 61.51, 61.54, 61.55, 61.58, 61.59, 61.61, 61.63, 61.70, 61.71, 61.72, 61.73, 61.83, and 61.84.

[57 FR 55077, Nov. 24, 1992]

PART 62--CRITERIA AND PROCEDURES FOR EMERGENCY ACCESS TO NON-FEDERAL AND REGIONAL LOW-LEVEL WASTE DISPOSAL FACILITIES

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 62.1 Purpose and scope.

(a) The regulations in this part establish for specific low-level radioactive waste:

(1) Criteria and procedures for granting emergency access under section 6 of the Low-Level Radioactive Waste Policy Amendments Act of 1985 (42 U.S.C. 2021) to any non-Federal or regional low-level radioactive waste (LLW) disposal facility or to any non-Federal disposal facility within a State that is not a member of a Compact, and

(2) The terms and conditions upon which the Commission will grant this emergency access.

(b) The regulations in this part apply to all persons as defined by this regulation, who have been denied access to existing regional or non-Federal low-level radioactive waste disposal facilities and who submit a request to the Commission for a determination pursuant to this part.

(c) The regulations in this part apply only to the LLW that the States have the responsibility to dispose of pursuant to section 3(1)(a) of the Act.

§ 62.2 Definitions.

[Top of File]

As used in this part:

Act means the Low-Level Radioactive Waste Policy Amendments Act of 1985 (Pub. L. 99-240).

Agreement State means a State that --

(1) Has entered into an agreement with the Nuclear Regulatory Commission under section 274 of the Atomic Energy Act of 1954 (42 U.S.C. 2021); and

(2) Has authority to regulate the disposal of low-level radioactive waste under such agreement.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Compact means a Compact entered into by two or more States pursuant to the Low-Level Radioactive Waste Policy Amendments Act of 1985.

Compact Commission means the regional commission, committee, or board established in a Compact to administer such Compact.

Disposal means the permanent isolation of low-level radioactive waste pursuant to the requirements established by the Nuclear Regulatory Commission under applicable laws, or by an Agreement State if such isolation occurs in this Agreement State.

Emergency access means access to an operating non-Federal or regional low-level radioactive waste disposal facility or facilities for a period not to exceed 180 days, which is granted by NRC to a generator of low-level radioactive waste who has been denied the use of those facilities.

Extension of emergency access means an extension of the access that had been previously granted by NRC to an operating non-Federal or regional low-level radioactive waste disposal facility or facilities for a period not to exceed 180 days.

Low-level radioactive waste (LLW) means radioactive material that —

(1) Is not high-level radioactive waste, spent nuclear fuel, or byproduct material (as defined in paragraphs (2), (3), and (4) of the definition of *Byproduct Material* set forth in § 20.1003 of this chapter); and

(2) The NRC, consistent with existing law and in accordance with paragraph (1) of this definition, classifies as low-level radioactive waste.

Non-Federal disposal facility means a low-level radioactive waste disposal facility that is commercially operated or is operated by a State.

Person means any individual, corporation, partnership, firm, association, trust, State, public or private institution, group or agency who is an NRC or NRC Agreement State licensed generator of low-level radioactive waste within the scope of § 62.1(c) of this part; any Governor (or for any State without a Governor, the chief executive officer of the State) on behalf of any NRC or NRC Agreement State licensed generator or generators of low-level radioactive waste within the scope of § 62.1(c) of this part located in his or her State; or their duly authorized representative, legal successor, or agent.

Regional disposal facility means a non-Federal low-level radioactive waste disposal facility in operation on January 1, 1985, or subsequently established and operated under a compact.

State means any State of the United States, the District of Columbia, and the Commonwealth of Puerto Rico.

Temporary emergency access means access that is granted at NRC's discretion under § 62.23 of this part upon determining that access is necessary to eliminate an immediate and serious threat to the public health and safety or the common defense and security. Such access expires 45 days after the granting and cannot be extended.

[72 FR 55933 Oct. 1, 2007]

§ 62.3 Communications.

[Top of File]

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent by mail addressed: ATTN: Document Control Desk, Director, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/eie.html*, by calling (301) 415–6030, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[68 FR 58814, Oct. 10, 2003 as amended at 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 73 FR 5725, Jan. 31, 2008]

§ 62.4 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be considered binding on the Commission.

§ 62.5 Specific exemptions.

[Top of File]

The Commission may, upon application of any interested person or upon its own initiative, grant an exemption from the requirements of the regulations in this part that it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest.

§ 62.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0143.

(b) The approved information collection requirements contained in this part appear in §§ 62.11, 62.12, 62.13, 62.14, and 62.15.

[54 FR 5420, Feb. 3, 1989, as amended at 62 FR 52188, Oct. 6, 1997]

Subpart B--Request for a Commission Determination

[Top of File]

§ 62.11 Filing and distribution of a determination request.

(a) (a) The person submitting a request for a Commission determination shall file a signed original of the request with the Commission at the address specified in § 62.3 of this part, with a copy also provided to the appropriate Regional Administrator at the address specified in appendix D to part 20 of this chapter. The request must be signed by the person requesting the determination or the person's authorized representative under oath or affirmation.

(b) Upon receipt of a request for a determination, the Secretary of the Commission shall publish a notice acknowledging receipt of the request in the Federal Register. The notice must require that public comment on the request be submitted within 10 days of the publication date of the notice. A copy of the request will be made available for inspection or copying at the NRC Web site, http://www.nrc.gov, and/or at the NRC Public Document Room. The Secretary of the Commission shall also transmit a copy of the request to the U.S. Department of Energy, to the Governors of the States of the Compact region where the waste is generated, to the Governors of the States with operating non-Federal low-level radioactive waste disposal facilities, to the Compact Commissions with operating regional low-level radioactive waste disposal facilities, and to the Governors of the States in the Compact Commissions with operating disposal facilities.

(c) Upon receipt of a request for a determination based on a serious and immediate threat to the common defense and security, the Commission will notify DOD and/or DOE and provide a copy of the request as needed for their consideration.

(d) Fees applicable to a request for a Commission determination under this part will be determined in accordance with the procedures set forth for special projects under category 12 of § 170.31 of this chapter.

(e) In the event that the allocations or limitations established in section 5(b) or 6(h) of the Act are met at all operating non-Federal or regional LLW disposal facilities, the Commission may suspend the processing or acceptance of requests for emergency access determinations until additional LLW disposal capacity is authorized by Congress.

[54 FR 5420, Feb. 3, 1989, as amended at 64 FR 48954, Sept. 9, 1999; 68 FR 58815, Oct. 10, 2003]

§ 62.12 Contents of a request for emergency access: General information.

[Top of File]

A request for a Commission determination under this part must include the following information for each generator to which the request applies:

(a) Name and address of the person making the request;

(b) Name and address of the person(s) or company(ies) generating the low-level radioactive waste for which the determination is sought;

(c) A statement indicating whether the generator is basing the request on the grounds of a serious and immediate threat to the public health and safety or the common defense and security;

(d) Certification that the radioactive waste for which emergency access is requested is low-level radioactive waste within § 62.1(c) of this part;

(e) The low-level waste generation facility(ies) producing the waste for which the request is being made;

(f) A description of the activity that generated the waste;

(g) Name of the disposal facility or facilities which had been receiving the waste stream of concern before the generator was denied access;

(h) A description of the low-level radioactive waste for which emergency access is requested, including --

(1) The characteristics and composition of the waste, including, but not limited to --

(i) Type of waste (e.g. solidified oil, scintillation fluid, failed equipment);

(ii) Principal chemical composition;

(iii) Physical state (solid, liquid, gas);

(iv) Type of solidification media; and

(v) Concentrations and percentages of any hazardous or toxic chemicals, chelating agents, or infectious or biological agents associated with the waste;

(2) The radiological characteristics of the waste such as --

(i) The classification of the waste in accordance with 61.55;

(ii) A list of the radionuclides present or potentially present in the waste, their concentration or contamination levels, and total quantity;

(iii) Distribution of the radionuclides within the waste (surface or volume distribution);

(iv) Amount of transuranics (nanocuries/gram);

(3) The minimum volume of the waste requiring emergency access to eliminate the threat to the public health and safety or the common defense and security;

(4) The time duration for which emergency access is requested (not to exceed 180 days);

(5) Type of disposal container or packaging (55 gallon drum, box, liner, etc.); and

(6) Description of the volume reduction and waste minimization techniques applied to the waste which assure that it is reduced to the maximum extent practicable, and the actual reduction in volume that occurred;

(i) Basis for requesting the determination set out in this part, including --

(1) The circumstances that led to the denial of access to existing low-level radioactive waste disposal facilities;

(2) A description of the situation that is responsible for creating the serious and immediate threat to the public health and safety or the common defense and security, including the date when the need for emergency access was identified;

(3) A chronology and description of the actions taken by the person requesting emergency access to prevent the need for making such a request, including consideration of all alternatives set forth in § 62.13 of this part, and any supporting documentation as appropriate;

(4) An explanation of the impacts of the waste on the public health and safety or the common defense and security if emergency access is not granted, and the basis for concluding that these impacts constitute a serious and immediate threat to the public health and safety or the common defense and security. The impacts to the public health and safety or the common defense and security should also be addressed if the generator's services, including research activities, were to be curtailed, either for a limited period of time or indefinitely;

(5) Other consequences if emergency access is not granted;

(j) Steps taken by the person requesting emergency access to correct the situation requiring emergency access and the person's plans to eliminate the need for additional or future emergency access requests;

(k) Documentation certifying that access has been denied;

(l) Documentation that the waste for which emergency access is requested could not otherwise qualify for disposal pursuant to the Unusual Volumes provision (Section 5(c)(5) of the Act) or is not simultaneously under consideration by the Department of Energy (DOE) for access through the Unusual Volumes allocation;

(m) Date by which access is required;

(n) Any other information which the Commission should consider in making its determination.

§ 62.13 Contents of a request for emergency access: Alternatives.

[Top of File]

(a) A request for emergency access under this part must include information on alternatives to emergency access. The request shall include a discussion of the consideration given to any alternatives, including, but not limited to, the following:

(1) Storage of low-level radioactive waste at the site of generation;

(2) Storage of low-level radioactive waste in a licensed storage facility;

(3) Obtaining access to a disposal facility by voluntary agreement;

(4) Purchasing disposal capacity available for assignment pursuant to the Act;

(5) Requesting disposal at a Federal low-level radioactive waste disposal facility in the case of a Federal or defense related generator of

LLW;

(6) Reducing the volume of the waste;

(7) Ceasing activities that generate low-level radioactive waste; and

(8) Other alternatives identified under paragraph (b) of this section.

(b) The request must identify all of the alternatives to emergency access considered, including any that would require State or Compact action, or any others that are not specified in paragraph (a) of this section. The request should also include a description of the process used to identify the alternatives, a description of the factors that were considered in identifying and evaluating them, a chronology of actions taken to identify and implement alternatives during the process, and a discussion of any actions that were considered, but not implemented.

(c) The evaluation of each alternative must consider:

(1) Its potential for mitigating the serious and immediate threat to public health and safety or the common defense and security posed by lack of access to disposal;

(2) The adverse effects on public health and safety and the common defense and security, if any, of implementing each alternative, including the curtailment or cessation of any essential services affecting the public health and safety or the common defense and security;

(3) The technical and economic feasibility of each alternative including the person's financial capability to implement the alternatives;

(4) Any other pertinent societal costs and benefits;

(5) Impacts to the environment;

(6) Any legal impediments to implementation of each alternative, including whether the alternatives will comply with applicable NRC and NRC Agreement States regulatory requirements; and

(7) The time required to develop and implement each alternative.

(d) The request must include the basis for:

(1) Rejecting each alternative; and

(2) Concluding that no alternative is available.

§ 62.14 Contents of a request for an extension of emergency access.

[Top of File]

A request for an extension of emergency access must include:

(a) Updates of the information required in §§ 62.12 and 62.13; and

(b) Documentation that the generator of the low-level radioactive waste granted emergency access and the State in which the low-level radioactive waste was generated have diligently, though unsuccessfully, acted during the period of the initial grant to eliminate the need for emergency access. Documentation must include:

(1) An identification of additional alternatives that have been evaluated during the period of the initial grant, and

(2) A discussion of any reevaluation of previously considered alternatives, including verification of continued attempts to gain access to a disposal facility by voluntary agreement.

§ 62.15 Additional information.

[Top of File]

(a) The Commission may require additional information from a person making a request for a Commission determination under this part concerning any portion of the request.

(b) The Commission shall deny a request for a Commission determination under this part if the person making the request fails to respond to a request for additional information under paragraph (a) of this section within ten (10) days from the date of the request for additional information, or any other time that the Commission may specify. This denial will not prejudice the right of the person making the request to

file another request for a Commission determination under this part.

§ 62.16 Withdrawal of a determination request.

[Top of File]

(a) A person may withdraw a request for a Commission determination under this part without prejudice at any time prior to the issuance of an initial determination under § 62.21 of this part.

(b) The Secretary of the Commission will cause to be published in the Federal Register a notice of the withdrawal of a request for a Commission determination under this part.

§ 62.17 Elimination of repetition.

[Top of File]

In any request under this part, the person making the request may incorporate by reference information contained in a previous application, Statement, or report filed with the Commission provided that these references are updated, clear, and specific.

§ 62.18 Denial of request.

[Top of File]

If a request for a determination is based on circumstances that are too remote and speculative to allow an informed determination, the Commission may deny the request.

Subpart C--Issuance of a Commission Determination

[Top of File]

§ 62.21 Determination for granting emergency access.

(a) Not later than (45) days after the receipt of a request for a Commission determination under this part from any generator of low-level radioactive waste, or any Governor on behalf of any generator or generators located in his or her State, the Commission shall determine whether --

(1) Emergency access to a regional disposal facility or a non-Federal disposal facility within a State that is not a member of a Compact for specific low-level radioactive waste is necessary because of an immediate and serious threat --

(i) To the public health and safety or

(ii) The common defense and security; and

(2) The threat cannot be mitigated by any alternative consistent with the public health and safety, including those identified in § 62.13.

(b) In making a determination under this section, the Commission shall be guided by the criteria set forth in § 62.25 of this part.

(c) A determination under this section must be in writing and contain a full explanation of the facts upon which the determination is based and the reasons for granting or denying the request. An affirmative determination must designate an appropriate non-Federal or regional LLW disposal facility or facilities for the disposal of wastes, specifically describe the low-level radioactive waste as to source, physical and radiological characteristics, and the minimum volume and duration (not to exceed 180 days) necessary to eliminate the immediate threat to public health and safety or the common defense and security. It may also contain conditions upon which the determination is dependent.

§ 62.22 Notice of issuance of a determination.

[Top of File]

(a) Upon the issuance of a Commission determination the Secretary of the Commission will notify in writing the following persons of the final determination: The person making the request, the Governor of the State in which the low-level radioactive waste requiring emergency access was generated, the Governor of the State in which the designated disposal facility is located, and if pertinent, the appropriate Compact Commission for such approval as is specified as necessary in section 6(g) of the Act. For the Governor of the State in which the designated disposal facility is located and for the appropriate Compact Commission, the notification must set forth the reasons that emergency access was granted and specifically describe the low-level radioactive waste as to source, physical and radiological characteristics, and the minimum volume and duration (not to exceed 180 days) necessary to alleviate the immediate and serious threat to public health and safety or the common defense and security. For the Governor of the State in which the low-level waste was generated, the notification must indicate that no extension of emergency access will be granted under § 62.24 of this part absent diligent State and

generator action during the period of the initial grant.

(b) The Secretary of the Commission will cause to be published in the *Federal Register* a notice of the issuance of the determination.

(c) The Secretary of the Commission shall make a copy of the final determination available for inspection at the NRC Web site, *http://www.nrc.gov.*

[54 FR 5420, Feb. 3, 1989, as amended at 64 FR 48954, Sept. 9, 1999]

§ 62.23 Determination for granting temporary emergency access.

[Top of File]

(a) The Commission may grant temporary emergency access to an appropriate non-Federal or regional disposal facility or facilities provided that the determination required under § 62.21(a)(1) of this part is made;

(b) The notification procedures under § 62.22 of this part are complied with; and

(c) The temporary emergency access duration will not exceed forty-five (45) days.

§ 62.24 Extension of emergency access.

[Top of File]

(a) After the receipt of a request from any generator of low-level waste, or any Governor on behalf of any generator or generators in his or her State, for an extension of emergency access that was initially granted under § 62.21, the Commission shall make an initial determination of whether --

(1) Emergency access continues to be necessary because of an immediate and serious threat to the public health and safety or the common defense and security;

(2) The threat cannot be mitigated by any alternative that is consistent with public health and safety; and

(3) The generator of low-level waste and the State have diligently though unsuccessfully acted during the period of the initial grant to eliminate the need for emergency access.

(b) After making a determination pursuant to paragraph (a) of this section, the requirements specified in §§ 62.21(c) and 62.22 of this part, must be followed.

§ 62.25 Criteria for a Commission determination.

[Top of File]

(a) In making the determination required by § 62.21(a) of this part, the Commission will determine whether the circumstances described in the request for emergency access create a serious and immediate threat to the public health and safety or the common defense and security.

(b) In making the determination that a serious and immediate threat exists to the public health and safety, the Commission will consider, notwithstanding the availability of any alternative identified in § 62.13 of this part:

(1) The nature and extent of the radiation hazard that would result from the denial of emergency access, including consideration of --

(i) The standards for radiation protection contained in part 20 of this chapter;

(ii) Any standards governing the release of radioactive materials to the general environment that are applicable to the facility that generated the low level waste; and

(iii) Any other Commission requirements specifically applicable to the facility or activity that is the subject of the emergency access request; and

(2) The extent to which essential services affecting the public health and safety (such as medical, therapeutic, diagnostic, or research activities) will be disrupted by the denial of emergency access.

(c) For purposes of granting temporary emergency access under § 62.23 of this part, the Commission will consider the criteria contained in the Commission's Policy Statement (45 FR 10950, February 24, 1977) for determining whether an event at a facility or activity licensed or otherwise regulated by the Commission is an abnormal occurrence within the purview of section 208 of the Energy Reorganization Act of

1974.

(d) In making the determination that a serious and immediate threat to the common defense and security exists, the Commission will consider, notwithstanding the availability of any alternative identified in § 62.13 of this part:

(1) Whether the activity generating the wastes is necessary to the protection of the common defense and security, and

(2) Whether the lack of access to a disposal site would result in a significant disruption in that activity that would seriously threaten the common defense and security.

The Commission will consider the views of the Department of Defense (DOD) and or the Department of Energy (DOE) regarding the importance of the activities responsible for generating the LLW to the common defense and security, when evaluating requests based all, or in part, on a serious and immediate threat to the common defense and security.

(e) In making the determination required by § 62.21(a)(2) of this part, the Commission will consider whether the person submitting the request --

(1) Has identified and evaluated any alternative that could mitigate the need for emergency access; and

(2) Has considered all pertinent factors in its evaluation of alternatives including state-of-the-art technology and impacts on public health and safety.

(f) In making the determination required by § 62.21(a)(2) of this part, the Commission will consider implementation of an alternative to be unreasonable if:

(1) It adversely affects public health and safety, the environment, or the common defense and security; or

(2) It results in a significant curtailment or cessation of essential services, affecting public health and safety or the common defense and security; or

(3) It is beyond the technical and economic capabilities of the person requesting emergency access; or

(4) Implementation of the alternative would conflict with applicable State or local or Federal laws and regulations; or

(5) It cannot be implemented in a timely manner.

(g) The Commission shall make an affirmative determination under § 62.21(a) of this part only if all of the alternatives that were considered are found to be unreasonable.

(h) As part of its mandated evaluation of the alternatives that were considered by the generator, the Commission shall consider the characteristics of the wastes (including: physical properties, chemical properties, radioactivity, pathogenicity, infectiousness, and toxicity, pyrophoricity, and explosive potential); condition of current container; potential for contaminating the disposal site; the technologies or combination of technologies available for treatment of the waste (including incinerators; evaporators-crystallizers; fluidized bed dryers; thin film evaporators; extruders, evaporators; and Compactors); the suitability of volume reduction equipment to the circumstances (specific activity considerations, actual volume reduction factors, generation of secondary wastes, equipment contamination, effluent releases, worker exposure, and equipment availability); and the administrative controls which could be applied, in making a determination whether waste to be delivered for disposal under this part has been reduced in volume to the maximum extent practicable using available technology.

§ 62.26 Criteria for designating a disposal facility.

[Top of File]

(a) The Commission shall designate an appropriate non-Federal or regional disposal facility if an affirmative determination is made pursuant to §§ 62.21, 62.23, or 62.24 of this part.

(b) The Commission will exclude a disposal facility from consideration if:

(1) The low-level radioactive wastes of the generator do not meet the criteria established by the license agreement or the license agreement of the facility; or

(2) The disposal facility is in excess of its approved capacity; or

(3) Granting emergency access would delay the closing of the disposal facility pursuant to plans established before the receipt of the request for emergency access; or

(4) The volume of waste requiring emergency access exceeds 20 percent of the total volume of low-level radioactive waste accepted for disposal at the facility during the previous calendar year.

(c) If, after applying the exclusionary criteria in paragraph (b) of this section, more than one disposal facility is identified as appropriate for designation, the Commission will then consider additional factors in designating a facility or facilities including --

(1) Type of waste and its characteristics,

(2) Previous disposal practices,

(3) Transportation

(4) Radiological effects,

(5) Site capability for handling waste,

(6) The volume of emergency access waste previously accepted by each site both for the particular year and overall, and

(7) Any other considerations deemed appropriate by the Commission.

(d) The Commission, in making its designation, will also consider any information submitted by the operating non-Federal or regional LLW disposal sites, or any information submitted by the public in response to a Federal Register notice requesting comment, as provided in paragraph (b) of § 62.11 of this part.

Subpart D--Termination of Emergency Access

[Top of File]

§ 62.31 Termination of emergency access.

(a) The Commission may terminate a grant of emergency access when emergency access is no longer necessary to eliminate an immediate threat to public health and safety or the common defense and security.

(b) The Commission may terminate a grant of emergency access if an applicant has provided inaccurate information in its application for emergency access or if the applicant has failed to comply with this part or any conditions set by the Commission pursuant to this part.

PART 63--DISPOSAL OF HIGH-LEVEL RADIOACTIVE WASTES IN A GEOLOGIC REPOSITORY AT YUCCA MOUNTAIN, NEVADA

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 63.1 Purpose and scope

This part prescribes rules governing the licensing (including issuance of a construction authorization) of the U.S. Department of Energy to receive and possess source, special nuclear, and byproduct material at a geologic repository operations area sited, constructed, or operated at Yucca Mountain, Nevada, in accordance with the Nuclear Waste Policy Act of 1982, as amended, and the Energy Policy Act of 1992. As provided in 10 CFR 60.1, the regulations in part 60 of this chapter do not apply to any activity licensed under another part of this chapter. This part also gives notice to all persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 63.11.

[69 FR 2280, Jan. 14, 2004]

§ 63.2 Definitions

[Top of File]

As used in this part:

Affected Indian Tribe means any Indian Tribe within whose reservation boundaries a repository for high-level radioactive waste or spent fuel is proposed to be located; or whose Federally-defined possessory or usage rights to other lands outside of the reservation's boundaries arising out of Congressionally-ratified treaties or other Federal law may be substantially and adversely affected by the location of the facility if the Secretary of the Interior finds, on the petition of the appropriate governmental officials of the Tribe, that the effects are both substantial and adverse to the Tribe.

Barrier means any material, structure, or feature that, for a period to be determined by NRC, prevents or substantially reduces the rate of movement of water or radionuclides from the Yucca Mountain repository to the accessible environment, or prevents the release or substantially reduces the release rate of radionuclides from the waste. For example, a barrier may be a geologic feature, an engineered structure, a canister, a waste form with physical and chemical characteristics that significantly decrease the mobility of radionuclides, or a material placed over and around the waste, provided that the material substantially delays movement of water or radionuclides.

Commencement of construction means clearing of land, surface or subsurface excavation, or other substantial action that would adversely affect the environment of a site. It does not include changes desirable for the temporary use of the land for public recreational uses, site characterization activities, other preconstruction monitoring and investigation necessary to establish background information related to the suitability of the Yucca Mountain site or to the protection of environmental values, or procurement or manufacture of components of the geologic repository operations area.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Containment means the confinement of radioactive waste within a designated boundary.

Design bases means that information that identifies the specific functions to be performed by a structure, system, or component of a facility and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be constraints derived from generally accepted "state-of-the-art" practices for achieving functional goals or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure, system, or component must meet its functional goals. The values for controlling parameters for external events include:

(1) Estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved; and

(2) Estimates of severe external human-induced events to be used for deriving design bases, that will be based on analysis of human activity in the region, taking into account the site characteristics and the risks associated with the event.

Director means the Director of the Nuclear Regulatory Commission's Office of Nuclear Material Safety and Safeguards.

Disposal means the emplacement of radioactive waste in a geologic repository with the intent of leaving it there permanently.

DOE means the U.S. Department of Energy or its duly authorized representatives.

Engineered barrier system means the waste packages, including engineered components and systems other than the waste package (e.g., drip shields), and the underground facility.

Event sequence means a series of actions and/or occurrences within the natural and engineered components of a geologic repository operations area that could potentially lead to exposure of individuals to radiation. An event sequence includes one or more initiating events and associated combinations of repository system component failures, including those produced by the action or inaction of operating personnel. Those event sequences that are expected to occur one or more times before permanent closure of the geologic repository operations area are referred to as Category 1 event sequences. Other event sequences that have at least one chance in 10,000 of occurring before permanent closure are referred to as Category 2 event sequences.

Geologic repository means a system that is intended to be used for, or may be used for, the disposal of radioactive wastes in excavated geologic media. A geologic repository includes the engineered barrier system and the portion of the geologic setting that provides isolation of the radioactive waste.

Geologic repository operations area means a high-level radioactive waste facility that is part of a geologic repository, including both surface and subsurface areas, where waste handling activities are conducted.

Geologic setting means the geologic, hydrologic, and geochemical systems of the region in which a geologic repository is or may be located.

High-level radioactive waste or *HLW means*:

(1) The highly radioactive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations;

(2) Irradiated reactor fuel; and

(3) Other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation.

HLW facility means a facility subject to the licensing and related regulatory authority of the Commission pursuant to sections 202(3) and 202 (4) of the Energy Reorganization Act of 1974 (88 Stat. 1244).[1]

Host rock means the geologic medium in which the waste is emplaced.

Important to safety, with reference to structures, systems, and components, means those engineered features of the geologic repository operations area whose function is:

(1) To provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the requirements of § 63.111(b)(1) for Category 1 event sequences; or

(2) To prevent or mitigate Category 2 event sequences that could result in radiological exposures exceeding the values specified at § 63.111 (b)(2) to any individual located on or beyond any point on the boundary of the site.

Important to waste isolation, with reference to design of the engineered barrier system and characterization of natural barriers, means those engineered and natural barriers whose function is to provide a reasonable expectation that high-level waste can be disposed of without exceeding the requirements of § 63.113(b) and (c).

Initiating event means a natural or human induced event that causes an event sequence.

Isolation means inhibiting the transport of radioactive material to:

(1) The location of the reasonably maximally exposed individual so that radiological exposures will not exceed the requirements of § 63.113 (b); and

(2) The accessible environment so that releases of radionuclides into the accessible environment will not exceed the requirements of § 63.113(c).

Performance assessment means an analysis that:

(1) Identifies the features, events, processes (except human intrusion), and sequences of events and processes (except human intrusion) that might affect the Yucca Mountain disposal system and their probabilities of occurring;

(2) Examines the effects of those features, events, processes, and sequences of events and processes upon the performance of the Yucca Mountain disposal system; and

(3) Estimates the dose incurred by the reasonably maximally exposed individual, including the associated uncertainties, as a result of releases caused by all significant features, events, processes, and sequences of events and processes, weighted by their probability of occurrence.

Performance confirmation means the program of tests, experiments, and analyses that is conducted to evaluate the adequacy of the information used to demonstrate compliance with the performance objectives in subpart E of this part.

Permanent closure means final backfilling of the underground facility, if appropriate, and the sealing of shafts, ramps, and boreholes.

Preclosure safety analysis means a systematic examination of the site; the design; and the potential hazards, initiating events and event sequences and their consequences (e.g., radiological exposures to workers and the public). The analysis identifies structures, systems, and components important to safety.

Public Document Room means the place at One White Flint North, 11555 Rockville Pike, Room O-1F13, Rockville, MD, at which records of the Commission will ordinarily be made available for public inspection and any other place, the location of which has been published in the *Federal Register*, at which public records of the Commission pertaining to a geologic repository at the Yucca Mountain site are made available for public inspection.

Publicly Available Records System (PARS) Library means the electronic library generated by the NRC's Agencywide Documents Access and Management System (ADAMS) to provide access to public documents. PARS has full text documents which can be searched using specific fields and parameters. The public can search, download, print, create reports, and order documents online. The PARS Library contains publicly available documents created or received by NRC since November 1, 1999, as well as some older documents that the NRC has retrofit into the collection. PARS is accessible from the NRC Web site at *http://www.nrc.gov/reading-rm.html*.

Radioactive waste or *waste* means HLW and radioactive materials other than HLW that are received for emplacement in a geologic repository.

Reasonably maximally exposed individual means the hypothetical person meeting the criteria specified at § 63.312.

Reference biosphere means the description of the environment inhabited by the reasonably maximally exposed individual. The reference biosphere comprises the set of specific biotic and abiotic characteristics of the environment, including, but not necessarily limited to, climate, topography, soils, flora, fauna, and human activities.

Restricted area means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set aside as a restricted area.

Retrieval means the act of permanently removing radioactive waste from the underground location at which the waste had been previously emplaced for disposal.

Saturated zone means that part of the earth's crust beneath the regional water table in which statistically all voids, large and small, are filled with water under pressure greater than atmospheric.

Site means that area surrounding the geologic repository operations area for which DOE exercises authority over its use in accordance with the provisions of this part.

Site characterization means the program of exploration and research, both in the laboratory and in the field, undertaken to establish the geologic conditions and the ranges of those parameters of the Yucca Mountain site, and the surrounding region to the extent necessary, relevant to the procedures under this part. Site characterization includes borings, surface excavations, excavation of exploratory shafts and/or ramps, limited subsurface lateral excavations and borings, and in situ testing at depth needed to determine the suitability of the site for a geologic repository.

Total effective dose equivalent (TEDE) means the sum of the effective dose equivalent (for external exposures) and the committed effective dose equivalent (for internal exposures).

Underground facility means the underground structure, backfill materials, if any, and openings that penetrate the underground structure (e.g., ramps, shafts, and boreholes, including their seals).

Unrestricted area means an area, access to which is neither limited nor controlled by the licensee.

Unsaturated zone means the zone between the land surface and the regional water table. Generally, fluid pressure in this zone is less than atmospheric pressure, and some of the voids may contain air or other gases at atmospheric pressure. Beneath flooded areas or in perched water bodies, the fluid pressure locally may be greater than atmospheric.

Waste form means the radioactive waste materials and any encapsulating or stabilizing matrix.

Waste package means the waste form and any containers, shielding, packing, and other absorbent materials immediately surrounding an individual waste container.

Water table means that surface in a ground-water body, separating the unsaturated zone from the saturated zone, at which the water pressure is atmospheric.

[68 FR 58815, Oct. 10, 2003; 74 FR 10828, Mar. 13, 2009]

[1] These are DOE "facilities used primarily for the receipt and storage of high-level radioactive wastes resulting from activities licensed under such Act (the Atomic Energy Act)" and "Retrievable Surface Storage Facilities and other facilities authorized for the express purpose of subsequent long-term storage of high-level radioactive wastes generated by (DOE), which are not used for, or are part of, research and development activities."

§ 63.3 License required.

[Top of File]

(a) DOE may not receive nor possess source, special nuclear, or byproduct material at a geologic repository operations area at the Yucca Mountain site except as authorized by a license issued by the Commission under this part.

(b) DOE may not begin construction of a geologic repository operations area at the Yucca Mountain site unless it has filed an application with the Commission and has obtained construction authorization as provided in this part. Failure to comply with this requirement is grounds for denial of a license.

§ 63.4 Communications and records.

[Top of File]

(a) Except as otherwise specified, in this part or in subpart J of part 2 of this chapter, all communications and reports concerning the regulations in this part and applications filed under them should be sent to the NRC as follows:

(1) By mail addressed: ATTN: Document Control Desk; Director, Office of Nuclear Material Safety and Safeguards; U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001;

(2) By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; ATTN: Document Control Desk: Director, Office of Nuclear Material Safety and Safeguards; or,

(3) Where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(b) Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform if the copy or microform is authenticated by authorized personnel and the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[68 FR 58815, Oct. 10, 2003 as amended at 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 63.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel is binding on the Commission.

§ 63.6 Exemptions.

[Top of File]

The Commission may, upon application by DOE, any interested person, or upon its own initiative, grant an exemption from the requirements of this part if it determines that the exemption is authorized by law, does not endanger life nor property nor the common defense and security, and is otherwise in the public interest.

§ 63.7 License not required for certain preliminary activities.

[Top of File]

The requirement for a license set forth in § 63.3(a) is not applicable to the extent that DOE receives and possesses source, special nuclear, and byproduct material at a geologic repository at the Yucca Mountain site:

(a) For purposes of site characterization; or

(b) For use, during site characterization or construction, as components of radiographic, radiation monitoring, or similar equipment or instrumentation.

§ 63.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501, et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0199.

(b) The approved information collection requirements contained in this Part appear in §§ 63.47, 63.62, 63.63, and 63.65.

(c) In § 63.47, Form N–71 and associated forms are approved under control number 3150–0056, and DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control numbers 0694–0135.

[73 FR 78606, Dec. 23, 2008]

§ 63.9 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant, against an employee, for engaging in certain protected activities, is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission, or his or her employer, information about alleged violations of either of the statutes named in paragraph (a) of this section or possible violations of requirements imposed under either of those aforementioned statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) of this section, or under these requirements, if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) of this section;

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section does not apply to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a), (e), or (f) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant may be grounds for--

(1) Denial, revocation, or suspension of the license;

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant; or

(3) Other enforcement action.

(d) Actions taken by an employer, or others, that adversely affect an employee, may be predicated on nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) Each licensee and each applicant for a license shall prominently post the revision of NRC Form 3, "Notice to Employees," referenced in § 19.11(c) of this chapter. This form must be posted at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(2) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by accessing the NRC Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision that would prohibit, restrict, or otherwise discourage an employee from participating in a protected activity as defined in paragraph (a)(1) of this section, including, but not limited to, providing information to NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[68 FR 58815, Oct. 10, 2003; 72 FR 63974, Nov. 14, 2007]

§ 63.10 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a license or by a licensee, or information required by statute, or required by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee must be complete and accurate in all material respects.

(b) The applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having, for the regulated activity, a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification must be provided to the Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, within 2 working days of identifying the information. This requirement is not applicable to information that is already required to be provided to the Commission by other reporting or updating requirements.

§ 63.11 Deliberate misconduct.

[Top of File]

(a) Any licensee, applicant for a license, employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to NRC, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

Subpart B--Licenses

[Top of File]

Preapplication Review

§ 63.15 Site characterization.

(a) DOE shall conduct a program of site characterization with respect to the Yucca Mountain site before it submits an application for a license to be issued under this part.

(b) DOE shall conduct the investigations to obtain the required information in a manner that limits adverse effects on the long-term performance of the geologic repository at Yucca Mountain to the extent practical.

§ 63.16 Review of site characterization activities.[2]

[Top of File]

(a) If DOE's planned site characterization activities include onsite testing with radioactive material, including radioactive tracers, the Commission shall determine whether the proposed use of such radioactive material is necessary to provide data for the preparation of the environmental reports required by law and for an application to be submitted under § 63.22.

(b) During the conduct of site characterization activities at the Yucca Mountain site, DOE shall report the nature and extent of the activities, the information that has been developed, and the progress of waste form and waste package research and development to the Commission not less than once every 6 months. The semiannual reports must include the results of site characterization studies, the identification of new issues, plans for additional studies to resolve new issues, elimination of planned studies no longer necessary, identification of decision points reached, and modifications to schedules, where appropriate. DOE shall also report its progress in developing the design of a geologic repository operations area appropriate for the area being characterized, noting when key design parameters or features that depend on the results of site characterization will be established. Other topics related to site characterization must also be covered if requested by the Director.

(c) During the conduct of site characterization activities at the Yucca Mountain site, NRC staff shall be permitted to visit and inspect the locations at which such activities are carried out and to observe excavations, borings, and in situ tests, as they are done.

(d) The Director may comment at any time in writing to DOE, expressing current views on any aspect of site characterization or performance assessment at the Yucca Mountain site. In particular, the Director shall comment whenever he or she determines that there are substantial grounds for making recommendations or stating objections to DOE's site characterization program. The Director shall invite public comment on any comments that the Director makes to DOE on review of the DOE semiannual reports or on any other comments that the Director makes to DOE on site characterization and performance assessment by placing the comments in a public forum to allow the public to comment on them after the Director's comments are sent to DOE.

(e) The Director shall transmit copies of all comments to DOE made by the Director under this section to the Governor and legislature of the State of Nevada and to the governing body of any affected Indian Tribe.

(f) The NRC shall place all correspondence between DOE and NRC resulting from the requirements of this section, including the reports described in paragraph (b) of this section, in the Publicly Available Records System (PARS) Library.

(g) The activities described in paragraphs (a) through (f) of this section constitute informal conference between a prospective applicant and the NRC staff, as described in § 2.101(a)(1) of this chapter, and are not part of a proceeding under the Atomic Energy Act of 1954, as amended. Accordingly, the issuance of the Director's comments made under this section does not constitute a commitment to issue any authorization or license, or in any way affect the authority of the Commission, Atomic Safety and Licensing Board, other presiding officers, or the Director, in any such proceeding.

[68 FR 58815, Oct. 10, 2003]

[2] In addition to the review of site characterization activities specified in this section, the Commission contemplates an ongoing review of other information on site investigation and site characterization, to allow early identification of potential licensing issues for timely resolution at the staff level.

License Application

[Top of File]

§ 63.21 Content of application.

(a) An application consists of general information and a Safety Analysis Report. An environmental impact statement must be prepared in accordance with the Nuclear Waste Policy Act of 1982, as amended, and must accompany the application. Any Restricted Data or National Security Information must be separated from unclassified information. The application must be as complete as possible in the light of information that is reasonably available at the time of docketing.

(b) The general information must include:

(1) A general description of the proposed geologic repository at the Yucca Mountain site, identifying the location of the geologic repository operations area, the general character of the proposed activities, and the basis for the exercise of the Commission's licensing authority.

(2) Proposed schedules for construction, receipt of waste, and emplacement of wastes at the proposed geologic repository operations area.

(3) A description of the detailed security measures for physical protection of high-level radioactive waste in accordance with § 73.51 of this chapter. This plan must include the design for physical protection, the licensee's safeguards contingency plan, and security organization personnel training and qualification plan. The plan must list tests, inspections, audits, and other means to be used to demonstrate compliance with such requirements.

(4) A description of the material control and accounting program to meet the requirements of § 63.78.

(5) A description of work conducted to characterize the Yucca Mountain site.

(c) The Safety Analysis Report must include:

(1) A description of the Yucca Mountain site, with appropriate attention to those features, events, and processes of the site that might affect design of the geologic repository operations area and performance of the geologic repository. The description of the site must include information regarding features, events, and processes outside of the site to the extent the information is relevant and material to safety or performance of the geologic repository. The information referred to in this paragraph must include:

(i) The location of the geologic repository operations area with respect to the boundary of the site;

(ii) Information regarding the geology, hydrology, and geochemistry of the site, including geomechanical properties and conditions of the host rock;

(iii) Information regarding surface water hydrology, climatology, and meteorology of the site; and

(iv) Information regarding the location of the reasonably maximally exposed individual, and regarding local human behaviors and characteristics, as needed to support selection of conceptual models and parameters used for the reference biosphere and reasonably maximally exposed individual.

(2) Information relative to materials of construction of the geologic repository operations area (including geologic media, general arrangement, and approximate dimensions), and codes and standards that DOE proposes to apply to the design and construction of the geologic repository operations area.

(3) A description and discussion of the design of the various components of the geologic repository operations area and the engineered barrier system including:

(i) Dimensions, material properties, specifications, analytical and design methods used along with any applicable codes and standards;

(ii) The design criteria used and their relationships to the preclosure and postclosure performance objectives specified at § 63.111(b), § 63.113(b), and § 63.113(c); and

(iii) The design bases and their relation to the design criteria.

(4) A description of the kind, amount, and specifications of the radioactive material proposed to be received and possessed at the geologic repository operations area at the Yucca Mountain site.

(5) A preclosure safety analysis of the geologic repository operations area, for the period before permanent closure, to ensure compliance with § 63.111(a), as required by § 63.111(c). For the purposes of this analysis, it is assumed that operations at the geologic repository operations area will be carried out at the maximum capacity and rate of receipt of radioactive waste stated in the application.

(6) A description of the program for control and monitoring of radioactive effluents and occupational radiological exposures to maintain such effluents and exposures in accordance with the requirements of § 63.111.

(7) A description of plans for retrieval and alternate storage of the radioactive wastes, should retrieval be necessary.

(8) A description of design considerations that are intended to facilitate permanent closure and decontamination or decontamination and dismantlement of surface facilities.

(9) An assessment to determine the degree to which those features, events, and processes of the site that are expected to materially affect compliance with § 63.113--whether beneficial or potentially adverse to performance of the geologic repository--have been characterized, and the extent to which they affect waste isolation. Investigations must extend from the surface to a depth sufficient to determine principal pathways for radionuclide migration from the underground facility. Specific features, events, and processes of the geologic setting must be investigated outside of the site if they affect performance of the geologic repository.

(10) An assessment of the anticipated response of the geomechanical, hydrogeologic, and geochemical systems to the range of design thermal loadings under consideration, given the pattern of fractures and other discontinuities and the heat transfer properties of the rock mass and water.

(11) An assessment of the ability of the proposed geologic repository to limit radiological exposures to the reasonably maximally exposed individual for the period after permanent closure, as required by § 63.113(b).

(12) An assessment of the ability of the proposed geologic repository to limit releases of radionuclides into the accessible environment as required by § 63.113(c).

(13) An assessment of the ability of the proposed geologic repository to limit radiological exposures to the reasonably maximally exposed individual for the period after permanent closure in the event of human intrusion into the engineered barrier system as required by § 63.113 (d).

(14) An evaluation of the natural features of the geologic setting and design features of the engineered barrier system that are considered barriers important to waste isolation as required by § 63.115.

(15) An explanation of measures used to support the models used to provide the information required in paragraphs (c)(9) through (c)(14) of this section. Analyses and models that will be used to assess performance of the geologic repository must be supported by using an appropriate combination of such methods as field tests, in situ tests, laboratory tests that are representative of field conditions, monitoring data, and natural analog studies.

(16) An identification of those structures, systems, and components of the geologic repository, both surface and subsurface, that require research and development to confirm the adequacy of design. For structures, systems, and components important to safety and for the engineered and natural barriers important to waste isolation, DOE shall provide a detailed description of the programs designed to resolve safety questions, including a schedule indicating when these questions would be resolved.

(17) A description of the performance confirmation program that meets the requirements of subpart F of this part.

(18) An identification and justification for the selection of those variables, conditions, or other items that are determined to be probable subjects of license specifications. Special attention must be given to those items that may significantly influence the final design.

(19) An explanation of how expert elicitation was used.

(20) A description of the quality assurance program to be applied to the structures, systems, and components important to safety and to the engineered and natural barriers important to waste isolation. The description of the quality assurance program must include a discussion of how the applicable requirements of § 63.142 will be satisfied.

(21) A description of the plan for responding to, and recovering from, radiological emergencies that may occur at any time before permanent closure and decontamination or decontamination and dismantlement of surface facilities, as required by § 63.161.

(22) The following information concerning activities at the geologic repository operations area:

(i) The organizational structure of DOE as it pertains to construction and operation of the geologic repository operations area, including a description of any delegations of authority and assignments of responsibilities, whether in the form of regulations, administrative directives, contract provisions, or otherwise.

(ii) Identification of key positions that are assigned responsibility for safety at and operation of the geologic repository operations area.

(iii) Personnel qualifications and training requirements.

(iv) Plans for startup activities and startup testing.

(v) Plans for conduct of normal activities, including maintenance, surveillance, and periodic testing of structures, systems, and components of the geologic repository operations area.

(vi) Plans for permanent closure and plans for the decontamination or decontamination and dismantlement of surface facilities.

(vii) Plans for any uses of the geologic repository operations area at the Yucca Mountain site for purposes other than disposal of radioactive wastes, with an analysis of the effects, if any, that such uses may have on the operation of the structures, systems, and components important to safety and the engineered and natural barriers important to waste isolation.

(23) A description of the program to be used to maintain the records described in §§ 63.71 and 63.72.

(24) A description of the controls that DOE will apply to restrict access and to regulate land use at the Yucca Mountain site and adjacent areas, including a conceptual design of monuments that would be used to identify the site after permanent closure.

(d) The applicant for a license to receive and possess source, special nuclear, and byproduct material at a geologic repository at Yucca

Mountain, Nevada, shall protect Safeguards Information in accordance with the requirements in § 73.21, and the requirements in § 73.22, or § 73.23 of this chapter, as applicable, and shall protect classified information in accordance with the requirements of parts 25 and 95 of this chapter, as applicable.

[73 FR 63572, Oct. 24, 2008]

§ 63.22 Filing and distribution of application.

[Top of File]

(a) An application for a construction authorization for a high- level radioactive waste repository at a geologic repository operations area at Yucca Mountain, and an application for a license to receive and possess source, special nuclear, or byproduct material at a geologic repository operations area at the Yucca Mountain site that has been characterized, any amendments to the application, and an accompanying environmental impact statement and any supplements, must be signed by the Secretary of Energy or the Secretary's authorized representative and must be filed with the Director in triplicate on paper and optical storage media.

(b) DOE shall submit 30 additional copies, on paper and optical storage media, of each portion of the application and any amendments, and each environmental impact statement and any supplements. DOE shall maintain the capability to generate additional copies for distribution in accordance with written instructions from the Director or the Director's designee.

(c) On notification of the appointment of an Atomic Safety and Licensing Board, DOE shall update the application, eliminating all superseded information, and supplement the environmental impact statement if necessary, and serve the updated application and environmental impact statement (as it may have been supplemented) as directed by the Board. Any subsequent amendments to the application or supplements to the environmental impact statement must be served in the same manner.

(d) When an application, and any amendment to it is filed, copies on paper and optical storage media must be made available in appropriate locations near the proposed geologic repository operations areas at the Yucca Mountain site for inspection by the public. These copies must be updated as amendments to the application are made. The environmental impact statement and any supplements to it must be made available in the same manner. An updated copy of the application, and the environmental impact statement and supplements, must be produced at any public hearing held by the Commission on the application for use by any party to the proceeding.

(e) DOE shall certify that the updated copies of the application, and the environmental impact statement as it may have been supplemented, as referred to in paragraphs (c) and (d) of this section, contain the current contents of these documents submitted as required by this part.

[68 FR 58815, Oct. 10, 2003; 69 FR 2280, Jan. 14, 2004]

§ 63.23 Elimination of repetition.

[Top of File]

In its application or environmental impact statement, DOE may incorporate, by reference, information contained in previous applications, statements, or reports filed with the Commission, if the references are clear and specific and copies of the information incorporated are made available to the public locations near the site of the proposed geologic repository, as specified in § 63.22(d).

§ 63.24 Updating of application and environmental impact statement.

[Top of File]

(a) The application must be as complete as possible in light of the information that is reasonably available at the time of docketing.

(b) DOE shall update its application in a timely manner so as to permit the Commission to review, before issuance of a license--

(1) Additional geologic, geophysical, geochemical, hydrologic, meteorologic, materials, design, and other data obtained during construction;

(2) Conformance of construction of structures, systems, and components with the design;

(3) Results of research programs carried out to confirm the adequacy of designs, conceptual models, parameter values, and estimates of performance of the geologic repository.

(4) Other information bearing on the Commission's issuance of a license that was not available at the time a construction authorization was issued.

(c) DOE shall supplement its environmental impact statement in a timely manner so as to take into account the environmental impacts of any substantial changes in its proposed actions or any significant new circumstances or information relevant to environmental concerns bearing on the proposed action or its impacts.

Construction Authorization

[Top of File]

§ 63.31 Construction authorization

On review and consideration of an application and environmental impact statement submitted under this part, the Commission may authorize construction of a geologic repository operations area at the Yucca Mountain site if it determines:

(a) *Safety.*

(1) That there is reasonable assurance that the types and amounts of radioactive materials described in the application can be received and possessed in a geologic repository operations area of the design proposed without unreasonable risk to the health and safety of the public; and

(2) That there is reasonable expectation that the materials can be disposed of without unreasonable risk to the health and safety of the public.

(3) In arriving at these determinations, the Commission shall consider whether--

(i) DOE has described the proposed geologic repository as specified at § 63.21;

(ii) The site and design comply with the performance objectives and requirements contained in subpart E of this part;

(iii) DOE's quality assurance program complies with the requirements of subpart G of this part;

(iv) DOE's personnel training program complies with the criteria contained in subpart H of this part;

(v) DOE's emergency plan complies with the criteria contained in subpart I of this part; and

(vi) DOE's proposed operating procedures to protect health and to minimize danger to life or property are adequate.

(b) *Common defense and security.* That there is reasonable assurance that the activities proposed in the application will not be inimical to the common defense and security.

(c) Environmental. That, after weighing the environmental, economic, technical, and other benefits against environmental costs, and considering available alternatives, the action called for is the issuance of the construction authorization, with any appropriate conditions to protect environmental values.

§ 63.32 Conditions of construction authorization.

[Top of File]

(a) In a construction authorization for a geologic repository operations area at the Yucca Mountain site, the Commission shall include any conditions it considers necessary to protect the health and safety of the public, the common defense and security, or environmental values.

(b) The Commission shall incorporate provisions in the construction authorization requiring DOE to furnish periodic or special reports regarding:

(1) Progress of construction;

(2) Any data about the site, obtained during construction, that are not within the predicted limits on which the facility design was based;

(3) Any deficiencies, in design and construction, that, if uncorrected, could adversely affect safety at any future time; and

(4) Results of research and development programs being conducted to resolve safety questions.

(c) The construction authorization for a geologic repository operations area at the Yucca Mountain site will include restrictions on subsequent changes to the features of the geologic repository and the procedures authorized. The restrictions that may be imposed under this paragraph can include measures to prevent adverse effects on the geologic setting as well as measures related to the design and construction of the geologic repository operations area. These restrictions will fall into three categories of descending importance to public health and safety, as follows:

(1) Those features and procedures that may not be changed without--

(i) 60 days prior notice to the Commission;

(ii) 30 days notice of opportunity for a prior hearing; and

(iii) Prior Commission approval;

(2) Those features and procedures that may not be changed without--

(i) 60 days prior notice to the Commission; and

(ii) Prior Commission approval; and

(3) Those features and procedures that may not be changed without 60 days notice to the Commission. Features and procedures falling in this paragraph section may not be changed without prior Commission approval if the Commission, after having received the required notice, so orders.

(d) A construction authorization must be subject to the limitation that a license to receive and possess source, special nuclear, or byproduct material at the Yucca Mountain site geologic repository operations area may not be issued by the Commission until;

(1) DOE has updated its application, as specified at § 63.24; and

(2) The Commission has made the findings stated in § 63.41.

§ 63.33 Amendment of construction authorization.

[Top of File]

(a) An application for amendment of a construction authorization must be filed with the Commission that fully describes any desired changes and follows, as far as applicable, the content requirements prescribed in § 63.21.

(b) In determining whether an amendment of a construction authorization will be approved, the Commission will be guided by the considerations that govern the issuance of the initial construction authorization, to the extent applicable.

License Issuance and Amendment

[Top of File]

§ 63.41 Standards for issuance of a license.

A license to receive and possess source, special nuclear, or byproduct material at a geologic repository operations area at the Yucca Mountain site may be issued by the Commission on finding that--

(a) Construction of the geologic repository operations area has been substantially completed in conformity with the application as amended, the provisions of the Atomic Energy Act, and the rules and regulations of the Commission. Construction may be considered substantially complete for the purposes of this paragraph if the construction of--

(1) Surface and interconnecting structures, systems, and components; and

(2) Any underground storage space required for initial operation, are substantially complete.

(b) The activities to be conducted at the geologic repository operations area will be in conformity with the application as amended, the provisions of the Atomic Energy Act and the Energy Reorganization Act, and the rules and regulations of the Commission.

(c) The issuance of the license will not be inimical to the common defense and security and will not constitute an unreasonable risk to the health and safety of the public.

(d) Adequate protective measures can and will be taken in the event of a radiological emergency at any time before permanent closure and decontamination or decontamination and dismantlement of surface facilities.

(e) All applicable requirements of part 51 of this chapter have been satisfied.

§ 63.42 Conditions of license.

[Top of File]

(a) The Commission shall include any conditions, including license specifications, it considers necessary to protect the health and safety of the public, the common defense and security, and environmental values in a license issued under this part.

(b) Whether stated in the license or not, the following are considered to be conditions in every license issued:

(1) The license is subject to revocation, suspension, modification, or amendment for cause, as provided by the Atomic Energy Act and the Commission's regulations.

(2) DOE shall, at any time while the license is in effect, on written request of the Commission, submit written statements to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.

(3) The license is subject to the provisions of the Atomic Energy Act now or hereafter in effect and to all rules, regulations, and orders of the Commission. The terms and conditions of the license are subject to amendment, revision, or modification, by reason of amendments to or by reason of rules, regulations, and orders issued in accordance with the terms of the Atomic Energy Act.

(c) Each license includes the provisions set forth in section 183 b-d, inclusive, of the Atomic Energy Act, whether or not these provisions are expressly set forth in the license.

(d) A license issued under this part includes the provisions set forth in section 114(d) of the Nuclear Waste Policy Act, as amended, defining the quantity of solidified high-level radioactive waste and spent nuclear fuel, until such time as a second repository is in operation, whether or not these provisions are expressly set forth in the license.

(e) The licensee (Department of Energy) shall ensure that Safeguards Information is protected against unauthorized disclosure in accordance with the requirements in § 73.21, and the requirements in § 73.22, or § 73.23 of this chapter, as applicable, and shall protect classified information in accordance with the requirements of parts 25 and 95 of this chapter, as applicable.

[73 FR 63572, Oct. 24, 2008]

§ 63.43 License specification.

[Top of File]

(a) A license issued under this part includes license conditions derived from the analyses and evaluations included in the application, including amendments made before a license is issued, together with any additional conditions the Commission finds appropriate.

(b) License conditions include items in the following categories:

(1) Restrictions as to the physical and chemical form and radioisotopic content of radioactive waste.

(2) Restrictions as to size, shape, and materials and methods of construction of radioactive waste packaging.

(3) Restrictions as to the amount of waste permitted per unit volume of storage space, considering the physical characteristics of both the waste and the host rock.

(4) Requirements relating to test, calibration, or inspection, to assure that the foregoing restrictions are observed.

(5) Controls to be applied to restrict access and to avoid disturbance to the site and to areas outside the site where conditions may affect compliance with §§ 63.111 and 63.113.

(6) Administrative controls, which are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure that activities at the facility are conducted in a safe manner and in conformity with the other license specifications.

§ 63.44 Changes, tests, and experiments.

[Top of File]

(a) Definitions for the purposes of this section:

(1) *Change* means a modification or addition to, or removal from, the geologic repository operations area design or procedures that affects a design function, event sequence, method of performing or controlling the function, or an evaluation that demonstrates that intended functions will be accomplished.

(2) *Departure from a method of evaluation described in the Safety Analysis Report (SAR) (as updated) used in establishing the preclosure safety analyses or performance assessment* means:

(i) Changing any of the elements of the method described in the SAR (as updated) unless the results of the analysis are conservative or essentially the same; or

(ii) Changing from a method described in the SAR to another method unless that method has been approved by NRC for the intended application, addition or removal.

(3) *Safety Analysis Report (SAR) (as updated)* means the Safety Analysis Report for the geologic repository, submitted in accordance with § 63.21, as updated in accordance with § 63.24.

(4) *Geologic repository operations area as described in the SAR (as updated)* means:

(i) The structures, systems, and components important to safety or barriers important to waste isolation that are described in the SAR (as updated); and

(ii) The design and performance requirements for such structures, systems, and components described in the SAR (as updated).

(5) *Procedures as described in the SAR (as updated)* means those procedures that contain information described in the SAR (as updated) such as how structures, systems, and components important to safety, or important to waste isolation, are operated or controlled.

(6) *Tests or experiments not described in the SAR (as updated)* means any condition where the geologic repository operations area or any of its structures, systems, and components important to safety, or important to waste isolation, are utilized, controlled, or altered in a manner which is either:

(i) Outside the reference bounds of the design bases as described in the SAR (as updated); or

(ii) Inconsistent with the analyses or descriptions in the SAR (as updated).

(b)(1) DOE may make changes in the geologic repository operations area as described in the SAR (as updated), make changes in the procedures as described in the SAR (as updated), and conduct tests or experiments not described in the SAR (as updated), without obtaining either an amendment of construction authorization under § 63.33 or a license amendment under § 63.45, if:

(i) A change in the conditions incorporated in the construction authorization or license is not required; and

(ii) The change, test, or experiment does not meet any of the criteria in paragraph (b)(2) of this section.

(2) DOE shall obtain an amendment of construction authorization under § 63.33 or a license amendment under § 63.45, before implementing a change, test, or experiment if it would:

(i) Result in more than a minimal increase in the frequency of occurrence of an event sequence previously evaluated in the SAR (as updated);

(ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of structures, systems, components important to safety, or important to waste isolation, which were previously evaluated in the SAR (as updated);

(iii) Result in more than a minimal increase in the consequences of an event sequence previously evaluated in the SAR (as updated);

(iv) Result in more than a minimal increase in the consequences of malfunction of structures, systems, components important to safety, or important to waste isolation, which were previously evaluated in the SAR (as updated);

(v) Create the possibility for an event sequence, or of a pathway for release of radionuclides, of a different type than any evaluated previously in the SAR (as updated);

(vi) Create the possibility for a malfunction of structures, systems, and components important to safety, or important to waste isolation, with a different result than any evaluated previously in the SAR (as updated);

(vii) Result in a departure from a method of evaluation described in the SAR (as updated) used in establishing the preclosure safety analysis or the performance assessment.

(3) In implementing this paragraph, the SAR (as updated) is considered to include SAR changes resulting from evaluations performed pursuant to this section and from safety analyses performed under § 63.33 or § 63.45, as applicable, after the last Safety Analysis Report was updated under § 63.24.

(4) The provisions in this section do not apply to changes to the geologic repository operations area or procedures when the applicable regulations establish more specific criteria for accomplishing such changes.

(c)(1) DOE shall maintain records of changes in the geologic repository operations area at the Yucca Mountain site, of changes in procedures, and of tests and experiments made under paragraph (b) of this section. These records must include a written evaluation that provides the bases for the determination that the change, test, or experiment does not require an amendment of construction authorization or license amendment under paragraph (b) of this section.

(2) No less frequently than every 24 months, DOE shall prepare a report containing a brief description of such changes, tests, and

experiments, including a summary of the evaluation of each. These written reports must be sent to the NRC using an appropriate method listed in § 63.4; addressed: ATTN: Document Control Desk; Director, Office of Nuclear Material Safety and Safeguards; U.S. Nuclear Regulatory Commission, Washington, DC 20555-001; and DOE shall furnish the report to the appropriate NRC Regional Office shown in appendix D to part 20 of this chapter. Any report submitted under this paragraph must be made a part of the public record of the licensing proceedings.

(d) Changes to the quality assurance program description required by § 63.21(c)(20) must be processed in accordance with § 63.144.

[68 FR 58815, Oct. 10, 2003]

§ 63.45 Amendment of license.

[Top of File]

(a) An application for amendment of a license may be filed with the Commission fully describing the changes desired and following as far as applicable the format prescribed for license applications.

(b) In determining whether an amendment of a license will be approved, the Commission will be guided by the considerations that govern the issuance of the initial license, to the extent applicable.

§ 63.46 Particular activities requiring license amendment.

[Top of File]

(a) Unless expressly authorized in the license, a license amendment is required for any of the following activities:

(1) Any action that would make emplaced high-level radioactive waste irretrievable or that would substantially increase the difficulty of retrieving the emplaced waste;

(2) Dismantling of structures;

(3) Removal or reduction of controls applied to restrict access to or avoid disturbance of the site and to areas outside the site where conditions may affect compliance with §§ 63.111 and 63.113;

(4) Destruction or disposal of records required to be maintained under the provisions of this part;

(5) Any substantial change to the design or operating procedures from that specified in the license, except as authorized in § 63.44; and

(6) Permanent closure.

(b) An application for an amendment must be filed, and will be reviewed, as specified in § 63.45.

US/IAEA Safeguards Agreement

[Top of File]

§ 63.47 Facility information and verification.

(a) In response to a written request by the Commission, each applicant for a construction authorization or license and each recipient of a construction authorization or a license shall submit facility information, as described in § 75.10 of this chapter, on Form N–71 and associated forms and site information on DOC/NRC Form AP–A and associated forms;

(b) As required by the Additional Protocol, applicants and licensees specified in paragraph (a) of this section shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms;

(c) Shall permit verification thereof by the International Atomic Energy Agency (IAEA) and take other action as necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

[73 FR 78606, Dec. 23, 2008]

Permanent Closure

[Top of File]

§ 63.51 License amendment for permanent closure.

(a) DOE shall submit an application to amend the license before permanent closure of a geologic repository at the Yucca Mountain site. The submission must consist of an update of the license application submitted under §§ 63.21 and 63.22, including:

(1) An update of the assessment of the performance of the geologic repository for the period after permanent closure. The updated assessment must include any performance confirmation data collected under the program required by subpart F, and pertinent to compliance with § 63.113.

(2) A description of the program for post-permanent closure monitoring of the geologic repository.

(3) A detailed description of the measures to be employed--such as land use controls, construction of monuments, and preservation of records--to regulate or prevent activities that could impair the long-term isolation of emplaced waste within the geologic repository and to assure that relevant information will be preserved for the use of future generations. As a minimum, these measures must include:

(i) Identification of the site and geologic repository operations area by monuments that have been designed, fabricated, and emplaced to be as permanent as is practicable;

(ii) Placement of records in the archives and land record systems of local, State, and Federal government agencies, and archives elsewhere in the world, that would be likely to be consulted by potential human intruders--such records to identify the location of the geologic repository operations area, including the underground facility, boreholes, shafts and ramps, and the boundaries of the site, and the nature and hazard of the waste; and

(iii) A program for continued oversight, to prevent any activity at the site that poses an unreasonable risk of breaching the geologic repository's engineered barriers; or increasing the exposure of individual members of the public to radiation beyond allowable limits.

(4) Geologic, geophysical, geochemical, hydrologic, and other site data that are obtained during the operational period, pertinent to compliance with § 63.113.

(5) The results of tests, experiments, and any other analyses relating to backfill of excavated areas, shaft, borehole, or ramp sealing, drip shields, waste packages, interactions between natural and engineered systems, and any other tests, experiments, or analyses pertinent to compliance with § 63.113.

(6) Any substantial revision of plans for permanent closure.

(7) Other information bearing on permanent closure that was not available at the time a license was issued.

(b) If necessary, to take into account the environmental impact of any substantial changes in the permanent closure activities proposed to be carried out or any significant new information regarding the environmental impacts of permanent closure, DOE shall also supplement its environmental impact statement and submit this statement, as supplemented, with the application for license amendment.

§ 63.52 Termination of license.

[Top of File]

(a) Following permanent closure and the decontamination or decontamination and dismantlement of surface facilities at the Yucca Mountain site, DOE may apply for an amendment to terminate the license.

(b) The application must be filed and will be reviewed in accordance with the provisions of § 63.45 and this section.

(c) A license may be terminated only when the Commission finds with respect to the geologic repository:

(1) That the final disposition of radioactive wastes has been made in conformance with DOE's plan, as amended and approved as part of the license.

(2) That the final state of the geologic repository operations area conforms to DOE's plans for permanent closure and DOE's plans for the decontamination or decontamination and dismantlement of surface facilities, as amended and approved as part of the license.

(3) That the termination of the license is authorized by law, including sections 57, 62, and 81 of the Atomic Energy Act, as amended.

Subpart C--Participation by State Government, Affected Units of Local Government, and Affected Indian Tribes

[Top of File]

§ 63.61 Provision of information.

(a) The Director shall provide the Governor and the Nevada State legislature, affected units of local government, and the governing body of

any affected Indian Tribe, with timely and complete information regarding determinations or plans made by the Commission with respect to the Yucca Mountain site. Information must be provided concerning the site characterization, siting, development, design, licensing, construction, operation, regulation, permanent closure, or decontamination and dismantlement of surface facilities of the geologic repository operations area at the site.

(b) Notwithstanding paragraph (a) of this section, the Director is not required to distribute any document to any entity if, with respect to the document, that entity or its counsel is included on a service list prepared under part 2 of this chapter.

(c) The NRC shall place communications by the Director under this section in the Publicly Available Records System (PARS) Library and furnish copies to DOE.

[68 FR 58815, Oct. 10, 2003]

§ 63.62 Site review.

[Top of File]

(a) The Director shall make the NRC staff available to consult with representatives of the State of Nevada, affected units of local government, and affected Indian Tribes regarding the status of site characterization at the Yucca Mountain site.

(b) Requests for consultation must be made in writing to the Director.

(c) Consultation under this section may include:

(1) Keeping the parties informed of the Director's views on the progress of site characterization.

(2) Review of applicable NRC regulations, licensing procedures, schedules, and opportunities for State, affected units of local government, and Tribe participation in the Commission's regulatory activities.

(3) Cooperation in development of proposals for State, affected units of local government, and Tribal participation in license reviews.

§ 63.63 Participation in license reviews.

[Top of File]

(a) The State, affected units of local government, and affected Indian Tribes may participate in license reviews as provided in subpart J of part 2 of this chapter.

(b) In addition, a State, or an affected unit of local government, or an affected Indian Tribe may submit a proposal to the Director to facilitate its participation in the review of the license application. The proposal may be submitted at any time and must contain a description and schedule of how the State, or affected unit of local government, or affected Indian Tribe wishes to participate in the review, or what services or activities the State, or affected unit of local government, or affected Indian Tribe wishes the NRC to carry out, and how the services or activities proposed to be carried out by the NRC would contribute to this participation. The proposal may include educational or information services (seminars, public meetings) or other actions on the part of NRC, such as establishing additional public document rooms or employment or exchange of State personnel under the Intergovernmental Personnel Act.

(c) The Director shall arrange for a meeting between the representatives of the State, or affected unit of local government, or affected Indian Tribe and the NRC staff, to discuss any proposal submitted under paragraph (b) of this section, with a view to identifying any modifications that may contribute to the effective participation by such State, or affected unit of local government, or Tribe.

(d) Subject to the availability of funds, the Director shall approve all or any part of a proposal, as it may be modified through the meeting described in paragraph (c) of this section, if it is determined that:

(1) The proposed activities are suitable in light of the type and magnitude of impacts that the State, or affected unit of local government, or affected Indian Tribe may bear;

(2) The proposed activities--

(i) Will enhance communications between NRC and the State, or affected unit of local government, or affected Indian Tribe;

(ii) Will make a productive and timely contribution to the review; and

(iii) Are authorized by law.

(e) The Director shall advise the State, or affected unit of local government, or affected Indian Tribe whether its proposal has been accepted or denied. If all or any part of a proposal is denied, the Director shall state the reason for the denial.

(f) The NRC shall place all proposals submitted under this section, and responses to them, in the Publicly Available Records System (PARS) Library.

[68 FR 58816, Oct. 10, 2003]

§ 63.64 Notice to State.

[Top of File]

If the Governor and legislature of the State of Nevada have jointly designated, on their behalf, a single person or entity to receive notice and information from the Commission under this part, the Commission will provide the notice and information to the jointly designated person or entity instead of the Governor and legislature separately.

§ 63.65 Representation.

[Top of File]

Any person who acts under this subpart as a representative for the State of Nevada (or for the Governor or legislature of Nevada), for an affected unit of local government, or for an affected Indian Tribe shall include in the request or other submission, or at the request of the Commission, a statement of the basis of his or her authority to act in this capacity.

Subpart D--Records, Reports, Tests, and Inspections

[Top of File]

§ 63.71 Records and reports.

(a) DOE shall maintain records and make reports in connection with the licensed activity that are required by the conditions of the license or by rules, regulations, and orders of the Commission, as authorized by the Atomic Energy Act and the Energy Reorganization Act.

(b) Records of the receipt, handling, and disposition of radioactive waste at a geologic repository operations area at the Yucca Mountain site must contain sufficient information to provide a complete history of the movement of the waste from the shipper through all phases of storage and disposal. DOE shall retain these records in a manner that ensures their usability for future generations in accordance with § 63.51(a)(3).

§ 63.72 Construction records.

[Top of File]

(a) DOE shall maintain records of construction of the geologic repository operations area at the Yucca Mountain site in a manner that ensures their usability for future generations in accordance with § 63.51(a)(3).

(b) The records required under paragraph (a) of this section must include at least the following--

(1) Surveys of the underground facility excavations, shafts, ramps, and boreholes referenced to readily identifiable surface features or monuments;

(2) A description of the materials encountered;

(3) Geologic maps and geologic cross-sections;

(4) Locations and amount of seepage;

(5) Details of equipment, methods, progress, and sequence of work;

(6) Construction problems;

(7) Anomalous conditions encountered;

(8) Instrument locations, readings, and analysis;

(9) Location and description of structural support systems;

(10) Location and description of dewatering systems;

(11) Details, methods of emplacement, and location of seals used; and

(12) Facility design records (e.g, design specifications and "as built" drawings).

§ 63.73 Reports of deficiencies.

[Top of File]

(a) DOE shall promptly notify the Commission of each deficiency found in the characteristics of the Yucca Mountain site, and design, and construction of the geologic repository operations area that, were it to remain uncorrected, could--

(1) Adversely affect safety at any future time;

(2) Represent a significant deviation from the design criteria and design basis stated in the design application; or

(3) Represent a deviation from the conditions stated in the terms of a construction authorization or the license, including license specifications.

(b) DOE shall implement a program for evaluating and reporting deviations and failures to comply, to identify defects and failures to comply associated with substantial safety hazards, based on the applicable requirements in 10 CFR 50.55(e) as it applies to the construction authorization and design of the geologic repository operations area at the Yucca Mountain site.

(c) DOE shall implement a program of reporting specific events and conditions that is the same as that specified in 10 CFR 72.75.

(d) The requisite notification must be as specified in the applicable regulation. By an appropriate method listed in § 63.4 of this chapter, written reports must be submitted to NRC addressed: ATTN: Document Control Desk; Director, Office of Nuclear Material Safety and Safeguards; U.S. Nuclear Regulatory Commission, Washington, DC 20555-001; and to the NRC onsite representative. DOE shall also furnish the report to the appropriate NRC Regional Office shown in appendix D to part 20 of this chapter.

[68 FR 58816, Oct. 10, 2003]

§ 63.74 Tests.

[Top of File]

(a) DOE shall perform, or permit the Commission to perform, those tests the Commission considers appropriate or necessary for the administration of the regulations in this part. This may include tests of--

(1) Radioactive waste,

(2) The geologic repository, including portions of the geologic setting and the structures, systems, and components constructed or placed therein,

(3) Radiation detection and monitoring instruments, and

(4) Other equipment and devices used in connection with the receipt, handling, or storage of radioactive waste.

(b) The tests required under this section must include a performance confirmation program carried out in accordance with subpart F of this part.

§ 63.75 Inspections.

[Top of File]

(a) DOE shall allow the Commission to inspect the premises of the geologic repository operations area at the Yucca Mountain site and adjacent areas to which DOE has rights of access.

(b) DOE shall make available to the Commission for inspection, on reasonable notice, records kept by DOE pertaining to activities under this part.

(c)(1) DOE shall, on requests by the Director, Office of Nuclear Material Safety and Safeguards, provide rent-free office space for the exclusive use of the Commission inspection personnel. Heat, air-conditioning, light, electrical outlets, and janitorial services must be furnished by DOE. The office must be convenient to and have full access to the facility and must provide the inspector both visual and acoustic privacy.

(2) The space provided must be adequate to accommodate two full-time inspectors, and other transient NRC personnel and will be generally

commensurate with other office facilities at the Yucca Mountain site geologic repository operations area. A space of 250 square feet either within the geologic repository operations area's office complex or in an office trailer or other onsite space at the geologic repository operations area is suggested as a guide. For locations at which activities are carried out under licenses issued under other parts of this chapter, additional space may be requested to accommodate additional full-time inspectors. The office space provided is subject to the approval of the Director, Office of Nuclear Material Safety and Safeguards. All furniture, supplies, and communication equipment will be furnished by the Commission.

(3) DOE shall afford any NRC resident inspector assigned to the Yucca Mountain site or other NRC inspectors identified by the Regional Administrator as likely to inspect the Yucca Mountain facility, immediate unfettered access, equivalent to access provided regular employees, after proper identification and compliance with applicable access control measures for security, radiological protection, and personal safety.

§ 63.78 Material control and accounting records and reports.

[Top of File]

DOE shall implement a program of material control and accounting (and accidental criticality reporting) that is the same as that specified in §§ 72.72, 72.74, 72.76, and 72.78 of this chapter.

Subpart E--Technical Criteria

[Top of File]

§ 63.101 Purpose and nature of findings.

(a)(1) Subpart B prescribes the standards for issuance of a license to receive and possess source, special nuclear, or byproduct material at a geologic repository operations area at the Yucca Mountain site. In particular, § 63.41(c) requires a finding that the issuance of a license will not constitute an unreasonable risk to the health and safety of the public. The purpose of this subpart is to set out the performance objectives for postclosure performance of the geologic repository and other criteria that, if satisfied, support a finding of no unreasonable risk. Postclosure performance objectives for the geologic repository include a requirement to limit radiological exposures to the reasonably maximally exposed individual, a requirement to limit releases of radionuclides to the accessible environment to protect ground water, and a requirement to limit radiological exposures to the reasonably maximally exposed individual in the event of human intrusion (see § 63.113 (b), (c), and (d), respectively).

(2) Although the postclosure performance objectives specified at § 63.113 are generally stated in unqualified terms, it is not expected that complete assurance that the requirements will be met can be presented. A reasonable expectation, on the basis of the record before the Commission, that the postclosure performance objectives will be met, is the general standard required. Proof that the geologic repository will conform with the objectives for postclosure performance is not to be had in the ordinary sense of the word because of the uncertainties inherent in the understanding of the evolution of the geologic setting, biosphere, and engineered barrier system. For such long-term performance, what is required is reasonable expectation, making allowance for the time period, hazards, and uncertainties involved, that the outcome will conform with the objectives for postclosure performance for the geologic repository. Demonstrating compliance will involve the use of complex predictive models that are supported by limited data from field and laboratory tests, site-specific monitoring, and natural analog studies that may be supplemented with prevalent expert judgment. Compliance demonstrations should not exclude important parameters from assessments and analyses simply because they are difficult to precisely quantify to a high degree of confidence. The performance assessments and analyses should focus upon the full range of defensible and reasonable parameter distributions rather than only upon extreme physical situations and parameter values. Further, in reaching a determination of reasonable expectation, the Commission may supplement numerical analyses with qualitative judgments including, for example, consideration of the degree of diversity among the multiple barriers as a measure of the resiliency of the geologic repository.

(b) Subpart B lists findings that must be made in support of an authorization to construct a geologic repository operations area at the Yucca Mountain site. Prior to closure, § 63.31(a)(1) requires a finding that there is reasonable assurance that the types and amounts of radioactive materials described in the application can be received, possessed, and stored in a geologic repository operations area of the design proposed without unreasonable risk to the health and safety of the public. After permanent closure, § 63.31(a)(2) requires the Commission to consider whether there is a reasonable expectation the site and design comply with the postclosure performance objectives. Once again, although the criteria may be written in unqualified terms, the demonstration of compliance must take uncertainties and gaps in knowledge into account so that the Commission can make the specified finding with respect to paragraph (a)(2) of § 63.31.

§ 63.102 Concepts.

[Top of File]

This section provides a functional overview of this Subpart E. In the event of any inconsistency, the definitions in § 63.2 prevail.

(a) *The HLW facility at the Yucca Mountain site.* NRC exercises licensing and related regulatory authority over those facilities described in section 202 (3) and (4) of the Energy Reorganization Act of 1974, including the site at Yucca Mountain, as designated by the Energy Policy Act of 1992.

(b) *The geologic repository operations area*. (1) These regulations deal with the exercise of authority with respect to a particular class of HLW facility--namely, a geologic repository operations area at Yucca Mountain.

(2) *A geologic repository operations area* consists of those surface and subsurface areas of the site that are part of a geologic repository where radioactive waste handling activities are conducted. The underground structure, backfill materials, if any, and openings that penetrate the underground structure (e.g., ramps, shafts and boreholes, including their seals), are designated the *underground facility*.

(3) The exercise of Commission authority requires that the geologic repository operations area be used for storage (which includes disposal) of *high-level radioactive wastes* (HLW).

(4) HLW includes irradiated reactor fuel as well as reprocessing wastes. However, if DOE proposes to use the geologic repository operations area for storage of radioactive waste other than HLW, the storage of this radioactive waste is subject to the requirements of this part.

(c) *Stages in the licensing process*. There are several stages in the licensing process. The *site characterization* stage, when the performance confirmation program is started, begins before submission of a license application, and may result in consequences requiring evaluation in the license review. The construction stage would follow after the issuance of a construction authorization. A period of operations follows the Commission's issuance of a license. The period of operations includes the time during which *emplacement* of wastes occurs; any subsequent period before permanent closure during which the emplaced wastes are retrievable; and *permanent closure*, which includes sealing openings to the repository. Permanent closure represents the end of the performance confirmation program; final backfilling of the underground facility, if appropriate; and the sealing of shafts, ramps, and boreholes.

(d) *Areas related to isolation*. Although the activities subject to regulation under this part are those to be carried out at the geologic repository operations area, the licensing process also considers characteristics of adjacent areas that are defined in other ways. There must be an area surrounding the geologic repository operations area, that could include either a portion or all of the site, within which DOE shall exercise specified controls to prevent adverse human actions after permanent closure. There is an area, designated the geologic setting, which includes the geologic, hydrologic, and geochemical systems of the region in which the site and geologic repository operations area are located. The geologic repository operations area, plus the portion of the geologic setting that provides isolation of the radioactive waste, make up the geologic repository.

(e) *Performance objectives through permanent closure*. Before permanent closure, the geologic repository operations area is required to limit radiation levels and radiological exposures, in both restricted and unrestricted areas, and releases of radioactive materials to unrestricted areas, as specified at § 63.111(a).

(f) *Preclosure safety analysis*. Section 63.111 includes performance objectives for the geologic repository operations area for the period before permanent closure and decontamination or permanent closure, decontamination, and dismantlement of surface facilities. The preclosure safety analysis is a systematic examination of the site; the design; and the potential hazards, initiating events and their resulting event sequences and potential radiological exposures to workers and the public. Initiating events are to be considered for inclusion in the preclosure safety analysis for determining event sequences only if they are reasonable (i.e., based on the characteristics of the geologic setting and the human environment, and consistent with precedents adopted for nuclear facilities with comparable or higher risks to workers and the public). The analysis identifies structures, systems, and components important to safety.

(g) *Performance objectives after permanent closure*. After permanent closure, the geologic repository is required to:

(1) Limit radiological exposures to the reasonably maximally exposed individual, as specified at § 63.113(b);

(2) Limit releases of radionuclides to the accessible environment to protect ground water, as specified at § 63.113(c); and

(3) Limit radiological exposures to the reasonably maximally exposed individual in the event of human intrusion, as specified at § 63.113(d).

(h) *Multiple barriers*. Section 63.113(a) requires that the geologic repository include multiple barriers, both natural and engineered. Geologic disposal of HLW is predicated on the expectation that one or more aspects of the geologic setting will be capable of contributing to the isolation of radioactive waste and thus be a barrier important to waste isolation. Although there is an extensive geologic record ranging from thousands to millions of years, this record is subject to interpretation and includes many uncertainties. In addition, there are uncertainties in the isolation capability and performance of engineered barriers. Although the composition and configuration of engineered structures (barriers) can be defined with a degree of precision not possible for natural barriers, it is recognized that except for a few archaeologic and natural analogs, there is a limited experience base for the performance of complex, engineered structures over periods longer than a few hundred years, considering the uncertainty in characterizing and modeling individual barriers. These uncertainties are addressed by requiring the use of a multiple barrier approach; specifically, an engineered barrier system is required in addition to the natural barriers provided by the geologic setting. The performance assessment provides an evaluation of the repository performance based on credible models and parameters including the consideration of uncertainty in the behavior of the repository system. Thus the performance assessment results reflect the capability of each of the barriers to cope with a variety of challenges (e.g., combinations of parameters leading to less favorable performance for individual barriers and combinations of barriers). A description of each barrier's capability (e.g., retardation of radionuclides in the saturated zone, waste package lifetime, matrix diffusion in the unsaturated zone), as reflected in the performance assessment, provides an understanding of how the natural barriers and the engineered barrier system work in combination to enhance the resiliency of the geologic repository. The Commission believes that this understanding can increase confidence that the postclosure performance objectives specified at § 63.113(b) and (c) will be achieved and that DOE's design includes a system of multiple barriers.

(i) *Reference biosphere and reasonably maximally exposed individual*. The performance assessment will estimate the amount of radioactive material released to water or air at various locations and times in the future. To estimate the potential for future human exposures resulting from release of radioactive material from a geologic repository at Yucca Mountain, it is necessary to make certain assumptions about the location and characteristics of the reasonably maximally exposed individual. The environment inhabited by the reasonably maximally exposed individual, along with associated human exposure pathways and parameters, make up the reference biosphere, as described in § 63.305. The reasonably maximally exposed individual, as a hypothetical person living in a community with characteristics of the Town of Amargosa Valley, is a representative person using water with average concentrations of radionuclides as described at § 63.312. The reasonably maximally exposed individual is selected to represent those persons in the vicinity of Yucca Mountain who are reasonably

expected to receive the greatest exposure to radioactive material released from a geologic repository at Yucca Mountain. Characteristics of the reference biosphere and the reasonably maximally exposed individual are to be based on current human behavior and biospheric conditions in the region, as described in § 63.305 and § 63.312.

(j) *Performance assessment*. Demonstrating compliance with the postclosure performance objective specified at § 63.113(b) requires a performance assessment to quantitatively estimate radiological exposures to the reasonably maximally exposed individual at any time during the compliance period. The performance assessment is a systematic analysis that identifies the features, events, and processes (i.e., specific conditions or attributes of the geologic setting, degradation, deterioration, or alteration processes of engineered barriers, and interactions between the natural and engineered barriers) that might affect performance of the geologic repository; examines their effects on performance; and estimates the radiological exposures to the reasonably maximally exposed individual. The features, events, and processes considered in the performance assessment should represent a wide range of both beneficial and potentially adverse effects on performance (e.g., beneficial effects of radionuclide sorption; potentially adverse effects of fracture flow or a criticality event). Those features, events, and processes expected to materially affect compliance with § 63.113(b) or be potentially adverse to performance are included, while events (event classes or scenario classes) that are very unlikely (less than one chance in 10,000 over 10,000 years) can be excluded from the analysis. An event class consists of all possible specific initiating events that are caused by a common natural process (e. g., the event class for seismicity includes the range of credible earthquakes for the Yucca Mountain site). Radiological exposures to the reasonably maximally exposed individual are estimated using the selected features, events, and processes, and incorporating the probability that the estimated exposures will occur. Additionally, performance assessment methods are appropriate for use in demonstrating compliance with the postclosure performance objectives for ground-water protection and human intrusion, and are subject to the requirements for performance assessments specified at § 63.114 and applicable criteria in Subpart L (e.g., criteria for evaluating compliance with ground-water protection and individual protection standards).

(k) *Institutional controls*. Active and passive institutional controls will be maintained over the Yucca Mountain site, and are expected to reduce significantly, but not eliminate, the potential for human activity that could inadvertently cause or accelerate the release of radioactive material. However, because it is not possible to make scientifically sound forecasts of the long-term reliability of institutional controls, it is not appropriate to include consideration of human intrusion into a fully risk-based performance assessment for purposes of evaluating the ability of the geologic repository to achieve the performance objective at § 63.113(b). Hence, human intrusion is addressed in a stylized manner as described in paragraph (l) of this section.

(l) *Human intrusion.* In contrast to events unrelated to human activity, the probability and characteristics of human intrusion occurring many hundreds or thousands of years into the future cannot be estimated by examining either the historic or geologic record. Rather than speculating on the nature and probability of future intrusion, it is more useful to assess how resilient the geologic repository would be against a human intrusion event. Although the consequences of an assumed intrusion event would be a separate analysis, the analysis is similar to the performance assessment required by § 63.113(b) but subject to specific requirements for evaluation of human intrusion specified at §§ 63.321, 63.322 and 63.342 of subpart L of this part.

(m) *Performance confirmation*. A performance confirmation program will be conducted to evaluate the adequacy of assumptions, data, and analyses that led to the findings that permitted construction of the repository and subsequent emplacement of the wastes. Key geotechnical and design parameters, including any interactions between natural and engineered systems and components, will be monitored throughout site characterization, construction, emplacement, and operation to identify any significant changes in the conditions assumed in the license application that may affect compliance with the performance objectives specified at § 63.113(b) and (c).

(n) *Ground-Water Protection*. Separate ground-water protection standards are designed to protect the ground water resources in the vicinity of Yucca Mountain. These standards, specified at § 63.331, require the estimation of ground water concentrations in the representative volume of water. Depending on the radionuclide, the estimated concentrations must either be below a specified concentration or result in an annual, drinking water dose to the whole body or any organ of no greater than 0.04 mSv (4 mrem). Although the estimation of radionuclide concentrations in the representative volume would be a separate analysis, the analysis is similar to the performance assessment required by § 63.113(b) but subject to specific requirements for evaluation of ground-water protection specified at §§ 63.331, 63.332 and 63.342 of subpart L of this part.

(o) *Implementation of TEDE*. When external exposure is determined by measurement with an external personal monitoring device, the deep-dose equivalent must be used in place of the effective dose equivalent, unless the effective dose equivalent is determined by a dosimetry method approved by the NRC. The assigned deep-dose equivalent must be for the part of the body receiving the highest exposure. The assigned shallow-dose equivalent must be the dose averaged over the contiguous 10 square centimeters of skin receiving the highest exposure. The radiation and organ or tissue weighting factors in Appendix A of 40 CFR part 197 are to be used to calculate TEDE. After the effective date of this regulation, the Commission may allow DOE to use updated factors, which have been issued by consensus scientific organizations and incorporated by EPA into Federal radiation guidance. Additionally, as scientific models and methodologies for estimating doses are updated, DOE may use the most current and appropriate (e.g., those accepted by the International Commission on Radiological Protection) scientific models and methodologies to calculate the TEDE. The weighting factors used in the calculation of TEDE must be consistent with the methodology used to perform the calculation.

[74 FR 10828, Mar. 13, 2009]

Preclosure Performance Objectives

[Top of File]

§ 63.111 Performance objectives for the geologic repository operations area through permanent closure.

(a) *Protection against radiation exposures and releases of radioactive material*.

(1) The geologic repository operations area must meet the requirements of part 20 of this chapter.

(2) During normal operations, and for Category 1 event sequences, the annual TEDE (hereafter referred to as "dose") to any real member of the public located beyond the boundary of the site may not exceed the preclosure standard specified at § 63.204.

(b) *Numerical guides for design objectives*.

(1) The geologic repository operations area must be designed so that, taking into consideration Category 1 event sequences and until permanent closure has been completed, the aggregate radiation exposures and the aggregate radiation levels in both restricted and unrestricted areas, and the aggregate releases of radioactive materials to unrestricted areas, will be maintained within the limits specified in paragraph (a) of this section.

(2) The geologic repository operations area must be designed so that, taking into consideration any single Category 2 event sequence and until permanent closure has been completed, no individual located on, or beyond, any point on the boundary of the site will receive, as a result of the single Category 2 event sequence, the more limiting of a TEDE of 0.05 Sv (5 rem), or the sum of the deep dose equivalent and the committed dose equivalent to any individual organ or tissue (other than the lens of the eye) of 0.5 Sv (50 rem). The lens dose equivalent may not exceed 0.15 Sv (15 rem), and the shallow dose equivalent to skin may not exceed 0.5 Sv (50 rem).

(c) *Preclosure safety analysis*. A preclosure safety analysis of the geologic repository operations area that meets the requirements specified at § 63.112 must be performed. This analysis must demonstrate that:

(1) The requirements of § 63.111(a) will be met; and

(2) The design meets the requirements of § 63.111(b).

(d) *Performance confirmation*. The geologic repository operations area must be designed so as to permit implementation of a performance confirmation program that meets the requirements of subpart F of this part.

(e) *Retrievability of waste*.

(1) The geologic repository operations area must be designed to preserve the option of waste retrieval throughout the period during which wastes are being emplaced and thereafter, until the completion of a performance confirmation program and Commission review of the information obtained from such a program. To satisfy this objective, the geologic repository operations area must be designed so that any or all of the emplaced waste could be retrieved on a reasonable schedule starting at any time up to 50 years after waste emplacement operations are initiated, unless a different time period is approved or specified by the Commission. This different time period may be established on a case-by-case basis consistent with the emplacement schedule and the planned performance confirmation program.

(2) This requirement may not preclude decisions by the Commission to allow backfilling part, or all of, or permanent closure of the geologic repository operations area, before the end of the period of design for retrievability.

(3) For purposes of paragraph (e) of this section, a reasonable schedule for retrieval is one that would permit retrieval in about the same time as that required to construct the geologic repository operations area and emplace waste.

Preclosure Safety Analysis

[Top of File]

§ 63.112 Requirements for preclosure safety analysis of the geologic repository operations area.

The preclosure safety analysis of the geologic repository operations area must include:

(a) A general description of the structures, systems, components, equipment, and process activities at the geologic repository operations area;

(b) An identification and systematic analysis of naturally occurring and human-induced hazards at the geologic repository operations area, including a comprehensive identification of potential event sequences;

(c) Data pertaining to the Yucca Mountain site, and the surrounding region to the extent necessary, used to identify naturally occurring and human-induced hazards at the geologic repository operations area;

(d) The technical basis for either inclusion or exclusion of specific, naturally occurring and human-induced hazards in the safety analysis;

(e) An analysis of the performance of the structures, systems, and components to identify those that are important to safety. This analysis identifies and describes the controls that are relied on to limit or prevent potential event sequences or mitigate their consequences. This analysis also identifies measures taken to ensure the availability of safety systems. The analysis required in this paragraph must include, but not necessarily be limited to, consideration of--

(1) Means to limit concentration of radioactive material in air;

(2) Means to limit the time required to perform work in the vicinity of radioactive materials;

(3) Suitable shielding;

(4) Means to monitor and control the dispersal of radioactive contamination;

(5) Means to control access to high radiation areas or airborne radioactivity areas;

(6) Means to prevent and control criticality;

(7) Radiation alarm system to warn of significant increases of radiation levels, concentrations of radioactive material in air, and increased radioactivity in effluents;

(8) Ability of structures, systems, and components to perform their intended safety functions, assuming the occurrence of event sequences;

(9) Explosion and fire detection systems and appropriate suppression systems;

(10) Means to control radioactive waste and radioactive effluents, and permit prompt termination of operations and evacuation of personnel during an emergency;

(11) Means to provide reliable and timely emergency power to instruments, utility service systems, and operating systems important to safety if there is a loss of primary electric power;

(12) Means to provide redundant systems necessary to maintain, with adequate capacity, the ability of utility services important to safety; and

(13) Means to inspect, test, and maintain structures, systems, and components important to safety, as necessary, to ensure their continued functioning and readiness.

(f) A description and discussion of the design, both surface and subsurface, of the geologic repository operations area, including--

(1) The relationship between design criteria and the requirements specified at § 63.111(a) and (b); and

(2) The design bases and their relation to the design criteria.

Postclosure Performance Objectives

[Top of File]

§ 63.113 Performance objectives for the geologic repository after permanent closure.

(a) The geologic repository must include multiple barriers, consisting of both natural barriers and an engineered barrier system.

(b) The engineered barrier system must be designed so that, working in combination with natural barriers, radiological exposures to the reasonably maximally exposed individual are within the limits specified at § 63.311 of subpart L of this part. Compliance with this paragraph must be demonstrated through a performance assessment that meets the requirements specified at § 63.114 of this subpart, and §§ 63.303, 63.305, 63.312 and 63.342 of Subpart L of this part.

(c) The engineered barrier system must be designed so that, working in combination with natural barriers, releases of radionuclides into the accessible environment are within the limits specified at § 63.331 of subpart L of this part. Compliance with this paragraph must be demonstrated through a performance assessment that meets the requirements specified at § 63.114 of this subpart and §§ 63.303, 63.332 and 63.342 of subpart L of this part.

(d) The ability of the geologic repository to limit radiological exposures to the reasonably maximally exposed individual, in the event of human intrusion into the engineered barrier system, must be demonstrated through an analysis that meets the requirements at §§ 63.321 and 63.322 of subpart L of this part. Estimating radiological exposures to the reasonably maximally exposed individual requires a performance assessment that meets the requirements specified at § 63.114 of this subpart, and §§ 63.303, 63.305, 63.312 and 63.342 of subpart L of this part.

Postclosure Performance Assessment

[Top of File]

§ 63.114 Requirements for performance assessment.

(a) Any performance assessment used to demonstrate compliance with § 63.113 for 10,000 years after disposal must:

(1) Include data related to the geology, hydrology, and geochemistry (including disruptive processes and events) of the Yucca Mountain site, and the surrounding region to the extent necessary, and information on the design of the engineered barrier system used to define, for 10,000 years after disposal, parameters and conceptual models used in the assessment.

(2) Account for uncertainties and variabilities in parameter values, for 10,000 years after disposal, and provide for the technical basis for parameter ranges, probability distributions, or bounding values used in the performance assessment.

(3) Consider alternative conceptual models of features and processes, for 10,000 years after disposal, that are consistent with available data and current scientific understanding and evaluate the effects that alternative conceptual models have on the performance of the geologic repository.

(4) Consider only features, events, and processes consistent with the limits on performance assessment specified at § 63.342.

(5) Provide the technical basis for either inclusion or exclusion of specific features, events, and processes in the performance assessment. Specific features, events, and processes must be evaluated in detail if the magnitude and time of the resulting radiological exposures to the reasonably maximally exposed individual, or radionuclide releases to the accessible environment, for 10,000 years after disposal, would be significantly changed by their omission.

(6) Provide the technical basis for either inclusion or exclusion of degradation, deterioration, or alteration processes of engineered barriers in the performance assessment, including those processes that would adversely affect the performance of natural barriers. Degradation, deterioration, or alteration processes of engineered barriers must be evaluated in detail if the magnitude and time of the resulting radiological exposures to the reasonably maximally exposed individual, or radionuclide releases to the accessible environment, for 10,000 years after disposal, would be significantly changed by their omission.

(7) Provide the technical basis for models used to represent the 10,000 years after disposal in the performance assessment, such as comparisons made with outputs of detailed process-level models and/or empirical observations (e.g., laboratory testing, field investigations, and natural analogs).

(b) The performance assessment methods used to satisfy the requirements of paragraph (a) of this section are considered sufficient for the performance assessment for the period of time after 10,000 years and through the period of geologic stability.

[74 FR 10828, Mar. 13, 2009]

§ 63.115 Requirements for multiple barriers.

[Top of File]

Demonstration of compliance with § 63.113(a) must:

(a) Identify those design features of the engineered barrier system, and natural features of the geologic setting, that are considered barriers important to waste isolation.

(b) Describe the capability of barriers, identified as important to waste isolation, to isolate waste, taking into account uncertainties in characterizing and modeling the behavior of the barriers.

(c) Provide the technical basis for the description of the capability of barriers, identified as important to waste isolation, to isolate waste. The technical basis for each barrier's capability shall be based on and consistent with the technical basis for the performance assessments used to demonstrate compliance with § 63.113(b) and (c).

Land Ownership and Control

[Top of File]

§ 63.121 Requirements for ownership and control of interests in land.

(a) *Ownership of land*.

(1) The geologic repository operations area must be located in and on lands that are either acquired lands under the jurisdiction and control of DOE, or lands permanently withdrawn and reserved for its use.

(2) These lands must be held free and clear of all encumbrances, if significant, such as:

(i) Rights arising under the general mining laws;

(ii) Easements for right-of-way; and

(iii) All other rights arising under lease, rights of entry, deed, patent, mortgage, appropriation, prescription, or otherwise.

(b) *Additional controls for permanent closure*. Appropriate controls must be established outside of the geologic repository operations area. DOE shall exercise any jurisdiction and control over surface and subsurface estates necessary to prevent adverse human actions that could significantly reduce the geologic repository's ability to achieve isolation. The rights of DOE may take the form of appropriate possessory interests, servitudes, or withdrawals from location or patent under the general mining laws.

(c) *Additional controls through permanent closure*. Appropriate controls must be established outside the geologic repository operations area. DOE shall exercise any jurisdiction or control of activities necessary to ensure the requirements at § 63.111(a) and (b) are met. Control includes the authority to exclude members of the public, if necessary.

(d) *Water rights*.

(1) DOE shall also have obtained such water rights as may be needed to accomplish the purpose of the geologic repository operations area.

(2) Water rights are included in the additional controls to be established under paragraph (b) of this section.

Subpart F--Performance Confirmation Program

[Top of File]

§ 63.131 General requirements.

(a) The performance confirmation program must provide data that indicate, where practicable, whether:

(1) Actual subsurface conditions encountered and changes in those conditions during construction and waste emplacement operations are within the limits assumed in the licensing review; and

(2) Natural and engineered systems and components required for repository operation, and that are designed or assumed to operate as barriers after permanent closure, are functioning as intended and anticipated.

(b) The program must have been started during site characterization, and it will continue until permanent closure.

(c) The program must include in situ monitoring, laboratory and field testing, and in situ experiments, as may be appropriate to provide the data required by paragraph (a) of this section.

(d) The program must be implemented so that:

(1) It does not adversely affect the ability of the geologic and engineered elements of the geologic repository to meet the performance objectives.

(2) It provides baseline information and analysis of that information on those parameters and natural processes pertaining to the geologic setting that may be changed by site characterization, construction, and operational activities.

(3) It monitors and analyzes changes from the baseline condition of parameters that could affect the performance of a geologic repository.

§ 63.132 Confirmation of geotechnical and design parameters.

[Top of File]

(a) During repository construction and operation, a continuing program of surveillance, measurement, testing, and geologic mapping must be conducted to ensure that geotechnical and design parameters are confirmed and to ensure that appropriate action is taken to inform the Commission of design changes needed to accommodate actual field conditions encountered.

(b) Subsurface conditions must be monitored and evaluated against design assumptions.

(c) Specific geotechnical and design parameters to be measured or observed, including any interactions between natural and engineered systems and components, must be identified in the performance confirmation plan.

(d) These measurements and observations must be compared with the original design bases and assumptions. If significant differences exist between the measurements and observations and the original design bases and assumptions, the need for modifications to the design or in construction methods must be determined and these differences, their significance to repository performance, and the recommended changes reported to the Commission.

(e) In situ monitoring of the thermomechanical response of the underground facility must be conducted until permanent closure, to ensure that the performance of the geologic and engineering features is within design limits.

§ 63.133 Design testing.

[Top of File]

(a) During the early or developmental stages of construction, a program for testing of engineered systems and components used in the design, such as, for example, borehole and shaft seals, backfill, and drip shields, as well as the thermal interaction effects of the waste packages, backfill, drip shields, rock, and unsaturated zone and saturated zone water, must be conducted.

(b) The testing must be initiated as early as practicable.

(c) If backfill is included in the repository design, a test must be conducted to evaluate the effectiveness of backfill placement and compaction procedures against design requirements before permanent backfill placement is begun.

(d) Tests must be conducted to evaluate the effectiveness of borehole, shaft, and ramp seals before full-scale operation proceeds to seal boreholes, shafts, and ramps.

§ 63.134 Monitoring and testing waste packages.

[Top of File]

(a) A program must be established at the geologic repository operations area for monitoring the condition of the waste packages. Waste packages chosen for the program must be representative of those to be emplaced in the underground facility.

(b) Consistent with safe operation at the geologic repository operations area, the environment of the waste packages selected for the waste package monitoring program must be representative of the environment in which the wastes are to be emplaced.

(c) The waste package monitoring program must include laboratory experiments that focus on the internal condition of the waste packages. To the extent practical, the environment experienced by the emplaced waste packages within the underground facility during the waste package monitoring program must be duplicated in the laboratory experiments.

(d) The waste package monitoring program must continue as long as practical up to the time of permanent closure.

Subpart G--Quality Assurance

[Top of File]

§ 63.141 Scope.

As used in this part, *quality assurance* comprises all those planned and systematic actions necessary to provide adequate confidence that the geologic repository and its structures, systems, or components will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to the physical characteristics of a material, structure, component, or system that provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

§ 63.142 Quality assurance criteria.

[Top of File]

(a) *Introduction and Applicability*. DOE is required by § 63.21(c)(20) to include in its safety analysis report a description of the quality assurance program to be applied to all structures, systems, and components important to safety, to design and characterization of barriers important to waste isolation, and to related activities. These activities include: site characterization; acquisition, control, and analyses of samples and data; tests and experiments; scientific studies; facility and equipment design and construction; facility operation; performance confirmation; permanent closure; and decontamination and dismantling of surface facilities. The description must indicate how the applicable quality assurance requirements will be satisfied. DOE shall include information pertaining to the managerial and administrative controls to be used to ensure safe operation in its safety analysis report. High-level waste repositories include structures, systems, and components that prevent or mitigate the consequences of postulated event sequences or that are important to waste isolation capabilities that could cause undue risk to the health and safety of the public. The pertinent requirements of this subpart apply to all activities that are important to waste isolation and important to safety functions of those structures, systems, and components. These activities include designing, purchasing, fabricating, handling, shipping, storing, cleaning, erecting, installing, inspecting, testing, operating, maintaining, repairing, modifying, site characterization, performance confirmation, permanent closure, decontamination, and dismantling of surface facilities.

(b) *Organization*. DOE shall establish and execute a quality assurance program. DOE may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part of it, but DOE retains responsibility for it.

(1) The authority and duties of persons and organizations performing activities affecting the functions of structures, systems, and components that are important to waste isolation and important to safety must be clearly established and delineated in writing. These activities include both the performing functions of attaining quality objectives and the quality assurance functions. The quality assurance

functions are those of:

(i) Assuring that an appropriate quality assurance program is established and effectively executed; and

(ii) Verifying that activities important to waste isolation and important to safety functions have been correctly performed by checking, auditing, and inspection of structures, systems, and components.

(2) The persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions. The persons and organizations performing quality assurance functions shall report to a management level so that the required authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations, are provided.

(3) Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms provided that the persons and organizations assigned the quality assurance functions have this required authority and organizational freedom. Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program at any location where activities subject to 10 CFR part 63 are being performed must have direct access to the levels of management as may be necessary to perform this function.

(c) *Quality assurance program*. DOE shall establish a quality assurance program that complies with the requirements of this subpart at the earliest practicable time, consistent with the schedule for accomplishing the activities. This program must be documented by written policies, procedures, or instructions and must be carried out throughout facility life in accordance with those policies, procedures, or instructions.

(1) DOE shall identify the structures, systems, and components to be covered by the quality assurance program and the major organizations participating in the program, together with the designated functions of these organizations. The quality assurance program must control activities affecting the quality of the identified structures, systems, and components, to an extent consistent with their importance to safety.

(2) Activities affecting quality must be accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanness; and assurance that all prerequisites for the given activity have been satisfied.

(3) The program must take into account the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection and test. The program must provide for indoctrination and training of personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained.

(4) DOE shall regularly review the status and adequacy of the quality assurance program. Management of other organizations participating in the quality assurance program shall regularly review the status and adequacy of that part of the quality assurance program which they are executing.

(d) *Design control*. (1) DOE shall establish measures to assure that applicable regulatory requirements and the design basis, as defined in § 63.2 and as specified in the license application, for those structures, systems, and components to which this subpart applies, are correctly translated into specifications, drawings, procedures, and instructions. These measures must assure that appropriate quality standards are specified and included in design documents and that deviations from such standards are controlled. Measures must also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are important to waste isolation and important to safety functions of the structures, systems and components.

(2) DOE shall establish measures to identify and control design interfaces and for coordination among participating design organizations. These measures must include the establishment of procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces.

(i) The design control measures must provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculational methods, or by the performance of a suitable testing program. The verifying or checking process must be performed by individuals or groups other than those who performed the original design. These individuals may be from the same organization. If a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it must include suitable qualifications testing of a prototype unit under the most adverse design conditions. Design control measures must be applied to items such as: criticality physics, stress, thermal, hydraulic, and preclosure and postclosure analyses; compatibility of materials; accessibility for inservice inspection, maintenance and repair; and delineation of acceptance criteria for inspections and tests.

(ii) Design changes, including field changes, must be subject to design control measures commensurate with those applied to the original design and be approved by the organization that performed the original design unless the applicant designates another responsible organization.

(e) *Procurement document control*. DOE shall establish measures to assure that applicable regulatory requirements, design bases, and other requirements necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the licensee or applicant or by its contractors or subcontractors. To the extent necessary, procurement documents must require contractors or subcontractors to provide a quality assurance program consistent with the pertinent provisions of this section.

(f) *Instructions, procedures, and drawings*. Activities affecting quality must be prescribed by documented instructions, procedures, or

drawings of a type appropriate to the circumstances and must be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures, or drawings must include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

(g) *Document control*. DOE shall establish measures to control the issuance of documents, such as instructions, procedures, and drawings, including changes to them that prescribe all activities affecting quality. These measures must assure that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel and are distributed to and used at the location where the prescribed activity is performed. Changes to documents must be reviewed and approved by the same organizations that performed the original review and approval unless the applicant designates another responsible organization.

(h) *Control of purchased material, equipment, and services*. DOE shall establish measures to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents.

(1) These measures must include appropriate provisions for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery.

(2) Documentary evidence that material and equipment conform to the procurement requirements must be available at the high-level waste repository site before the material and equipment are installed or used. This documentary evidence must be retained at the high-level waste repository site and be sufficient to identify the specific requirements, such as codes, standards, or specifications, met by the purchased material and equipment.

(3) The effectiveness of the control of quality by contractors and subcontractors must be assessed by the licensee or applicant or designee at intervals consistent with the importance, complexity, and quantity of the product or services.

(i) *Identification and control of materials, parts, and components*. Measures must be established for the identification and control of materials, parts, and components, including partially fabricated assemblies. These measures must assure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item. These identification and control measures must be designed to prevent the use of incorrect or defective material, parts, and components.

(j) *Control of special processes*. DOE shall establish measures to assure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

(k) *Inspection*. DOE shall establish and execute a program for inspection of activities affecting quality to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity. The inspection must be performed by individuals other than those who performed the activity being inspected.

(1) Examinations, measurements, or tests of material or products processed must be performed for each work operation where necessary to assure quality. If inspection of processed material or products is impossible or disadvantageous, indirect control by monitoring processing methods, equipment, and personnel must be provided. Both inspection and process monitoring must be provided when control is inadequate without both.

(2) If mandatory inspection hold points that require witnessing or inspecting by the applicant's designated representative and beyond which work may not proceed without the consent of its designated representative are required, the specific hold points must be indicated in appropriate documents.

(l) *Test control*. DOE shall establish a test program to assure that all testing required to demonstrate that structures, systems, and components important to safety will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.

(1) The test program must include, as appropriate, proof tests prior to installation, preoperational tests, and operational tests during repository operation, of structures, systems, and components.

(2) Test procedures must include provisions for assuring that all prerequisites for the given test have been met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions.

(3) Test results must be documented and evaluated to assure that test requirements have been satisfied.

(m) *Control of measuring and test equipment*. DOE shall establish measures to assure that tools, gages, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

(n) *Handling, storage, and shipping*. DOE shall establish measures to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration. When necessary for particular products, special protective environments, such as inert gas atmosphere, specific moisture content levels, and temperature levels, must be specified and provided.

(o) *Inspection, test, and operating status*. DOE shall establish measures to indicate the status of inspections and tests performed on individual items of the high-level waste repository by markings such as stamps, tags, labels, routing cards, or other suitable means. These measures must provide for the identification of items that have satisfactorily passed required inspections and tests, where necessary to

preclude inadvertent bypassing of such inspections and tests. Measures must also be established for indicating the operating status of structures, systems, and components of the high-level waste repository, such as by tagging valves and switches, to prevent inadvertent operation.

(p) *Nonconforming materials, parts, or components*. DOE shall establish measures to control materials, parts, or components which do not conform to requirements in order to prevent their inadvertent use or installation. These measures must include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items must be reviewed and accepted, rejected, repaired or reworked in accordance with documented procedures.

(q) *Corrective action*. DOE shall establish measures to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. If significant conditions are adverse to quality, the measures must assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken must be documented and reported to appropriate levels of management.

(r) *Quality assurance records*. DOE shall maintain sufficient records to furnish evidence of activities affecting quality.

(1) The records must include at least the following: Operating logs and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses.

(2) The records must also include closely-related data such as qualifications of personnel, procedures, and equipment.

(3) Inspection and test records must, at a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted.

(4) Records must be identifiable and retrievable. Consistent with applicable regulatory requirements, the applicant shall establish requirements concerning record retention, such as duration, location, and assigned responsibility.

(s) *Audits*. DOE shall carry out a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits must be performed in accordance with the written procedures or check lists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audit results must be documented and reviewed by management having responsibility in the area audited. Followup action, including reaudit of deficient areas, must be taken where indicated.

§ 63.143 Implementation.

[Top of File]

DOE shall implement a quality assurance program based on the criteria required by § 63.142.

§ 63.144 Quality assurance program change.

[Top of File]

Changes to DOE's NRC-approved Safety Analysis Report quality assurance program description are processed as follows:

(a) DOE may change a previously accepted quality assurance program description included or referenced in the Safety Analysis Report without prior NRC approval, if the change does not reduce the commitments in the program description previously accepted by the NRC. Changes to the quality assurance program description that do not reduce the commitments must be submitted every 24 months, in accordance with paragraph (b)(1) of this section. In addition to quality assurance program changes involving administrative improvements and clarifications, spelling corrections, punctuation, or editorial items, the following changes are not considered reductions in commitment:

(1) The use of a quality assurance standard approved by the NRC which is more recent than the quality assurance standard in DOE's current quality assurance program at the time of the change;

(2) The use of generic organizational position titles that clearly denote the position function, supplemented as necessary by descriptive text, rather than specific titles;

(3) The use of generic organizational charts to indicate functional relationships, authorities, and responsibilities, or alternatively, the use of descriptive text;

(4) The elimination of quality assurance program information that duplicates language in quality assurance regulatory guides and quality assurance standards to which the licensee is committed; and

(5) Organizational revisions that ensure that persons and organizations performing quality assurance functions continue to have the requisite authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations.

(b) DOE shall submit changes made to the NRC-accepted Safety Analysis Report quality assurance program description that do reduce the commitments to the NRC and receive NRC approval prior to implementation, as follows:

(1) By an appropriate method listed in § 63.4 of this chapter, the signed document must be submitted to the Nuclear Regulatory Commission, addressed: ATTN: Document Control Desk; Director, Office of Nuclear Material and Safeguards; U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and one copy to the appropriate NRC Resident Inspector, if one has been assigned to the site or facility.

(2) The submittal of a change to the Safety Analysis Report quality assurance program description must include all pages affected by that change and must be accompanied by a forwarding letter identifying the change, the reason for the change, and the basis for concluding that the revised program incorporating the change continues to describe how the requirements of § 63.142 will be satisfied and continues to satisfy the criteria of § 63.142 and the Safety Analysis Report quality assurance program description previously accepted by the NRC (the letter need not provide the basis for changes that correct spelling, punctuation, or editorial items).

(3) DOE shall maintain records of quality assurance program changes that do reduce commitments.

[68 FR 58816, Oct. 10, 2003]

Subpart H--Training and Certification of Personnel

[Top of File]

§ 63.151 General requirements.

Operations of systems and components that have been identified as important to safety in the Safety Analysis Report and in the license must be performed only by trained and certified personnel or by personnel under the direct visual supervision of an individual with training and certification in such operation. Supervisory personnel who direct operations that are important to safety must also be certified in such operations.

§ 63.152 Training and certification program.

[Top of File]

DOE shall establish a program for training, proficiency testing, certification, and requalification of operating and supervisory personnel.

§ 63.153 Physical requirements.

[Top of File]

The physical condition and the general health of personnel certified for operations that are important to safety may not be such as might cause operational errors that could endanger the public health and safety. Any condition that might cause impaired judgment or motor coordination must be considered in the selection of personnel for activities that are important to safety. These conditions need not categorically disqualify a person, so long as appropriate provisions are made to accommodate the conditions.

Subpart I--Emergency Planning Criteria

[Top of File]

§ 63.161 Emergency plan for the geologic repository operations area through permanent closure

DOE shall develop and be prepared to implement a plan to cope with radiological accidents that may occur at the geologic repository operations area, at any time before permanent closure and decontamination or decontamination and dismantlement of surface facilities. The emergency plan must be based on the criteria of § 72.32(b) of this chapter.

Subpart J--Violations

[Top of File]

§ 63.171 Violations

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued under those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued under the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

§ 63.172 Criminal penalties

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in this part 63 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in this part 63 that are not issued under sections 161b, 161i, or 161o for the purposes of Section 223 are as follows: §§ 63.1, 63.2, 63.5, 63.6, 63.7, 63.8, 63.15, 63.16, 63.21, 63.22, 63.23, 63.24, 63.31, 63.32, 63.33, 63.41, 63.42, 63.43, 63.45, 63.46, 63.51, 63.52, 63.61, 63.62, 63.63, 63.64, 63.65, 63.101, 63.102, 63.111, 63.112, 63.113, 63.114, 63.115, 63.121, 63.131, 63.132, 63.133, 63.134, 63.141, 63.142, 63.143, 63.153, 63.161, 63.171, 63.172, 63.201, 63.202, 63.203, 63.204, 63.301, 63.302, 63.303, 63.304, 63.305, 63.311, 63.312, 63.321, 63.322, 63.331, 63.332, 63.341, and 63.342.

Subpart K--Preclosure Public Health and Environmental Standards

[Top of File]

§ 63.201 Purpose and scope

This subpart covers the storage of radioactive material by DOE in the Yucca Mountain repository and on the Yucca Mountain site. For the purposes of demonstrating compliance with this subpart, to the extent there may be any conflict with the requirements specified in this subpart and the requirements contained in Subparts A-J of this regulation, including definitions, the requirements in this subpart shall take precedence.

§ 63.202 Definitions for Subpart K.

[Top of File]

General environment means everywhere outside the Yucca Mountain site, the Nellis Air Force Range, and the Nevada Test Site.

Member of the public means anyone who is not a radiation worker for purposes of worker protection.

Radioactive material means matter composed of or containing radionuclides subject to the Atomic Energy Act of 1954, as amended (42 U.S. C. sec. 2014 et seq.). Radioactive material includes, but is not limited to, high-level radioactive waste and spent nuclear fuel.

Spent nuclear fuel means fuel that has been withdrawn from a nuclear reactor following irradiation, the constituent elements of which have not been separated by reprocessing.

Storage means retention (and any associated activity, operation, or process necessary to carry out successful retention) of radioactive material with the intent or capability to readily access or retrieve such material.

Yucca Mountain repository means the excavated portion of the facility constructed underground within the Yucca Mountain site.

Yucca Mountain site means:

(1) The site recommended by the Secretary of DOE to the President under section 112(b)(1)(B) of the Nuclear Waste Policy Act of 1982 (42 U.S.C. 10132(b)(1)(B)) on May 27, 1986; or

(2) The area under the control of DOE for the use of Yucca Mountain activities at the time of licensing, if the site designated under the Nuclear Waste Policy Act is amended by Congress prior to the time of licensing.

§ 63.203 Implementation of Subpart K.

[Top of File]

DOE must demonstrate that normal operations at the Yucca Mountain site will and do occur in compliance with this subpart before the Commission grants or continues a license for DOE to receive and possess radioactive material within the Yucca Mountain site.

§ 63.204 Preclosure standard.

[Top of File]

DOE must ensure that no member of the public in the general environment receives more than an annual dose of 0.15 mSv (15 mrem) from the combination of:

(a) Management and storage (as defined in 40 CFR 191.2) of radioactive material that:

(1) Is subject to 40 CFR 191.3(a); and

(2) Occurs outside of the Yucca Mountain repository but within the Yucca Mountain site; and

(b) Storage (as defined in § 63.202) of radioactive material inside the Yucca Mountain repository.

Subpart L--Postclosure Public Health and Environmental Standards

[Top of File]

§ 63.301 Purpose and scope

This subpart covers the disposal of radioactive material in the Yucca Mountain repository by DOE. For the purposes of demonstrating compliance with this subpart, to the extent that there may be any conflict with the requirements specified in this subpart and the requirements contained in Subparts A-J of this part, including definitions, the requirements in this subpart shall take precedence.

§ 63.302 Definitions for Subpart L.

[Top of File]

All definitions in subpart K of this part, and the following:

Accessible environment means any point outside of the controlled area, including:

(1) The atmosphere (including the atmosphere above the surface area of the controlled area);

(2) Land surfaces;

(3) Surface waters;

(4) Oceans; and

(5) The lithosphere.

Aquifer means a water-bearing underground geological formation, group of formations, or part of a formation (excluding perched water bodies) that can yield a significant amount of ground water to a well or spring.

Controlled area means:

(1) The surface area, identified by passive institutional controls, that encompasses no more than 300 square kilometers. It must not extend farther:

(i) South than 36°40'13.6661" North latitude, in the predominant direction of ground-water flow; and

(ii) Than five kilometers from the repository footprint in any other direction; and

(2) The subsurface underlying the surface area.

Disposal means the emplacement of radioactive material into the Yucca Mountain disposal system with the intent of isolating it for as long as reasonably possible and with no intent of recovery, whether or not the design of the disposal system permits the ready recovery of the material. Disposal of radioactive material in the Yucca Mountain disposal system begins when all of the ramps and other openings into the Yucca Mountain repository are sealed.

Ground water means water that is below the land surface and in a saturated zone.

Human intrusion means breaching of any portion of the Yucca Mountain disposal system, within the repository footprint, by any human activity.

Passive institutional controls means:

(1) Markers, as permanent as practicable, placed on the Earth's surface;

(2) Public records and archives;

(3) Government ownership and regulations regarding land or resource use; and

(4) Other reasonable methods of preserving knowledge about the location, design, and contents of the Yucca Mountain disposal system.

Peak dose means the highest annual dose projected to be received by the reasonably maximally exposed individual.

Period of geologic stability means the time during which the variability of geologic characteristics and their future behavior in and around the Yucca Mountain site can be bounded, that is, they can be projected within a reasonable range of possibilities. This period is defined to end at 1 million years after disposal.

Plume of contamination means that volume of ground water in the predominant direction of ground-water flow that contains radioactive contamination from releases from the Yucca Mountain repository. It does not include releases from any other potential sources on or near the Nevada Test Site.

Repository footprint means the outline of the outermost locations of where the waste is emplaced in the Yucca Mountain repository.

Slice of the plume means a cross-section of the plume of contamination with sufficient thickness parallel to the prevalent direction of flow of the plume that it contains the representative volume.

Total dissolved solids means the total dissolved (filterable) solids in water as determined by use of the method specified in 40 CFR part 136.

Undisturbed performance means that human intrusion or the occurrence of unlikely natural features, events, and processes do not disturb the disposal system.

Undisturbed Yucca Mountain disposal system means that the Yucca Mountain disposal system is not affected by human intrusion.

Waste means any radioactive material emplaced for disposal into the Yucca Mountain repository.

Well-capture zone means the volume from which a well pumping at a defined rate is withdrawing water from an aquifer. The dimensions of the well-capture zone are determined by the pumping rate in combination with aquifer characteristics assumed for calculations, such as hydraulic conductivity, gradient, and the screened interval.

Yucca Mountain disposal system means the combination of underground engineered and natural barriers within the controlled area that prevents or substantially reduces releases from the waste.

[74 FR 10829, Mar. 13, 2009]

§ 63.303 Implementation of Subpart L.

[Top of File]

(a) Compliance is based upon the arithmetic mean of the projected doses from DOE's performance assessments for the period within 1 million years after disposal, with:

(1) Sections 63.311(a)(1) and 63.311(a)(2); and

(2) Sections 63.321(b)(1), 63.321(b)(2), and 63.331, if performance assessment is used to demonstrate compliance with either or both of these sections.

[74 FR 10829, Mar. 13, 2009]

§ 63.304 Reasonable expectation.

[Top of File]

Reasonable expectation means that the Commission is satisfied that compliance will be achieved based upon the full record before it. Characteristics of reasonable expectation include that it:

(1) Requires less than absolute proof because absolute proof is impossible to attain for disposal due to the uncertainty of projecting long-term performance;

(2) Accounts for the inherently greater uncertainties in making long-term projections of the performance of the Yucca Mountain disposal system;

(3) Does not exclude important parameters from assessments and analyses simply because they are difficult to precisely quantify to a high degree of confidence; and

(4) Focuses performance assessments and analyses on the full range of defensible and reasonable parameter distributions rather than only upon extreme physical situations and parameter values.

§ 63.305 Required characteristics of the reference biosphere

[Top of File]

(a) Features, events, and processes that describe the reference biosphere must be consistent with present knowledge of the conditions in the region surrounding the Yucca Mountain site.

(b) DOE should not project changes in society, the biosphere (other than climate), human biology, or increases or decreases of human knowledge or technology. In all analyses done to demonstrate compliance with this part, DOE must assume that all of those factors remain constant as they are at the time of submission of the license application.

(c) DOE must vary factors related to the geology, hydrology, and climate based upon cautious, but reasonable assumptions of the changes in these factors that could affect the Yucca Mountain disposal system during the period of geologic stability, consistent with the requirements for performance assessments specified at § 63.342.

(d) Biosphere pathways must be consistent with arid or semi-arid conditions.

[74 FR 10829, Mar. 13, 2009]

Postclosure Individual Protection Standard

[Top of File]

§ 63.311 Individual protection standard after permanent closure.

(a) DOE must demonstrate, using performance assessment, that there is a reasonable expectation that the reasonably maximally exposed individual receives no more than the following annual dose from releases from the undisturbed Yucca Mountain disposal system:

(1) 0.15 mSv (15 mrem) for 10,000 years following disposal; and

(2) 1.0 mSv (100 mrem) after 10,000 years, but within the period of geologic stability.

(b) DOE's performance assessment must include all potential pathways of radionuclide transport and exposure.

[74 FR 10829, Mar. 13, 2009]

§ 63.312 Required characteristics of the reasonably maximally exposed individual.

[Top of File]

The reasonably maximally exposed individual is a hypothetical person who meets the following criteria:

(a) Lives in the accessible environment above the highest concentration of radionuclides in the plume of contamination;

(b) Has a diet and living style representative of the people who now reside in the Town of Amargosa Valley, Nevada. DOE must use projections based upon surveys of the people residing in the Town of Amargosa Valley, Nevada, to determine their current diets and living styles and use the mean values of these factors in the assessments conducted for §§ 63.311 and 63.321;

(c) Uses well water with average concentrations of radionuclides based on an annual water demand of 3000 acre-feet;

(d) Drinks 2 liters of water per day from wells drilled into the ground water at the location specified in paragraph (a) of this section; and

(e) Is an adult with metabolic and physiological considerations consistent with present knowledge of adults.

Human-Intrusion Standard

[Top of File]

§ 63.321 Individual protection standard for human intrusion.

(a) DOE must determine the earliest time after disposal that the waste package would degrade sufficiently that a human intrusion (see § 63.322) could occur without recognition by the drillers.

(b) DOE must demonstrate that there is a reasonable expectation that the reasonably maximally exposed individual receives, as a result of the human intrusion, no more than the following annual dose:

(1) 0.15 mSv (15 mrem) for 10,000 years following disposal; and

(2) 1.0 mSv (100 mrem) after 10,000 years, but within the period of geologic stability.

(c) DOE's analysis must include all potential environmental pathways of radionuclide transport and exposure, subject to the requirements of § 63.322.

[74 FR 10829, Mar. 13, 2009]

§ 63.322 Human intrusion scenario.

[Top of File]

For the purposes of the analysis of human intrusion, DOE must make the following assumptions:

(a) There is a single human intrusion as a result of exploratory drilling for ground water;

(b) The intruders drill a borehole directly through a degraded waste package into the uppermost aquifer underlying the Yucca Mountain repository;

(c) The drillers use the common techniques and practices that are currently employed in exploratory drilling for ground water in the region surrounding Yucca Mountain;

(d) Careful sealing of the borehole does not occur, instead natural degradation processes gradually modify the borehole;

(e) No particulate waste material falls into the borehole;

(f) The exposure scenario includes only those radionuclides transported to the saturated zone by water (e.g., water enters the waste package, releases radionuclides, and transports radionuclides by way of the borehole to the saturated zone); and

(g) No releases are included which are caused by unlikely natural processes and events.

Ground Water Protection Standards

[Top of File]

§ 63.331 Separate standards for protection of ground water.

DOE must demonstrate that there is a reasonable expectation that, for 10,000 years of undisturbed performance after disposal, releases of radionuclides from waste in the Yucca Mountain disposal system into the accessible environment will not cause the level of radioactivity in the representative volume of ground water to exceed the limits in the following Table 1:

Table 1.--Limits on Radionuclides in the Representative Volume

Radionuclide or type of radiation emitted	Limit	Is natural background included?
Combined radium-226 and radium-228.	5 picocuries per liter	Yes
Gross alpha activity (including radium-226 but excluding radon and uranium).	15 picocuries per liter.	Yes
Combined beta and photon emitting radionuclides.	0.04 mSv (4mrem) per year to the whole body or any organ, based on drinking 2 liters of water per day from the representative volume.	No

§ 63.332 Representative volume.

[Top of File]

(a) The representative volume is the volume of ground water that would be withdrawn annually from an aquifer containing less than 10,000 milligrams of total dissolved solids per liter of water to supply a given water demand. DOE must project the concentration of radionuclides released from the Yucca Mountain disposal system that will be in the representative volume. DOE must use the projected concentrations to demonstrate a reasonable expectation that the Yucca Mountain disposal system complies with § 63.331. The DOE must make the following assumptions concerning the representative volume:

(1) It includes the highest concentration level in the plume of contamination in the accessible environment;

(2) Its position and dimensions in the aquifer are determined using average hydrologic characteristics which have cautious, but reasonable, values representative of the aquifers along the radionuclide migration path from the Yucca Mountain repository to the accessible environment as determined by site characterization; and

(3) It contains 3,000 acre-feet of water (about 3,714,450,000 liters or 977,486,000 gallons).

(b) DOE must use one of two alternative methods for determining the dimensions of the representative volume. The DOE must propose its chosen method, and any underlying assumptions, to NRC for approval.

(1) DOE may calculate the dimensions as a well-capture zone. If DOE uses this approach, it must assume that the:

(i) Water supply well(s) has (have) characteristics consistent with public water supply wells in the Town of Amargosa Valley, Nevada, for example, well-bore size and length of the screened intervals;

(ii) Screened interval(s) include(s) the highest concentration in the plume of contamination in the accessible environment; and

(iii) Pumping rates and the placement of the well(s) must be set to produce an annual withdrawal equal to the representative volume and to tap the highest concentration within the plume of contamination.

(2) DOE may calculate the dimensions as a slice of the plume. If DOE uses this approach, it must:

(i) Propose, for approval, where the location of the edge of the plume of contamination occurs. For example, the place where the concentration of radionuclides reaches 0.1% of the level of the highest concentration in the accessible environment;

(ii) Assume that the slice of the plume is perpendicular to the prevalent direction of flow of the aquifer; and

(iii) Assume that the volume of ground water contained within the slice of the plume equals the representative volume.

Additional Provisions

[Top of File]

§ 63.342 Limits on performance assessments.

(a) DOE's performance assessments conducted to show compliance with §§ 63.311(a)(1), 63.321(b)(1), and 63.331 shall not include consideration of very unlikely features, events, or processes, i.e., those that are estimated to have less than one chance in 100,000,000 per year of occurring. In addition, DOE's performance assessments need not evaluate the impacts resulting from any features, events, and processes or sequences of events and processes with a higher chance of occurring if the results of the performance assessments would not be changed significantly in the initial 10,000-year period after disposal.

(b) For performance assessments conducted to show compliance with §§ 63.321(b)(1) and 63.331, DOE's performance assessments shall exclude the unlikely features, events, and processes, or sequences of events and processes, i.e., those that are estimated to have less than

one chance in 100,000 per year of occurring and at least one chance in 100,000,000 per year of occurring.

(c) For performance assessments conducted to show compliance with §§ 63.311(a)(2) and 63.321(b)(2), DOE's performance assessments shall project the continued effects of the features, events, and processes included in paragraph (a) of this section beyond the 10,000-year post-disposal period through the period of geologic stability. DOE must evaluate all of the features, events, or processes included in paragraph (a) of this section, and also:

(1) DOE must assess the effects of seismic and igneous activity scenarios, subject to the probability limits in paragraph (a) of this section for very unlikely features, events, and processes, or sequences of events and processes. Performance assessments conducted to show compliance with § 63.321(b)(2) are also subject to the probability limits in paragraph (b) of this section for unlikely features, events, and processes, or sequences of events and processes.

(i) The seismic analysis may be limited to the effects caused by damage to the drifts in the repository, failure of the waste packages, and changes in the elevation of the water table under Yucca Mountain (*i.e.,* the magnitude of the water table rise under Yucca Mountain).

(ii) The igneous activity analysis may be limited to the effects of a volcanic event directly intersecting the repository. The igneous event may be limited to that causing damage to the waste packages directly, causing releases of radionuclides to the biosphere, atmosphere, or ground water.

(2) DOE must assess the effects of climate change. The climate change analysis may be limited to the effects of increased water flow through the repository as a result of climate change, and the resulting transport and release of radionuclides to the accessible environment. The nature and degree of climate change may be represented by constant-in-time climate conditions. The analysis may commence at 10,000 years after disposal and shall extend through the period of geologic stability. The constant-in-time values to be used to represent climate change are to be the spatial average of the deep percolation rate within the area bounded by the repository footprint. The constant-in-time deep percolation rates to be used to represent climate change shall be based on a lognormal distribution with an arithmetic mean of 41 mm/year (1.6 in./year) and a standard deviation of 33 mm/year (1.3 in./year). The lognormal distribution is to be truncated so that the deep percolation rates vary between 10 and 100 mm/year (0.39 and 3.9 in./year).

(3) DOE must assess the effects of general corrosion on engineered barriers. DOE may use a constant representative corrosion rate throughout the period of geologic stability or a distribution of corrosion rates correlated to other repository parameters.

[67 FR 62634, Oct. 8, 2002; 74 FR 10829, Mar. 13, 2009]

§ 63.343 Severability of individual protection and ground-water protection standards.

[Top of File]

The individual protection and ground-water protection standards are severable.

PART 70--DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 70.1 Purpose.

(a) Except as provided in paragraphs (c) and (d) of this section, the regulations of this part establish procedures and criteria for the issuance of licenses to receive title to, own, acquire, deliver, receive, possess, use, and transfer special nuclear material; and establish and provide for the terms and conditions upon which the Commission will issue such licenses.

(b) The regulations contained in this part are issued pursuant to the Atomic Energy Act of 1954, as amended (68 Stat. 919) and Title II of the Energy Reorganization Act of 1974 (88 Stat. 1242).

(c) The regulations in part 72 of this chapter establish requirements, procedures, and criteria for the issuance of licenses to possess:

(1) Spent fuel, power reactor-related Greater than Class C (GTCC) waste, and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI), or

(2) Spent fuel, high-level radioactive waste, power reactor-related GTCC waste, and other radioactive materials associated with the storage in a monitored retrievable storage installation (MRS), and the terms and conditions under which the Commission will issue such licenses.

(d) As provided in part 76 of this chapter, the regulations of this part establish procedures and criteria for physical security and material control and accounting for the issuance of a certificate of compliance or the approval of a compliance plan.

(e) As provided in the Atomic Energy Act of 1954, as amended, the regulations in this part establish requirements, procedures, and criteria for the issuance of licenses to uranium enrichment facilities.

[21 FR 764, Feb. 3, 1956, as amended at 32 FR 4056, Mar. 15, 1967; 40 FR 8791, Mar. 3, 1975; 43 FR 6924, Feb. 17, 1978; 45 FR 74712, Nov. 12, 1980; 53 FR 31682, Aug. 19, 1988; 59 FR 48960, Sept. 23, 1994; 62 FR 6669, Feb. 12, 1997; 66 FR 51838, Oct. 11, 2001]

§ 70.2 Scope.

[Top of File]

Except as provided in §§ 70.11 to 70.13, inclusive, the regulations in this part apply to all persons in the United States. This part also gives notice to all persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 70.10.

[56 FR 40691, Aug. 15, 1991]

§ 70.3 License requirements.

[Top of File]

No person subject to the regulations in this part shall receive title to, own, acquire, deliver, receive, possess, use, or transfer special nuclear material except as authorized in a license issued by the Commission pursuant to these regulations.

[32 FR 2562, Feb. 7, 1967, as amended at 43 FR 6924, Feb. 17, 1978]

§ 70.4 Definitions.

[Top of File]

Act means the Atomic Energy Act of 1954 (68 Stat 919), including any amendments thereto;

Acute, as used in this part, means a single radiation dose or chemical exposure event or multiple radiation dose or chemical exposure events occurring within a short time (24 hours or less).

Agreement State as designated in part 150 of this chapter means any State with which the Commission has entered into an effective

agreement under subsection 274b. of the Act. Non-agreement State means any other State.

Alert means events may occur, are in progress, or have occurred that could lead to a release of radioactive material[s] but that the release is not expected to require a response by an offsite response organization to protect persons offsite.

Atomic energy means all forms of energy released in the course of nuclear fission or nuclear transformation;

Atomic weapon means any device utilizing atomic energy, exclusive of the means for transporting or propelling the device (where such means is a separable and divisible part of the device), the principal purpose of which is for use as, or for development of, a weapon, a weapon prototype, or a weapon test device;

Available and reliable to perform their function when needed, as used in subpart H of this part, means that, based on the analyzed, credible conditions in the integrated safety analysis, items relied on for safety will perform their intended safety function when needed, and management measures will be implemented that ensure compliance with the performance requirements of § 70.61 of this part, considering factors such as necessary maintenance, operating limits, common-cause failures, and the likelihood and consequences of failure or degradation of the items and measures.

Commencement of construction means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site but does not include changes desirable for the temporary use of the land for public recreational uses, necessary borings to determine site characteristics or other preconstruction monitoring to establish background information related to the suitability of a site or to the protection of environmental values.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives;

Common defense and security means the common defense and security of the United States;

Configuration management (CM) means a management measure that provides oversight and control of design information, safety information, and records of modifications (both temporary and permanent) that might impact the ability of items relied on for safety to perform their functions when needed.

Contiguous sites means licensee controlled locations, deemed by the Commission to be in close enough proximity to each other, that the special nuclear material must be considered in the aggregate for the purpose of physical protection.

Corporation means the United States Enrichment Corporation (USEC), or its successor, a Corporation that is authorized by statute to lease the gaseous diffusion enrichment plants in Paducah, Kentucky, and Piketon, Ohio, from the Department of Energy, or any person authorized to operate one or both of the gaseous diffusion plants, or other facilities, pursuant to a plan for the privatization of USEC that is approved by the President.

Critical mass of special nuclear material (SNM), as used in Subpart H, means special nuclear material in a quantity exceeding 700 grams of contained uranium-235; 520 grams of uranium-233; 450 grams of plutonium; 1500 grams of contained uranium-235, if no uranium enriched to more than 4 percent by weight of uranium-235 is present; 450 grams of any combination thereof; or one-half such quantities if massive moderators or reflectors made of graphite, heavy water, or beryllium may be present.

Decommission means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits--

(1) Release of the property for unrestricted use and termination of the license; or

(2) Release of the property under restricted conditions and termination of the license.

Department and Department of Energy means the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 et seq.), to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

Double contingency principle means that process designs should incorporate sufficient factors of safety to require at least two unlikely, independent, and concurrent changes in process conditions before a criticality accident is possible.

Effective dose equivalent means the sum of the products of the dose equivalent to the body organ or tissue and the weighting factors applicable to each of the body organs or tissues that are irradiated. Weighting factors are: 0.25 for gonads, 0.15 for breast, 0.12 for red bone marrow, 0.12 for lungs, 0.03 for thyroid, 0.03 for bone surface, and 0.06 for each of the other five organs receiving the highest dose equivalent.

Effective kilograms of special nuclear material means: (1) For plutonium and uranium-233 their weight in kilograms; (2) For uranium with an enrichment in the isotope U-235 of 0.01 (1%) and above, its element weight in kilograms multiplied by the square of its enrichment expressed as a decimal weight fraction; and (3) For uranium with an enrichment in the isotope U-235 below 0.01 (1%), by its element weight in kilograms multiplied by 0.0001.

Formula quantity means strategic special nuclear material in any combination in a quantity of 5000 grams or more computed by the

formula, grams=(grams contained U-235)+2.5 (grams U-233+grams plutonium). This class of material is sometimes referred to as a Category I quantity of material.

Government agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government;

Hazardous chemicals produced from licensed materials means substances having licensed material as precursor compound(s) or substances that physically or chemically interact with licensed materials; and that are toxic, explosive, flammable, corrosive, or reactive to the extent that they can endanger life or health if not adequately controlled. These include substances commingled with licensed material, and include substances such as hydrogen fluoride that is produced by the reaction of uranium hexafluoride and water, but do not include substances prior to process addition to licensed material or after process separation from licensed material.

Integrated safety analysis (ISA) means a systematic analysis to identify facility and external hazards and their potential for initiating accident sequences, the potential accident sequences, their likelihood and consequences, and the items relied on for safety. As used here, integrated means joint consideration of, and protection from, all relevant hazards, including radiological, nuclear criticality, fire, and chemical. However, with respect to compliance with the regulations of this part, the NRC requirement is limited to consideration of the effects of all relevant hazards on radiological safety, prevention of nuclear criticality accidents, or chemical hazards directly associated with NRC licensed radioactive material. An ISA can be performed process by process, but all processes must be integrated, and process interactions considered.

Integrated safety analysis summary means a document or documents submitted with the license application, license amendment application, license renewal application, or pursuant to § 70.62(c)(3)(ii) that provides a synopsis of the results of the integrated safety analysis and contains the information specified in § 70.65(b). The ISA Summary can be submitted as one document for the entire facility, or as multiple documents that cover all portions and processes of the facility.

Items relied on for safety mean structures, systems, equipment, components, and activities of personnel that are relied on to prevent potential accidents at a facility that could exceed the performance requirements in § 70.61 or to mitigate their potential consequences. This does not limit the licensee from identifying additional structures, systems, equipment, components, or activities of personnel (i.e., beyond those in the minimum set necessary for compliance with the performance requirements) as items relied on for safety.

License, except where otherwise specified, means a license issued pursuant to the regulations in this part;

Management measures mean the functions performed by the licensee, generally on a continuing basis, that are applied to items relied on for safety, to ensure the items are available and reliable to perform their functions when needed. Management measures include configuration management, maintenance, training and qualifications, procedures, audits and assessments, incident investigations, records management, and other quality assurance elements.

Person means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department, except that the Department shall be considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing;

Plutonium processing and fuel fabrication plant means a plant in which the following operations or activities are conducted: (1) Operations for manufacture of reactor fuel containing plutonium including any of the following: (i) Preparation of fuel material; (ii) formation of fuel material into desired shapes; (iii) application of protective cladding; (iv) recovery of scrap material; and (v) storage associated with such operations; or (2) Research and development activities involving any of the operations described in paragraph (1) of this definition except for research and development activities utilizing unsubstantial amounts of plutonium.

Principal activities, as used in this part, means activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended. Storage during which no licensed material is accessed for use or disposal and activities incidental to decontamination or decommissioning are not principal activities.

Produce, when used in relation to special nuclear material, means (1) to manufacture, make, produce, or refine special nuclear material; (2) to separate special nuclear material from other substances in which such material may be contained; or (3) to make or to produce new special nuclear material;

Research and development means (1) theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes;

Restricted Data means all data concerning (1) design, manufacture or utilization of atomic weapons; (2) the production of special nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Act;

Sealed source means any special nuclear material that is encased in a capsule designed to prevent leakage or escape of the special nuclear material.

Site Area emergency means events may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by offsite response organizations to protect persons offsite.

Source material means source material as defined in section 11z. of the Act and in the regulations contained in part 40 of this chapter;

Special nuclear material means (1) plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material;

Special nuclear material means (1) plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material;

Special nuclear material of low strategic significance means:

(1) Less than an amount of special nuclear material of moderate strategic significance as defined in paragraph (1) of the definition of strategic nuclear material of moderate strategic significance in this section, but more than 15 grams of uranium-235 (contained in uranium enriched to 20 percent or more in U-235 isotope) or 15 grams of uranium-233 or 15 grams of plutonium or the combination of 15 grams when computed by the equation, grams = (grams contained U-235) + (grams plutonium) + (grams U-233); or

(2) Less than 10,000 grams but more than 1,000 grams of uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U-235 isotope); or

(3) 10,000 grams or more of uranium-235 (contained in uranium enriched above natural but less than 10 percent in the U-235 isotope).

This class of material is sometimes referred to as a Category III quantity of material.

Special nuclear material of moderate strategic significance means:

(1) Less than a formula quantity of strategic special nuclear material but more than 1,000 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope) or more than 500 grams of uranium-233 or plutonium, or in a combined quantity of more than 1,000 grams when computed by the equation, grams = (grams contained U-235) + 2 (grams U-233 + grams plutonium); or

(2) 10,000 grams or more of uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U-235 isotope).

This class of material is sometimes referred to as a Category II quantity of material.

Special nuclear material scrap means the various forms of special nuclear material generated during chemical and mechanical processing, other than recycle material and normal process intermediates, which are unsuitable for use in their present form, but all or part of which will be used after further processing.

Strategic special nuclear material means uranium-235 (contained in uranium enriched to 20 percent or more in the U235 isotope), uranium-233, or plutonium.

Transient shipment means a shipment of nuclear material, originating and terminating in foreign countries, on a vessel or aircraft which stops at a United States port.

Unacceptable performance deficiencies mean deficiencies in the items relied on for safety or the management measures that need to be corrected to ensure an adequate level of protection as defined in 10 CFR 70.61(b), (c), or (d).

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

Uranium enrichment facility means:

(1) Any facility used for separating the isotopes of uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for such equipment or device, capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

Worker, when used in Subpart H of this Part, means an individual who receives an occupational dose as defined in 10 CFR 20.1003.

[21 FR 764, Feb. 3, 1956]

Editorial Note: For *Federal Register* citations affecting § 70.4, see the List of CFR Sections Affected.

§ 70.5 Communications.

(a) Unless otherwise specified or covered under the regional licensing program as provided in paragraph (b) of this section, any communication or report concerning the regulations in this part and any application filed under these regulations may be submitted to the Commission as follows:

(1) By mail addressed to: ATTN: Document Control Desk, Director, Office of Nuclear Material Safety and Safeguards or Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(2) By hand delivery to the Director, Office of Nuclear Material Safety and Safeguards or Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response at the NRC's offices at 11555 Rockville Pike, Rockville, Maryland.

(3) Where practicable, by electronic submission, for example, via Electronic Information Exchange, and CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(4) Classified communications shall be transmitted to the NRC Headquarters' classified mailing address as specified in appendix A to part 73 of this chapter or delivered by hand in accordance with paragraph (a)(2) of this section.

(b) The Commission has delegated to the four Regional Administrators licensing authority for selected parts of its decentralized licensing program for nuclear materials as described in paragraph (b)(1) of this section. Any communication, report, or application covered under this licensing program must be submitted to the appropriate Regional Administrator. The Administrators' jurisdictions and mailing addresses are listed in paragraph (b)(2) of this section.

(1) The delegated licensing program includes authority to issue, renew, amend, cancel, modify, suspend, or revoke licenses for nuclear materials issued pursuant to 10 CFR parts 30 through 36, 39, 40, and 70 to all persons for academic, medical, and industrial uses, with the following exceptions:

(i) Activities in the fuel cycle and special nuclear material in quantities sufficient to constitute a critical mass in any room or area. This exception does not apply to license modifications relating to termination of special nuclear material licenses that authorize possession of larger quantities when the case is referred for action from NRC's Headquarters to the Regional Administrators.

(ii) Health and safety design review of sealed sources and devices and approval, for licensing purposes, of sealed sources and devices.

(iii) Processing of source material for extracting of metallic compounds (including Zirconium, Hafnium, Tantalum, Titanium, Niobium, etc.).

(iv) Distribution of products containing radioactive material to persons exempt pursuant to 10 CFR 32.11 through 32.26.

(v) New uses or techniques for use of byproduct, source, or special nuclear material.

(vi) Reviews pursuant to § 70.32(c).

(vii) Uranium enrichment facilities.

(2) *Submissions--(i) Region I.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region I non-Agreement States and the District of Columbia: Connecticut, Delaware, Maine, Massachusetts, New Jersey, Pennsylvania, and Vermont. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region I, Nuclear Material Section B, 475 Allendale Road, King of Prussia, Pennsylvania 19406-1415; where e-mail is appropriate it should be addressed to *RidsRgn1MailCenter@nrc.gov*.

(ii) *Region II.* The regional licensing program involves all Federal facilties in the region and non-Federal licensees in the following Region II non-Agreement States and territories: Virginia, West Virginia, Puerto Rico, and the Virgin Islands. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region II, Material Licensing/Inspection Branch, Sam Nunn Atlanta Federal Center, Suite 23T85, 61 Forsyth Street, SW, Atlanta, GA 30303-8931; where e-mail is appropriate it should be addressed to *RidsRgn2MailCenter@nrc.gov*.

(iii) *Region III.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region III non-Agreement States: Indiana, Michigan, Minnesota, Missouri, Ohio, and Wisconsin. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment, or renewal of an existing license specified in paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region III, Material Licensing Section, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; where e-mail is appropriate it should be addressed to *RidsRgn3MailCenter@nrc.gov*.

(iv) *Region IV.* The regional licensing program involves all Federal facilities in the region and non-Federal licensees in the following Region IV non-Agreement States and a territory: Alaska, Hawaii, Montana, Oklahoma, South Dakota, Wyoming, and Guam. All mailed or hand-delivered inquiries, communications, and applications for a new license or an amendment or renewal of an existing license specified in

paragraph (b)(1) of this section must use the following address: U.S. Nuclear Regulatory Commission, Region IV, Material Radiation Protection Section, 611 Ryan Plaza Drive, Suite 400, Arlington, Texas 76011-4005; where e-mail is appropriate it should be addressed to *RidsRgn4MailCenter@nrc.gov*.

[48 FR 16032, Apr. 14, 1983, as amended at 49 FR 19631, May 9, 1984; 49 FR 47824, Dec. 7, 1984; 50 FR 14694, Apr. 15, 1985; 51 FR 36001, Oct. 8, 1986; 52 FR 38392, Oct. 16, 1987; 52 FR 48093, Dec. 18, 1987; 53 FR 3862, Feb. 10, 1988; 53 FR 4111, Feb. 12, 1988; 53 FR 43421, Oct. 27, 1988; 54 FR 6877, Feb. 15, 1989; 57 FR 18392, Apr. 30, 1992; 58 FR 7737, Feb. 9, 1993; 58 FR 64112, Dec. 6, 1993; 59 FR 17466, Apr. 13, 1994; 60 FR 24552, May 9, 1995; 62 FR 22880, Apr. 28, 1997; 68 FR 58816, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 71 FR 15012, Mar. 27, 2006; 72 FR 33386, Jun. 18, 2007]

§ 70.6 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 70.7 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in paragraph (a) introductory text of this section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) introductory text or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) introductory text.

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraphs (a), (e), or (f) of this section by a Commission licensee, an applicant for a Commission license, or a contractor or subcontractor of a Commission licensee or applicant may be grounds for--

(1) Denial, revocation, or suspension of the license.

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant.

(3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse

action dictated by nonprohibited considerations.

(e)(1) Each specific licensee, each applicant for a specific license, and each general licensee subject to part 19 shall prominently post the revision of NRC Form 3, "Notice to Employees," referenced in 10 CFR 19.11(c).

(2) The posting of NRC Form 3 must be at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license, and for 30 days following license termination.

(3) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by accessing the NRC Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[58 FR 52413, Oct. 8, 1993, as amended at 60 FR 24552, May 9, 1995; 61 FR 6765, Feb. 22, 1996; 68 FR 58817, Oct. 10, 2003; 72 FR 63974, Nov. 14, 2007]

§ 70.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0009.

(b) The approved information collection requirements contained in this part appear in §§ 70.9, 70.17, 70.19, 70.20a, 70.20b, 70.21, 70.22, 70.24, 70.25, 70.32, 70.33, 70.34, 70.38, 70.39, 70.42, 70.50, 70.51, 70.52, 70.59, 70.61, 70.62, 70.64, 70.65, 70.72, 70.73, 70.74, and Appendix A.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 70.21(g), Form N–71 and associated forms are approved under control number 3150–0056.

(2) In § 70.38, NRC form 314 is approved under control number 3150-0028.

(3) In § 70.21(g), DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control number 0694–0135.

[49 FR 19628, May 9, 1984, as amended at 52 FR 19305, May 22, 1987; 56 FR 40769, Aug. 16, 1991; 57 FR 18392, Apr. 30, 1992; 58 FR 39634, July 26, 1993; 62 FR 52189, Oct. 6, 1997; 65 FR 56225, Sept. 18, 2000; 67 FR 78412, Dec. 23, 2002; 73 FR 78606, Dec. 23, 2008]

§ 70.9 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[52 FR 49373, Dec. 31, 1987]

§ 70.10 Deliberate misconduct.

[Top of File]

(a) Any licensee, applicant for a license, employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

[63 FR 1899, Jan. 13, 1998]

Subpart B--Exemptions

[Top of File]

§ 70.11 Persons using special nuclear material under certain Department of Energy and Nuclear Regulatory Commission contracts.

Except to the extent that Department facilities or activities of the types subject to licensing pursuant to section 202 of the Energy Reorganization Act of 1974 are involved, any prime contractor of the Department is exempt from the requirements for a license set forth in section 53 of the Act and from the regulations in this part to the extent that such contractor, under his prime contract with the Department receives title to, owns, acquires, delivers, receives, possesses, uses, or transfers special nuclear material for:

(a) The performance of work for the Department at a United States Government-owned or controlled site, including the transportation of special nuclear material to or from such site and the performance of contract services during temporary interruptions of such transportation; (b) research in, or development, manufacture, storage, testing or transportation of, atomic weapons or components thereof; or (c) the use or operation of nuclear reactors or other nuclear devices in a United States Government-owned vehicle or vessel. In addition to the foregoing exemptions, and subject to the requirement for licensing of Department facilities and activities pursuant to section 202 of the Energy Reorganization Act of 1974, any prime contractor or subcontractor of the Department or the Commission is exempt from the requirements for a license set forth in section 53 of the Act and from the regulations in this part to the extent that such prime contractor or subcontractor receives title to, owns, acquires, delivers, receives, possesses, uses, or transfers special nuclear material under his prime contract or subcontract when the Commission determines that the exemption of the prime contractor or subcontractor is authorized by law; and that, under the terms of the contract or subcontract there is adequate assurance that the work thereunder can be accomplished without undue risk to the public health and safety.

[40 FR 14085, Mar. 28, 1975; 40 FR 16047, Apr. 9, 1975; as amended at 43 FR 6924, Feb. 17, 1978; 65 FR 54950, Sept. 12, 2000]

§ 70.12 Carriers.

[Top of File]

Common and contract carriers, freight forwarders, warehousemen, and the U.S. Postal Service are exempt from the regulations in this part to the extent that they transport special nuclear material in the regular course of carriage for another or storage incident thereto. This exemption does not apply to the storage in transit or transport of material by persons covered by the general license issued under § 70.20a and § 70.20b.

[46 FR 12696, Feb. 18, 1981]

§ 70.13 Department of Defense.

[Top of File]

The regulations in this part do not apply to the Department of Defense to the extent that the Department receives, possesses and uses special nuclear material in accordance with the direction of the President pursuant to section 91 of the Act.

§ 70.14 Foreign military aircraft.

[Top of File]

The regulations in this part do not apply to persons who carry special nuclear material (other than plutonium) in aircraft of the armed forces of foreign nations subject to 49 U.S.C. 40103(d).

[46 FR 12194, Feb. 13, 1981. Redesignated at 65 FR 56225, Sept. 18, 2000; 71 FR 15012, Mar. 27, 2006]

§ 70.17 Specific exemptions.

[Top of File]

(a) The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

(b) [Reserved]

(c) The DOE is exempt from the requirements of the regulations in this part to the extent that its activities are subject to the requirements of part 60 or part 63 of this chapter.

(d) Except as specifically provided in part 61 of this chapter, any licensee is exempt from the requirements of the regulations in this part to the extent that its activities are subject to the requirements of part 61 of this chapter.

[37 FR 5749, Mar. 21, 1972, as amended at 45 FR 65536, Oct. 3, 1980; 46 FR 13987, Feb. 25, 1981; 47 FR 57481, Dec. 27, 1982; Redesignated at 65 FR 56225, Sept. 18, 2000, as amended at 66 FR 55815, Nov. 2, 2001]

Subpart C--General Licenses

[Top of File]

§ 70.18 Types of licenses.

Licenses for special nuclear material are of two types: general and specific. Any general license provided in this part is effective without the filing of applications with the Commission or the issuance of licensing documents to particular persons. Specific licenses are issued to named persons upon applications filed pursuant to the regulations in this part.

[29 FR 5884, May 5, 1964]

§ 70.19 General license for calibration or reference sources.

[Top of File]

(a) A general license is hereby issued to those persons listed below to receive title to, own, acquire, deliver, receive, possess, use and transfer in accordance with the provisions of paragraphs (b) and (c) of this section, plutonium in the form of calibration or reference sources:

(1) Any person in a non-agreement State who holds a specific license issued by the Commission or the Atomic Energy Commission which authorizes him to receive, possess, use and transfer byproduct material, source material, or special nuclear material;

(2) Any Government agency as defined in § 70.4 that holds a specific license issued by the Commission that authorizes it to receive, possess, use, or transfer byproduct material, source material, or special nuclear material; and

(3) Any person in an agreement State who holds a specific license issued by the Commission or the Atomic Energy Commission which authorizes him to receive, possess, use and transfer special nuclear material.

(b) The general license in paragraph (a) of this section applies only to calibration or reference sources which have been manufactured or initially transferred in accordance with the specifications contained in a specific license issued pursuant to § 70.39 or in accordance with the specifications contained in a specific license issued by an agreement State which authorizes manufacture of the sources for distribution to persons generally licensed by the agreement State.

(c) The general license in paragraph (a) of this section is subject to the provisions of §§ 70.32, 70.50, 70.55, 70.56, 70.91, 70.81, and 70.82; the provisions of §§ 74.11 and 74.19 of this chapter; and to the provisions of parts 19, 20, and 21 of this chapter. In addition, persons who receive title to own, acquire, deliver, receive, possess, use or transfer one or more calibration or reference sources under this

general license:

(1) Shall not possess at any one time, at any one location of storage or use, more than 5 microcuries of plutonium in such sources;

(2) Shall not receive, possess, use or transfer such source unless the source, or the storage container, bears a label which includes the following statement or a substantially similar statement which contains the information called for in the following statement:[1]

> The receipt, possession, use and transfer of this source, Model-- --- , Serial No.-----, are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.
>
> CAUTION—RADIOACTIVE MATERIAL—THIS SOURCE CONTAINS PLUTONIUM. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.
>
> (Name of Manufacturer or Initial Transferor)

(3) Shall not transfer, abandon, or dispose of such source except by transfer to a person authorized by a license from the Commission or the Atomic Energy Commission or an Agreement State to receive the source.

(4) Shall store such source, except when the source is being used, in a closed container adequately designed and constructed to contain plutonium which might otherwise escape during storage.

(5) Shall not use such source for any purpose other than the calibration of radiation detectors or the standardization of other sources.

(d) The general license in paragraph (a) of this section does not authorize the manufacture, import, or export of calibration or reference sources containing plutonium.

[29 FR 5884, May 5, 1964, as amended at 32 FR 8124, June 7, 1967; 38 FR 22221, Aug. 17, 1973; 40 FR 8792, Mar. 3, 1975; 42 FR 28896, June 6, 1977; 43 FR 6924, Feb. 17, 1978; 48 FR 32329, July 15, 1983; 56 FR 40769, Aug. 16, 1991; 57 FR 33428, July 29, 1992; 67 FR 78142, Dec. 23, 2002; 72 FR 35144, June 27, 2007]

[1] Sources generally licensed under this section prior to January 19, 1975 may bear labels authorized by the regulations in effect on January 1, 1975.

§ 70.20 General license to own special nuclear material.

[Top of File]

A general license is hereby issued to receive title to and own special nuclear material without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this section is not authorized to acquire, deliver, receive, possess, use, transfer, import, or export special nuclear material, except as authorized in a specific license.

[33 FR 9810, July 9, 1968]

§ 70.20a General license to possess special nuclear material for transport.

[Top of File]

(a) A general license is issued to any person to possess formula quantities of strategic special nuclear material of the types and quantities subject to the requirements of §§ 73.20, 73.25, 73.26 and 73.27 of this chapter, and irradiated reactor fuel containing material of the types and quantities subject to the requirements of § 73.37 of this chapter, in the regular course of carriage for another or storage incident. Carriers generally licensed under § 70.20b are exempt from the requirements of this section. Carriers of irradiated reactor fuel for the United States Department of Energy are also exempt from the requirements of this section. The general license is subject to the applicable provisions of §§ 70.7 (a) through (e), 70.32 (a) and (b), and §§ 70.42, 70.52, 70.55, 70.91, 70.81, 70.82 and 10 CFR 74.11.

(b) Notwithstanding any other provision of this chapter, the general license issued under this section does not authorize any person to conduct any activity that would be authorized by a license issued pursuant to parts 30 through 36, 39, 40, 50, 72, 110, or other sections of this part.

(c) Notwithstanding any other provision of this chapter, the duties of a general licensee under this section while in possession of formula quantities of strategic special nuclear material or irradiated reactor fuel in the regular course of carriage for another or storage incident thereto shall be limited to providing for the physical protection of such material against theft or sabotage. Unless otherwise provided by this section, a general license under this section is not subject to the requirements of Parts 19, 20, 70 and 73.

(d) Any person who possesses formula quantities of strategic special nuclear material under this general license:

(1) Shall have submitted and received approval of a transportation security plan. The security plan shall outline the procedures that will be

used to meet the requirements of §§ 73.20, 73.25, 73.26, 73.27 and 73.70(g) of this chapter including a plan for the selection, qualification, and training of armed escorts, or the specification and design of a specially designed truck or trailer as appropriate.

(2) Shall assure that the transportation is in accordance with the applicable physical protection requirements of §§ 73.20, 73.25, 73.26, 73.27 and 73.70(g) of this chapter and the applicable approved transportation security plan.

(3) Shall be subject to part 26 and § 73.80 of this chapter.

(e) Any person who possesses irradiated reactor fuel under this general license shall:

(1) Assure or receive certification from the shipper that the transportation is in accordance with the applicable physical protection requirements of § 73.37 of this chapter; and

(2) Comply with the reporting requirements of § 73.71 of this chapter.

[44 FR 26851, May 8, 1979, as amended at 44 FR 68186, Nov. 28, 1979; 46 FR 12696, Feb. 18, 1981; 47 FR 30458, July 14, 1982; 53 FR 31682, Aug. 19, 1988; 58 FR 7737, Feb. 9, 1993; 58 FR 31471, June 3, 1993; 67 FR 78142, Dec. 23, 2002; 72 FR 35144, June 27, 2007]

§ 70.20b General license for carriers of transient shipments of formula quantities of strategic special nuclear material, special nuclear material of moderate strategic significance, special nuclear material of low strategic significance, and irradiated reactor fuel.

[Top of File]

(a) A general license is hereby issued to any person to possess transient shipments of the following kinds and quantities of special nuclear material:

(1) A formula quantity of special nuclear material of the types and quantities subject to the requirements of §§ 73.20, 73.25, 73.26, and 73.27 of this chapter.

(2) Special nuclear material of moderate and low strategic significance of the types and quantities subject to the requirements of § 73.67 of this chapter.

(3) Irradiated reactor fuel of the type and quantity subject to the requirements of § 73.37 of this chapter.

(b) Persons generally licensed under this section are exempt from the requirements of parts 19 and 20 of this chapter and the requirements of this part, except §§ 70.32 (a) and (b), 70.52, 70.55, 70.91, 70.81, and 70.82.

(c) Persons generally licensed under this section to possess a transient shipment of special nuclear material of the kind and quantity specified in paragraph (a)(1) of this section shall provide physical protection for that shipment in accordance with or equivalent to §§ 73.20 (a), 73.20(b), 73.25, and 73.71(b) of this chapter from the time a shipment enters a United States port until it exits that or another United States port.

(d) Persons generally licensed under this section to possess a transient shipment of special nuclear material of moderate or low strategic significance of the kind and quantity specified in paragraph (a)(2) of this section shall provide physical protection for that shipment in accordance with or equivalent to § 73.67 of this chapter and shall comply with the requirements of § 73.71(b) of this chapter.

(e) Persons generally licensed under this section to possess a transient shipment of irradiated reactor fuel of the kind and quantity specified in paragraph (a)(3) of this section shall provide physical protection for that shipment in accordance with or equivalent to § 73.37 of this chapter and shall comply with the requirements of § 73.71(b) of this chapter.

(f)(1) Persons generally licensed under this section, who plan to carry transient shipments with scheduled stops at United States ports, shall notify in writing the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, using an appropriate method listed in § 70.5(a). Classified notifications shall be sent to the NRC headquarters classified mailing address listed in appendix A to part 73 of this chapter.

(2) A person generally licensed under this section shall assure that:

(i) The notification will be received at least 10 days before transport of the shipment commences at the shipping facility;

(ii) The NRC Headquarters Operations Center shall be notified by telephone at least 2 days before commencement of the shipment at the numbers listed in appendix A to part 73 of this chapter. Classified notifications shall be made by secure telephone.

(iii) The NRC Headquarters Operations Center shall be notified by telephone of schedule changes greater than ±6 hours at the numbers listed in appendix A to part 73 of this chapter. Classified notifications shall be made by secure telephone.

(3) Persons who are generally licensed under paragraph (a)(1) of this section must include the information listed in paragraphs (f)(3)(i) through (ix) of this section. Persons who are generally licensed under § 70.20b(a)(2) and § 70.20b(a)(3) must include the information

listed in paragraphs (f)(3) (i) through (viii) of this section.

(i) Location of all scheduled stops in United States territory;

(ii) Arrival and departure times for all scheduled stops in United States territory;

(iii) The type of transport vehicle;

(iv) A physical description of the shipment (elements, isotopes, and enrichments);

(v) The number and types of containers;

(vi) The name and telephone number of the carrier's representative at each stopover location in United States territory;

(vii) The estimated time and date that shipment will commence and that each country (other than the United States) along the route is scheduled to be entered;

(viii) For shipments between countries that are not party to the Convention on the Physical Protection of Nuclear Material, provide assurances, as far as is practicable, that this nuclear material will be protected during international transport at levels described in Annex I to that Convention (see appendices E and F of part 73 of this chapter); and

(ix) A physical protection plan for implementing the requirement of § 70.20b(c), which will include the use of armed personnel to protect the shipment during the time the shipment is in a United States port.

(g) Persons generally licensed under this section making unscheduled stops at United States ports, immediately after the decision to make an unscheduled stop, shall:

(1) Provide to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, the information required under paragraph (f) of this section.

(2) In the case of persons generally licensed under paragraph (a)(1) of this section, arrange for local law enforcement authorities or trained and qualified private guards to protect the shipment during the stop.

(3) In the case of persons generally licensed under paragraph (a)(2) of this section, arrange for the shipment to be protected as required in § 73.67(e) of this chapter.

(4) In the case of persons generally licensed under paragraph (a)(3) of this section, arrange for the shipment to be protected as required in § 73.37(e) of this chapter.

(5) Implement these arrangements within a reasonable time after the arrival of the shipment at a United States port to remain in effect until the shipment exits that or another United States port.

[52 FR 9652, Mar. 26, 1987, as amended at 60 FR 24552, May 9, 1995; 67 FR 3585, Jan. 25, 2002; 68 FR 58817, Oct. 10, 2003; 72 FR 35144, June 27, 2007]

Subpart D--License Applications

[Top of File]

§ 70.21 Filing.

(a)(1) A person may apply for a license to possess and use special nuclear material in a plutonium processing or fuel fabrication plant, or for a uranium enrichment facility license, by filing the application with the Director of the NRC's Office of Nuclear Material Safety and Safeguards in accordance with the instructions in § 70.5(a). If the application is on paper or CD-ROM, only one copy need be provided. If the application is to be submitted electronically, see guidance for electronic submissions to the Commission.

(2) A person may apply for any other license issued under this part, by filing the application in accordance with the instructions in § 70.5 (a). If the application is on paper, only one copy need be provided. If the application is to be submitted electronically, see guidance for electronic submissions to the Commission.

(3) Information contained in previous applications, statements, or reports filed with the Commission may be incorporated by reference if the references are clear and specific.

(b) An application for license filed pursuant to the regulations in this part will be considered also as an application for licenses authorizing other activities for which licenses are required by the Act, provided the application specifies the additional activities for which licenses are requested and complies with regulations of the Commission as to applications for such licenses.

(c) Any application which contains Restricted Data shall be prepared in such manner that all Restricted Data are separated from the unclassified information.

(d) Applications and documents submitted to the Commission in connection with applications may be made available for public inspection in accordance with the provisions of the regulations contained in part 2 of this chapter.

(e) Each application for a special nuclear material license, other than a license exempted from part 170 of this chapter, shall be accompanied by the fee prescribed in § 170.31 of this chapter. No fee will be required to accompany an application for renewal or amendment of a license, except as provided in § 170.31 of this chapter.

(f) An application for a license to possess and use special nuclear material for processing and fuel fabrication, scrap recovery or conversion of uranium hexafluoride, or for the conduct of any other activity which the Commission has determined pursuant to subpart A of part 51 of this chapter will significantly affect the quality of the environment shall be filed at least 9 months prior to commencement of construction of the plant or facility in which the activity will be conducted, and shall be accompanied by an Environmental Report required under subpart A of part 51 of this chapter.

(g)(1) In response to a written request by the Commission, each applicant for a construction authorization or license and each recipient of a construction authorization or a license to possess and use special nuclear material shall submit facility information, as described in § 75.10 of this chapter, on Form N–71 and associated forms and site information on DOC/NRC Form AP–A and associated forms;

(2) As required by the Additional Protocol, applicants and licensees specified in paragraph (a) of this section shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms; and

(3) Shall permit verification thereof by the International Atomic Energy Agency (IAEA) and take other action as necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

(h) A license application for a uranium enrichment facility must be accompanied by an Environmental Report required under subpart A of part 51 of this chapter.

[21 FR 764, Feb. 3, 1956, as amended at 23 FR 1122, Feb. 21, 1958; 31 FR 4670, Mar. 19, 1966; 34 FR 19546, Dec. 11, 1969; 36 FR 146, Jan. 6, 1971; 37 FR 5749, Mar. 21, 1972; 49 FR 9406, Mar. 12, 1984; 49 FR 19628 and 19632, May 9, 1984; 49 FR 21699, May 23, 1984; 57 FR 18392, Apr. 30, 1992; 68 FR 58817, Oct. 10, 2003; 73 FR 78606, Dec. 23, 2008]

§ 70.22 Contents of applications.

[Top of File]

(a) Each application for a license shall contain the following information:

(1) The full name, address, age (if an individual), and citizenship of the applicant and the names and addresses of three personal references. If the applicant is a corporation or other entity, it shall indicate the State where it was incorporated or organized, the location of the principal office, the names, addresses, and citizenship of its principal officers, and shall include information known to the applicant concerning the control or ownership, if any, exercised over the applicant by any alien, foreign corporation, or foreign government;

(2) The activity for which the special nuclear material is requested, or in which special nuclear material will be produced, the place at which the activity is to be performed and the general plan for carrying out the activity;

(3) The period of time for which the license is requested;

(4) The name, amount, and specifications (including the chemical and physical form and, where applicable, isotopic content) of the special nuclear material the applicant proposes to use or produce;

(5) [Reserved]

(6) The technical qualifications, including training and experience of the applicant and members of his staff to engage in the proposed activities in accordance with the regulations in this chapter;

(7) A description of equipment and facilities which will be used by the applicant to protect health and minimize danger to life or property (such as handling devices, working areas, shields, measuring and monitoring instruments, devices for the disposal of radioactive effluents and wastes, storage facilities, criticality accident alarm systems, etc.);

(8) Proposed procedures to protect health and minimize danger to life or property (such as procedures to avoid accidental criticality, procedures for personnel monitoring and waste disposal, post-criticality accident emergency procedures, etc.).

Note: Where the nature of the proposed activities is such as to require consideration of the applicant's financial qualifications to engage in the proposed activities in accordance with the regulations in this chapter, the Commission may request the applicant to submit information with respect to his financial qualifications.

(9) As provided by § 70.25, certain applications for specific licenses filed under this part must contain a proposed decommissioning funding

plan or a certification of financial assurance for decommissioning. In the case of renewal applications submitted on or before July 27, 1990, this submittal may follow the renewal application but must be submitted on or before July 27, 1990.

(b) Each application for a license to possess special nuclear material, to possess equipment capable of enriching uranium, to operate an uranium enrichment facility, to possess and use at any one time and location special nuclear material in a quantity exceeding one effective kilogram, except for applications for use as sealed sources and for those uses involved in the operation of a nuclear reactor licensed pursuant to part 50 of this chapter and those involved in a waste disposal operation, must contain a full description of the applicant's program for control and accounting of such special nuclear material or enrichment equipment that will be in the applicant's possession under license to show how compliance with the requirements of §§ 74.31, 74.33, 74.41, or 74.51 of this chapter, as applicable, will be accomplished.

(c) [Reserved]

(d) The Commission may at any time after the filing of the original application, and before the expiration of the license, require further statements in order to enable the Commission to determine whether the application should be granted or denied or whether a license should be modified or revoked. All applications and statements shall be signed by the applicant or licensee or a corporate officer thereof.

(e) Each application and statement shall contain complete and accurate disclosure as to all matters and things required to be disclosed.

(f) Each application for a license to possess and use special nuclear material in a plutonium processing and fuel fabrication plant shall contain, in addition to the other information required by this section, a description of the plantsite, a description and safety assessment of the design bases of the principal structure, systems, and components of the plant, including provisions for protection against natural phenomena, and a description of the quality assurance program to be applied to the design, fabrication, construction, testing and operation of the structures, systems, and components of the plant.[2]

(g)(1) Each application for a license that would authorize the transport or delivery to a carrier for transport of special nuclear material in an amount specified in § 73.1(b)(2) of this chapter must include (i) a description of the plan for physical protection of special nuclear material in transit in accordance with §§ 73.20, 73.25, 73.26, 73.27, and 73.67(a), (e), and (g) for 10 kg or more of special nuclear material of low strategic significance, and § 73.70(g) of this chapter including, as appropriate, a plan for the selection, qualification, and training of armed escorts, or the specification and design of a specially designed truck or trailer, and (ii) a licensee safeguards contingency plan or response procedures, as appropriate, for dealing with threats, thefts, and radiological sabotage relating to the special nuclear material in transit.

(2) Each application for such a license involving formula quantities of strategic special nuclear material must include the first four categories of information contained in the applicant's safeguards contingency plan. (The first four categories of information, as set forth in appendix C to part 73 of this chapter, are Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix. The fifth category of information, Procedures, does not have to be submitted for approval.)

(3) The licensee shall retain this discription of the plan for physical protection of special nuclear material in transit and the safeguards contingency plan or safeguards response procedures and each change to the plan or procedures as a record for a period of three years following the date on which the licensee last possessed the appropriate type and quantity of special nuclear material requiring this record under each license.

(h)(1) Each application for a license to possess or use, at any site or contiguous sites subject to licensee control, a formula quantity of strategic special nuclear material, as defined in § 70.4, other than a license for possession or use of this material in the operation of a nuclear reactor licensed pursuant to part 50 of this chapter, must include a physical security plan. The plan must describe how the applicant will meet the applicable requirements of part 73 of this chapter in the conduct of the activity to be licensed, including the identification and description of jobs as required by 10 CFR 11.11(a). The plan must list tests, inspections, audits, and other means to be used to demonstrate compliance with the requirements of 10 CFR parts 11 and 73, if applicable.

(2) The licensee shall retain a copy of this physical security plan and each change to the plan as a record for a period of three years following the date on which the licensee last possessed the appropriate type and quantity of special nuclear material requiring this record under each license.

(i)(1) Each application to possess enriched uranium or plutonium for which a criticality accident alarm system is required, uranium hexafluoride in excess of 50 kilograms in a single container or 1000 kilograms total, or in excess of 2 curies of plutonium in unsealed form or on foils or plated sources, must contain either:

(i) An evaluation showing that the maximum dose to a member of the public offsite due to a release of radioactive materials would not exceed 1 rem effective dose equivalent or an intake of 2 milligrams of soluble uranium, or

(ii) An emergency plan for responding to the radiological hazards of an accidental release of special nuclear material and to any associated chemical hazards directly incident thereto.

(2) One or more of the following factors may be used to support an evaluation submitted under paragraph (i)(1)(i) of this section:

(i) The radioactive material is physically separated so that only a portion could be involved in an accident;

(ii) All or part of the radioactive material is not subject to release during an accident or to criticality because of the way it is stored or packaged;

(iii) In the case of fires or explosions, the release fraction would be lower than 0.001 due to the chemical or physical form of the material;

(iv) The solubility of the material released would reduce the dose received;

(v) The facility design or engineered safety features in the facility would cause the release fraction to be lower than 0.001;

(vi) Operating restrictions or procedures would prevent a release large enough to cause a member of the public offsite to receive a dose exceeding 1 rem effective dose equivalent; or

(vii) Other factors appropriate for the specific facility.

(3) Emergency plans submitted under paragraph (i)(1)(ii) of this section must include the following information:

(i) *Facility description*. A brief description of the licensee's facility and area near the site.

(ii) *Types of accidents*. An identification of each type of radioactive materials accident for which protective actions may be needed.

(iii) *Classification of accidents*. A classification system for classifying accidents as alerts or site area emergencies.

(iv) *Detection of accidents*. Identification of the means of detecting each type of accident in a timely manner.

(v) *Mitigation of consequences*. A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(vi) *Assessment of releases*. A brief description of the methods and equipment to assess releases of radioactive materials.

(vii) *Responsibilities*. A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC; also responsibilities for developing, maintaining, and updating the plan.

(viii) *Notification and coordination*. A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the NRC operations center immediately after notification of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency.[1]

(ix) Information to be communicated. A brief description of the types of information on facility status, radioactive releases, and recommended protective actions, if necessary, to be given to offsite response organizations and to the NRC.

(x) Training. A brief description of the frequency, performance objectives and plans for the training that the licensee will provide workers on how to respond to an emergency including any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel. The training shall familiarize personnel with site-specific emergency procedures. Also, the training shall thoroughly prepare site personnel for their responsibilities in the event of accident scenarios postulated as most probable for the specific site, including the use of team training for such scenarios.

(xi) Safe shutdown. A brief description of the means of restoring the facility to a safe condition after an accident.

(xii) Exercises. Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the biennial exercises. Participation of offsite response organizations in biennial exercises although recommended is not required. Exercises must use accident scenarios postulated as most probable for the specific site and the scenarios shall not be known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for the plan. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.

(xiii) Hazardous chemicals. A certification that the applicant has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499, if applicable to the applicant's activities at the proposed place of use of the special nuclear material.

(4) The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the licensee's emergency plan before submitting it to NRC. The licensee shall provide any comments received within the 60 days to the NRC with the emergency plan.

(j)(1) Each application for a license to possess or use at any site or contiguous sites subject to control by the licensee uranium-235 (contained in uranium enriched to 20 percent or more in the uranium-235 isotope), uranium-233, or plutonium alone or in any combination in a quantity of 5,000 grams or more computed by the formula, grams = (grams contained U - 235) + 2.5 (grams U-233 + grams plutonium) other than a license for possession or use of this material in the operation of a nuclear reactor licensed pursuant to part 50 of

this chapter, must include a licensee safeguards contingency plan for dealing with threats, thefts, and radiological sabotage, as defined in part 73 of this chapter, relating to nuclear facilities licensed under part 50 of this chapter or to the possession of special nuclear material licensed under this part.

(2) Each application for such a license must include the first four categories of information contained in the applicant's safeguards contingency plan. (The first four categories of information, as set forth in appendix C to part 73 of this chapter, are Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix.) The fifth category of information, Procedures, does not have to be submitted for approval.

(3) The licensee shall retain a copy of this safeguards contingency plan as a record until the Commission terminates each license obtained by this application or any application for renewal of a license and retain each change to the plan as a record for three years after the date of the change.

(k) Each application for a license to possess or use at any site or contiguous sites subject to licensee control, special nuclear material of moderate strategic significance or 10 kg or more of special nuclear material of low strategic significance as defined under § 70.4, other than a license for possession or use of this material in the operation of a nuclear power reactor licensed pursuant to part 50 of this chapter, must include a physical security plan that demonstrates how the applicant plans to meet the requirements of paragraphs (d), (e), (f), and (g) of § 73.67 of this chapter, as appropriate. The licensee shall retain a copy of this physical security plan as a record for the period during which the licensee possesses the appropriate type and quantity of special nuclear material under each license, and if any portion of the plan is superseded, retain that superseded portion of the plan for 3 years after the effective date of the change.

(l) Each applicant for a license shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements of § 73.22, or 73.23 of this chapter, as applicable, and shall protect classified information in accordance with the requirements of parts 25 and 95 of this chapter, as applicable.

(m) Each application for a license to possess equipment capable of enriching uranium or operate an enrichment facility, and produce, possess, or use more than one effective kilogram of special nuclear material at any site or contiguous sites subject to control by the applicant, must contain a full description of the applicant's security program to protect against theft, and to protect against unauthorized viewing of classified enrichment equipment, and unauthorized disclosure of classified matter in accordance with the requirements of 10 CFR parts 25 and 95.

(n) A license application that involves the use of special nuclear material in a uranium enrichment facility must include the applicant's provisions for liability insurance.

[21 FR 764, Feb. 3, 1956; 73 FR 63572, Oct. 24, 2008]

Editorial Note: For Federal Register citations affecting § 70.22, see the List of CFR Sections Affected.

[1] These reporting requirements do not superceed or release licensees of complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499 or other state or federal reporting requirements.

[2] The description of the quality assurance program should include a discussion of how the criteria in appendix B of part 50 of this chapter will be met.

§ 70.23 Requirements for the approval of applications.

[Top of File]

(a) An application for a license will be approved if the Commission determines that:

(1) The special nuclear material is to be used for the conduct of research or development activities of a type specified in section 31 of the Act,[1] in activities licensed by the Commission under section 103 or 104 of the Act, or for such other uses as the Commission determines to be appropriate to carry out the purposes of the Act;

(2) The applicant is qualified by reason of training and experience to use the material for the purpose requested in accordance with the regulations in this chapter;

(3) The applicant's proposed equipment and facilities are adequate to protect health and minimize danger to life or property;

(4) The applicant's proposed procedures to protect health and to minimize danger to life or property are adequate;

(5) Where the nature of the proposed activities is such as to require consideration by the Commission, that the applicant appears to be financially qualified to engage in the proposed activities in accordance with the regulations in this part;

(6) Where the applicant is required to submit a summary description of the fundamental material controls provided in his procedures for the control of and accounting for special nuclear material pursuant to § 70.22 (b), the applicant's proposed controls are adequate;

(7) Where the proposed activity is processing and fuel fabrication, scrap recovery, conversion of uranium hexafluoride, uranium enrichment

facility construction and operation, or any other activity which the Commission determines will significantly affect the quality of the environment, the Director of Nuclear Material Safety and Safeguards or his designee, before commencement of construction of the plant or facility in which the activity will be conducted, on the basis of information filed and evaluations made pursuant to subpart A of part 51 of this chapter, has concluded, after weighing the environmental, economic, technical, and other benefits against environmental costs and considering available alternatives, that the action called for is the issuance of the proposed license, with any appropriate conditions to protect environmental values. Commencement of construction prior to this conclusion is grounds for denial to possess and use special nuclear material in the plant or facility. As used in this paragraph, the term "commencement of construction" means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, roads necessary for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

(8) Where the proposed activity is the operation of a plutonium processing and fuel fabrication plant, construction of the principal structures, systems, and components approved pursuant to paragraph (b) of this section has been completed in accordance with the application;

(9) Where the applicant is required to submit a plan for physical protection of special nuclear material in transit pursuant to § 70.22(g), of this chapter, the applicant's plan is adequate;

(10) Where the applicant is required to submit a physical security plan pursuant to § 70.22(h), the applicant's proposed plan is adequate;

(11) Where the proposed activity is processing and fuel fabrication, scrap recovery, conversion of uranium hexafluoride, or involves the use of special nuclear material in a uranium enrichment facility, the applicant's proposed emergency plan is adequate.

(12) Where the proposed activity is use of special nuclear material in a uranium enrichment facility, the applicable provisions of part 140 of this chapter have been satisfied.

(b) The Commission will approve construction of the principal structures, systems, and components of a plutonium processing and fuel fabrication plant on the basis of information filed pursuant to § 70.22(f) when the Commission has determined that the design bases of the principal structures, systems, and components, and the quality assurance program provide reasonable assurance of protection against natural phenomena and the consequences of potential accidents.[3] Failure to obtain Commission approval prior to beginning of such construction may be grounds for denial of a license to possess and use special nuclear material in a plutonium processing and fuel fabrication plant.

[36 FR 17574, Sept. 2, 1971, as amended at 37 FR 5749, Mar. 21, 1972; 38 FR 30534, 30538, Nov. 6, 1973; 39 FR 26286, July 18, 1974; 42 FR 17126, Mar. 31, 1977; 43 FR 6924, Feb. 17, 1978; 49 FR 9406, Mar. 12, 1984; 54 FR 14064, Apr. 7, 1989; 57 FR 18392, Apr. 30, 1992; 67 FR 78142, Dec. 23, 2002]

[1] The types of research and development activities specified in section 31 are those relating to:

(1) Nuclear processes;

(2) The theory and production of atomic energy, including processes, materials, and devices related to such production;

(3) Utilization of special nuclear material and radioactive material for medical, biological, agricultural, health or military purposes;

(4) Utilization of special nuclear material, atomic energy, and radioactive material and processes entailed in the utilization or production of atomic energy or such material for all other purposes, including industrial use, the generation of usable energy, and the demonstration of the practical value of utilization or production facilities for industrial or commercial purposes; and

(5) The protection of health and the promotion of safety during research and production activities.

[3] The criteria in appendix B of part 50 of this chapter will be used by the Commission in determining the adequacy of the quality assurance program.

§ 70.23a Hearing required for uranium enrichment facility.

[Top of File]

The Commission will hold a hearing under 10 CFR part 2, subparts A, C, G, and I, on each application for issuance of a license for construction and operation of a uranium enrichment facility. The Commission will publish public notice of the hearing in the Federal Register at least thirty (30) days before the hearing.

[57 FR 18392, Apr. 30, 1992; 69 FR 2280, Jan. 14, 2004]

§ 70.24 Criticality accident requirements.

[Top of File]

(a) Each licensee authorized to possess special nuclear material in a quantity exceeding 700 grams of contained uranium-235, 520 grams of uranium-233, 450 grams of plutonium, 1,500 grams of contained uranium-235 if no uranium enriched to more than 4 percent by weight of uranium-235 is present, 450 grams of any combination thereof, or one-half such quantities if massive moderators or reflectors made of graphite, heavy water or beryllium may be present, shall maintain in each area in which such licensed special nuclear material is handled, used, or stored, a monitoring system meeting the requirements of either paragraph (a)(1) or (a)(2), as appropriate, and using gamma- or neutron-sensitive radiation detectors which will energize clearly audible alarm signals if accidental criticality occurs. This section is not intended to require underwater monitoring when special nuclear material is handled or stored beneath water shielding or to require monitoring systems when special nuclear material is being transported when packaged in accordance with the requirements of part 71 of this chapter.

(1) The monitoring system shall be capable of detecting a criticality that produces an absorbed dose in soft tissue of 20 rads of combined neutron and gamma radiation at an unshielded distance of 2 meters from the reacting material within one minute. Coverage of all areas shall be provided by two detectors.

(2) Persons licensed prior to December 6, 1974, to possess special nuclear material subject to this section may maintain a monitoring system capable of detecting a criticality which generates radiation levels of 300 rems per hour one foot from the source of the radiation. The monitoring devices in the system shall have a preset alarm point of not less than 5 millirems per hour (in order to avoid false alarms) nor more than 20 millirems per hour. In no event may any such device be farther than 120 feet from the special nuclear material being handled, used, or stored; lesser distances may be necessary to meet the requirements of this paragraph (a)(2) on account of intervening shielding or other pertinent factors.

(3) The licensee shall maintain emergency procedures for each area in which this licensed special nuclear material is handled, used, or stored to ensure that all personnel withdraw to an area of safety upon the sounding of the alarm. These procedures must include the conduct of drills to familiarize personnel with the evacuation plan, and designation of responsible individuals for determining the cause of the alarm, and placement of radiation survey instruments in accessible locations for use in such an emergency. The licensee shall retain a copy of current procedures for each area as a record for as long as licensed special nuclear material is handled, used, or stored in the area. The licensee shall retain any superseded portion of the procedures for three years after the portion is superseded.

(b) Each licensee authorized to possess special nuclear material in quantities in excess of those specified in paragraph (a) shall:

(1) Provide the means for identifying quickly which individuals have received doses of 10 rads or more.

(2) Maintain facilities and supplies at the site for decontamination of personnel, arrangements for the services of a physician and other medical personnel qualified to handle radiation emergencies, arrangements for transportation of injured or contaminated individuals to treatment facilities, and arrangements for treatment of individuals at treatment facilities outside the site boundary.

(c) Holders of licenses for construction or operation of a nuclear reactor issued pursuant to part 50 of this chapter, except critical assembly reactors, are exempt for the requirements of paragraph (b) of this section with respect to special nuclear material used or to be used in the reactor.

(d)(1) The requirements in paragraphs (a) through (c) of this section do not apply to a holder of a construction permit or operating license for a nuclear power reactor issued under part 50 of this chapter or a combined license issued under part 52 of this chapter, if the holder complies with the requirements of paragraph (b) of 10 CFR 50.68.

(2) An exemption from § 70.24 held by a licensee who thereafter elects to comply with requirements of paragraph (b) of 10 CFR 50.68 does not exempt that licensee from complying with any of the requirements in § 50.68, but shall be ineffective so long as the licensee elects to comply with § 50.68.

[39 FR 39021, Nov. 5, 1974, as amended at 41 FR 31522, July 29, 1976; 53 FR 19252, May 27, 1988; 62 FR 63828, Dec. 3, 1997; 63 FR 63130, Nov. 12, 1998]

§ 70.25 Financial assurance and recordkeeping for decommissioning.

[Top of File]

(a) Each applicant for a specific license of the types described in paragraphs (a)(1) and (2) of this section shall submit a decommissioning funding plan as described in paragraph (e) of this section.

(1) A specific license for a uranium enrichment facility;

(2) A specific license authorizing the possession and use of unsealed special nuclear material in quantities exceeding 10^5 times the applicable quantities set forth in appendix B to part 30. A decommissioning funding plan must also be submitted when a combination of isotopes is involved if R divided by 105 is greater than 1 (unity rule), where R is the sum of the ratios of the quantity of each isotope to the applicable value in appendix B to part 30.

(b) Each applicant for a specific license authorizing possession and use of unsealed special nuclear material in quantities specified in paragraph (d) of this section shall either--

(1) Submit a decommissioning funding plan as described in paragraph (e) of this section; or

(2) Submit a certification that financial assurance for decommissioning has been provided in the amount prescribed by paragraph (d) of this section using one of the methods described in paragraph (f) of this section. For an applicant, this certification may state that the appropriate assurance will be obtained after the application has been approved and the license issued but before the receipt of licensed material. If the applicant defers execution of the financial instrument until after the license has been issued, a signed original of the financial instrument obtained to satisfy the requirements of paragraph (f) of this section must be submitted to NRC before receipt of licensed material. If the applicant does not defer execution of the financial instrument, the applicant shall submit to NRC, as part of the certification, a signed original of the financial instrument obtained to satisfy the requirements of paragraph (f) of this section.

(c)(1) Each holder of a specific license issued on or after July 27, 1990, which is of a type described in paragraph (a) or (b) of this section, shall provide financial assurance for decommissioning in accordance with the criteria set forth in this section.

(2) Each holder of a specific license issued before July 27, 1990, and of a type described in paragraph (a) of this section shall submit a decommissioning funding plan as described in paragraph (e) of this section or a certification of financial assurance for decommissioning in an amount at least equal to $1,125,000 in accordance with the criteria set forth in this section. If the licensee submits the certification of financial assurance rather than a decommissioning funding plan, the licensee shall include a decommissioning funding plan in any application for license renewal.

(3) Each holder of a specific license issued before July 27, 1990, and of a type described in paragraph (b) of this section shall submit, on or before July 27, 1990, a decommissioning funding plan, described in paragraph (e) of this section, or a certification of financial assurance for decommissioning in accordance with the criteria set forth in this section.

(4) Any licensee who has submitted an application before July 27, 1990, for renewal of license in accordance with § 70.33 shall provide financial assurance for decommissioning in accordance with paragraphs (a) and (b) of this section. This assurance must be submitted when this rule becomes effective November 24, 1995.

(d) Table of required amounts of financial assurance for decommissioning by quantity of material. Licensees required to submit the $1,125,000 amount must do so by December 2, 2004. Licensees required to submit the $225,000 amount must do so by June 2, 2005. Licensees having possession limits exceeding the upper bounds of this table must base financial assurance on a decommissioning funding plan.

greater than 10^4 but less than or equal to 10^5 times the applicable quantities of appendix B to part 30. (For a combination of isotopes, if R, as defined in § 70.25(a), divided by 10^4 is greater than 1 but R divided by 10^5 is less than or equal to 1.)	$1,125,000
greater than 10^3 but less than or equal to 10^4 times the applicable quantities of appendix B to part 30. (For a combination of isotopes, if R, as defined in § 70.25(a), divided by 10^3 is greater than 1 but R divided by 10^4 is less than or equal to 1.)	$225,000

(e) Each decommissioning funding plan must contain a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning from paragraph (f) of this section, including means for adjusting cost estimates and associated funding levels periodically over the life of the facility. Cost estimates must be adjusted at intervals not to exceed 3 years. The decommissioning funding plan must also contain a certification by the licensee that financial assurance for decommissioning has been provided in the amount of the cost estimate for decommissioning and a signed original of the financial instrument obtained to satisfy the requirements of paragraph (f) of this section.

(f) Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) Prepayment. Prepayment is the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(2) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to part 30. A parent company guarantee may not be used in combination with other financial methods to satisfy the requirements of this section. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to part 30. For commercial companies that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to part 30. For nonprofit entities, such as colleges, universities, and nonprofit hospitals, a guarantee of funds by the applicant or licensee may be used if the guarantee and test are as contained in appendix E to part 30. A guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section or in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions:

(i) The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Commission, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Commission within 30 days after receipt of notification of cancellation.

(ii) The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(iii) The surety method or insurance must remain in effect until the Commission has terminated the license.

(3) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund established and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licenssee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provisions must be as stated in paragraph (f)(2) of this section.

(4) In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning or an amount based on the Table in paragraph (d) of this section, and indicating that funds for decommissioning will be obtained when necessary.

(5) When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

(g) Each person licensed under this part shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of--

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) Except for areas containing only sealed sources (provided the sources have not leaked or no contamination remains after cleanup of any leak), a list contained in a single document and updated every 2 years, of the following:

(i) All areas designated and formerly designated as restricted areas as defined under 10 CFR 20.1003 (For requirements prior to January 1, 1994, see 10 CFR 20.3 as contained in the CFR edition revised as of January 1, 1993.);

(ii) All areas outside of restricted areas that require documentation under § 70.25(g)(1);

(iii) All areas outside of restricted areas where current and previous wastes have been buried as documented under 10 CFR 20.2108; and

(iv) All areas outside of restricted areas that contain material such that, if the license expired, the licensee would be required to either decontaminate the area to meet the criteria for decommissioning in 10 CFR part 20, subpart E, or apply for approval for disposal under 10 CFR 20.2002.

(4) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

[53 FR 24053, June 27, 1988, as amended at 56 FR 23474, May 21, 1991; 57 FR 18393, Apr. 30, 1992; 58 FR 39634, July 26, 1993; 58 FR 67662, Dec. 22, 1993; 58 FR 68731, Dec. 29, 1993; 59 FR 1618, Jan. 12, 1994; 60 FR 38239, July 26, 1995; 61 FR 24675, May 16, 1996; 62 FR 39091, July 21, 1997; 63 FR 29544, June 1, 1998; 68 FR 57337, Oct. 3, 2003]

Subpart E--Licenses

[Top of File]

§ 70.31 Issuance of licenses.

(a) Upon a determination that an application meets the requirements of the act and of the regulations of the Commission, the Commission will issue a license in such form and containing such conditions and limitations as it deems appropriate or necessary to effectuate the purposes of the act.

(b) [Reserved]

(c) Each license issued to a person for use of special nuclear material in activities in which special nuclear material will be produced shall (subject to the provisions of § 70.41(b)) be deemed to authorize such person to receive title to, own, acquire, receive, possess, use, and transfer the special nuclear material produced in the course of such authorized activities.

(d) No license will be issued by the Commission to any person within the United States if the Commission finds that the issuance of such

license would be inimical to the common defense and security or would constitute an unreasonable risk to the health and safety of the public.

(e) No license to construct and operate a uranium enrichment facility may be issued until a hearing pursuant to 10 CFR part 2, subparts G and I, is completed and decision issued on the application.

[21 FR 764, Feb. 3, 1956, as amended at 32 FR 2563, Feb. 7, 1967; 32 FR 4056, Mar. 15, 1967; 43 FR 6925, Feb. 17, 1978; 57 FR 18393, Apr. 30, 1992]

§ 70.32 Conditions of licenses.

[Top of File]

(a) Each license shall contain and be subject to the following conditions:

(1) [Reserved]

(2) No right to the special nuclear material shall be conferred by the license except as defined by the license;

(3) Neither the license nor any right under the license shall be assigned or otherwise transferred in violation of the provisions of the Act;

(4) All special nuclear material shall be subject to the right of recapture or control reserved by section 108 and to all other provisions of the Act;

(5) No special nuclear material may be used in any utilization or production facility except in accordance with the provisions of the Act;

(6) The licensee shall not use the special nuclear material to construct an atomic weapon or any component of an atomic weapon;

(7) Except to the extent that the indemnification and limitation of liability provisions of part 140 of this chapter apply, the licensee will hold the United States and the Department harmless from any damages resulting from the use or possession of special nuclear material leased from the Department by the licensee;

(8) The license shall be subject to and the licensee shall observe, all applicable rules, regulations and orders of the Commission.

(9)(i) Each licensee shall notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any Chapter of Title 11 (Bankruptcy) of the United States Code by or against:

(A) The licensee;

(B) An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or

(C) An affiliate (as that term is defined in 11 U.S.C. 101(a)) of the licensee.

(ii) This notification must indicate:

(A) The bankruptcy court in which the petition for bankruptcy was filed; and

(B) The date of the filing of the petition.

(b) The Commission may incorporate in any license such additional conditions and requirements with respect to the licensee's ownership, receipt, possession, use, and transfer of special nuclear material as it deems appropriate or necessary in order to:

(1) Promote the common defense and security;

(2) Protect health or to minimize danger to life or property;

(3) Protect restricted data;

(4) Guard against the loss or diversion of special nuclear material;

(5) Require such reports and the keeping of such records, and to provide for such inspections, of activities under the license as may be necessary or appropriate to effectuate the purposes of the act and regulations thereunder.

(c)(1) Each license authorizing the possession and use at any one time and location of uranium source material at an uranium enrichment facility or special nuclear material in a quantity exceeding one effective kilogram, except for use as sealed sources and those uses involved

in the operation of a nuclear reactor licensed pursuant to part 50 of this chapter and those involved in a waste disposal operation, shall contain and be subject to a condition requiring the licensee to maintain and follow:

(i) The program for control and accounting of uranium source material at an uranium enrichment facility and special nuclear material at all applicable facilities as implemented pursuant to § 70.22(b), or §§ 74.31(b), 74.33(b), 74.41(b), or 74.51(c) of this chapter, as appropriate;

(ii) The measurement control program for uranium source material at an uranium enrichment facility and for special nuclear material at all applicable facilities as implemented pursuant to §§ 74.31(b), 74.33(b), 74.45(c), or 74.59(e) of this chapter, as appropriate; and

(iii) Other material control procedures as the Commission determines to be essential for the safeguarding of uranium source material at an uranium enrichment facility or of special nuclear material and providing that the licensee shall make no change that would decrease the effectiveness of the material control and accounting program implemented pursuant to § 70.22(b), or §§ 74.31(b), 74.33(b), 74.41(b), or 74.51(c) of this chapter, and the measurement control program implemented pursuant to §§ 74.31(b), 74.33(b), 74.41(b), or 74.59(e) of this chapter without the prior approval of the Commission. A licensee desiring to make changes that would decrease the effectiveness of its material control and accounting program or its measurement control program shall submit an application for amendment to its license pursuant to § 70.34.

(2) The licensee shall maintain records of changes to the material control and accounting program made without prior Commission approval for a period of 5 years from the date of the change. Licensees located in all four Regions as indicated in appendix A of part 73 of this chapter shall furnish to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, using an appropriate method listed in § 70.5(a), a report containing a description of each change within:

(i) Two months of the change if it pertains to uranium-233, uranium-235 contained in uranium enriched 20 percent or more in the uranium-235 isotope, or plutonium, except plutonium containing 80 percent or more by weight of the isotope Pu-238, and

(ii) Six months of the change if it pertains to uranium enriched less than 20 percent in the uranium-235 isotope, or plutonium containing 80 percent or more by weight of the isotope Pu-238.

(d) The licensee shall make no change which would decrease the effectiveness of the plan for physical protection of special nuclear material in transit prepared pursuant to § 70.22(g) or § 73.20(c) of this chapter without the prior approval of the Commission. A licensee desiring to make such changes shall submit an application for a change in the technical specifications incorporated in his or her license, if any, or for an amendment to the license pursuant to § 50.90 or § 70.34 of this chapter, as appropriate. The licensee may make changes to the plan for physical protection of special nuclear material without prior Commission approval if these changes do not decrease the effectiveness of the plan. The licensee shall retain a copy of the plan as a record for the period during which the licensee possesses a formula quantity of special nuclear material requiring this record under each license and each change to the plan for three years from the effective date of the change. Within two months after each change, a report containing a description of the change must be furnished to the Director of the NRC's Office of Nuclear Material Safety and Safeguards, using an appropriate method listed in § 70.5(a); and a copy must be sent to the appropriate NRC Regional Office shown in appendix A to part 73 of this chapter.

(e) The licensee shall make no change which would decrease the effectiveness of a security plan prepared pursuant to §§ 70.22(h), 70.22 (k), or 73.20(c) without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to its license pursuant to § 70.34. The licensee shall maintain records of changes to the plan made without prior Commission approval, for three years from the effective date of the change, and shall, within two months after the change is made, furnish a report containing a description of each change to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response; the report may be sent using an appropriate method listed in § 70.5(a), and a copy of the report must be sent to the appropriate NRC Regional Office shown in appendix A to part 73 of this chapter.

(f) [Reserved]

(g) The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with appendix C to part 73 of this chapter for bringing about the actions and decisions contained in the Responsibility Matrix of its safeguards contingency plan. The licensee shall retain the current safeguards contingency plan procedures as a record for the entire period during which the licensee possesses the appropriate type and quantity of special nuclear material under each license for which the procedures were developed and, if any portion of the plan is superseded, retain that superseded portion for 3 years after the effective date of the change. The licensee shall not make a change that would decrease the safeguards effectiveness of the first four categories of information (i.e., Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix) contained in any licensee safeguards contingency plan prepared pursuant to §§ 70.22(g), 70.22(j), 72.184, 73.20(c), 73.26(e)(1), 73.46(h)(1), or 73.50(g)(1) of this chapter without the prior approval of the NRC. A licensee desiring to make such a change shall submit an application for an amendment to its license pursuant to § 70.34. The licensee may make changes to the licensee safeguards contingency plan without prior NRC approval if the changes do not decrease the safeguards effectiveness of the plan. The licensee shall maintain each change to the plan made without prior approval as a record during the period for which possession of a formula quantity of special nuclear material is authorized under a license and retain the superseded portion for 3 years after the effective date of the change, and shall, within 60 days after the change is made, furnish a report containing a description of each change to the Director of Nuclear Material Safety and Safeguards; the report may be sent using an appropriate method listed in § 70.5 (a), and a copy of the report must be sent to the Regional Administrator of the appropriate NRC Regional Office as specified in appendix A to part 73 of this chapter.

(h) [Reserved]

(i) Licensees required to submit emergency plans in accordance with § 70.22(i) shall follow the emergency plan approved by the Commission. The licensee may change the approved plan without Commission approval if the changes do not decrease the effectiveness of the plan. Within six months after each change is made, the licensee shall, using an appropriate method listed in § 70.5(a), furnish the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, a copy of each change, with copies to the appropriate NRC Regional Office specified in appendix D to part 20 of this chapter and to affected offsite response organizations. Proposed

changes that decrease the effectiveness of the approved emergency plan may not be implemented without prior application to and prior approval by the Commission.

(j) Each licensee who possesses special nuclear material, or who transports, or delivers to a carrier for transport, a formula quantity of strategic special nuclear material, special nuclear material of moderate strategic significance, or special nuclear material of low strategic significance, or more than 100 grams of irradiated reactor fuel shall ensure that Safeguards Information is protected against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable, and shall protect classified information in accordance with the requirements of parts 25 and 95 of this chapter, as applicable.

(k) No person may commence operation of a uranium enrichment facility until the Commission verifies through inspection that the facility has been constructed in accordance with the requirements of the license. The Commission shall publish notice of the inspection results in the Federal Register.

[21 FR 764, Feb. 3, 1956; 73 FR 63572, Oct. 24, 2008]

Editorial Note: For Federal Register citations affecting § 70.32, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 70.33 Renewal of licenses.

[Top of File]

(a) Applications for renewal of a license should be filed in accordance with §§ 70.21 and 70.22. Information contained in previous applications, statements or reports filed with the Commission under the license may be incorporated by reference: Provided, That such references are clear and specific.

(b) If any licensee granted the extension described in 10 CFR 70.38(a)(2) has a currently pending renewal application for that extended license, that application will be considered withdrawn by the licensee and any renewal fees paid by the licensee for that application will be refunded.

[21 FR 764, Feb. 3, 1956, as amended at 59 FR 36037, July 15, 1994; 61 FR 1115, Jan. 16, 1996]

§ 70.34 Amendment of licenses.

[Top of File]

Applications for amendment of a license shall be filed in accordance with § 70.21(a) and shall specify the respects in which the licensee desires his license to be amended and the grounds for such amendment.

§ 70.35 Commission action on applications to renew or amend.

[Top of File]

In considering an application by a licensee to renew or amend his license, the Commission will apply the criteria set forth in § 70.23.

§ 70.36 Inalienability of licenses.

[Top of File]

No license granted under the regulations in this part and no right to possess or utilize special nuclear material granted by any license issued pursuant to the regulations in this part shall be transferred, assigned or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any license to any person unless the Commission shall after securing full information, find that the transfer is in accordance with the provisions of the Act, and shall give its consent in writing.

[21 FR 764, Feb. 3, 1956, as amended at 35 FR 11461, July 17, 1970]

§ 70.37 Disclaimer of warranties.

[Top of File]

Neither the Government nor the Commission makes any warranty or other representation that special nuclear material (a) will not result in injury or damage when used for purposes approved by the Commission, (b) will accomplish the results for which it is requested and approved by the Commission, or (c) is safe for any other use.

§ 70.38 Expiration and termination of licenses and decommissioning of sites and separate buildings or outdoor areas.

(a) Each specific license expires at the end of the day on the expiration date stated in the license unless the licensee has filed an application for renewal under § 70.33 not less than 30 days before the expiration date stated in the existing license. If an application for renewal has been filed at least 30 days before the expiration date stated in the existing license, the existing license expires at the end of the day on which the Commission makes a final determination to deny the renewal application or, if the determination states an expiration date, the expiration date stated in the determination.

(b) Each specific license revoked by the Commission expires at the end of the day on the date of the Commission's final determination to revoke the license, or on the expiration date stated in the determination, or as otherwise provided by Commission Order.

(c) Each specific license continues in effect, beyond the expiration date if necessary, with respect to possession of special nuclear material until the Commission notifies the licensee in writing that the license is terminated. During this time, the licensee shall--

(1) Limit actions involving special nuclear material to those related to decommissioning; and

(2) Continue to control entry to restricted areas until they are suitable for release in accordance with NRC requirements.

(d) Within 60 days of the occurrence of any of the following, consistent with the administrative directions in § 70.5, each licensee shall provide notification to the NRC in writing and either begin decommissioning its site, or any separate building or outdoor area that contains residual radioactivity, so that the building or outdoor area is suitable for release in accordance with NRC requirements, or submit within 12 months of notification a decommissioning plan, if required by paragraph (g)(1) of this section, and begin decommissioning upon approval of that plan if--

(1) The license has expired pursuant to paragraph (a) or (b) of this section; or

(2) The licensee has decided to permanently cease principal activities, as defined in this part, at the entire site or in any separate building or outdoor area; or

(3) No principal activities under the license have been conducted for a period of 24 months; or

(4) No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements.

(e) Coincident with the notification required by paragraph (d) of this section, the licensee shall maintain in effect all decommissioning financial assurances established by the licensee pursuant to § 70.25 in conjunction with a license issuance or renewal or as required by this section. The amount of the financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to paragraph (g)(4)(v) of this section.

(1) Any licensee who has not provided financial assurance to cover the detailed cost estimate submitted with the decommissioning plan shall do so when this rule becomes effective November 24, 1995.

(2) Following approval of the decommissioning plan, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the Commission.

(f) The Commission may grant a request to delay or postpone initiation of the decommissioning process if the Commission determines that this relief is not detrimental to the public health and safety and is otherwise in the public interest. The request must be submitted no later than 30 days before notification pursuant to paragraph (d) of this section. The schedule for decommissioning set forth in paragraph (d) of this section may not commence until the Commission has made a determination on the request.

(g)(1) A decommissioning plan must be submitted if required by license condition or if the procedures and activities necessary to carry out decommissioning of the site or separate building or outdoor area have not been previously approved by the Commission and these procedures could increase potential health and safety impacts to workers or to the public, such as in any of the following cases:

(i) Procedures would involve techniques not applied routinely during cleanup or maintenance operations;

(ii) Workers would be entering areas not normally occupied where surface contamination and radiation levels are significantly higher than routinely encountered during operation;

(iii) Procedures could result in significantly greater airborne concentrations of radioactive materials than are present during operation; or

(iv) Procedures could result in significantly greater releases of radioactive material to the environment than those associated with operation.

(2) The Commission may approve an alternate schedule for submittal of a decommissioning plan required pursuant to paragraph (d) of this section if the Commission determines that the alternative schedule is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the public health and safety and is otherwise in the public interest.

(3) The procedures listed in paragraph (g)(1) of this section may not be carried out prior to approval of the decommissioning plan.

(4) The proposed decommissioning plan for the site or separate building or outdoor area must include:

(i) A description of the conditions of the site or separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(ii) A description of planned decommissioning activities;

(iii) A description of methods used to ensure protection of workers and the environment against radiation hazards during decommissioning;

(iv) A description of the planned final radiation survey; and

(v) An updated detailed cost estimate for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and a plan for assuring the availability of adequate funds for completion of decommissioning.

(vi) A description of the physical security plan and material control and accounting plan provisions in place during decommissioning.

(vii) For decommissioning plans calling for completion of decommissioning later than 24 months after plan approval, a justification for the delay based on the criteria in paragraph (i) of this section.

(5) The proposed decommissioning plan will be approved by the Commission if the information therein demonstrates that the decommissioning will be completed as soon as practical and that the health and safety of workers and the public will be adequately protected.

(h)(1) Except as provided in paragraph (i) of this section, licensees shall complete decommissioning of the site or separate building or outdoor area as soon as practicable but no later than 24 months following the initiation of decommissioning.

(2) Except as provided in paragraph (i) of this section, when decommissioning involves the entire site, the licensee shall request license termination as soon as practicable but no later than 24 months following the initiation of decommissioning.

(i) The Commission may approve a request for an alternate schedule for completion of decommissioning of the site or separate building or outdoor area, and license termination if appropriate, if the Commission determines that the alternative is warranted by consideration of the following:

(1) Whether it is technically feasible to complete decommissioning within the allotted 24-month period;

(2) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted 24-month period;

(3) Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(4) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(5) Other site-specific factors which the Commission may consider appropriate on a case-by-case basis, such as regulatory requirements of other government agencies, lawsuits, ground-water treatment activities, monitored natural ground-water restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(j) As the final step in decommissioning, the licensee shall--

(1) Certify the disposition of all licensed material, including accumulated wastes, by submitting a completed NRC Form 314 or equivalent information; and

(2) Conduct a radiation survey of the premises where the licensed activities were carried out and submit a report of the results of this survey, unless the licensee demonstrates in some other manner that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E. The licensee shall, as appropriate--

(i) Report levels of gamma radiation in units of millisieverts (microroentgen) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of megabecquerels (disintegrations per minute or microcuries) per 100 square centimeters removable and fixed for surfaces, megabecquerels (microcuries) per milliliter for water, and becquerels (picocuries) per gram for solids such as soils or concrete; and

(ii) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

(k) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the Commission determines that:

(1) Special nuclear material has been properly disposed;

(2) Reasonable effort has been made to eliminate residual radioactive contamination, if present; and

(3)(i) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E; or

(ii) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E.

(4) Records required by § 70.51(b)(6) have been received.

[59 FR 36037, July 15, 1994, as amended at 60 FR 38240, July 26, 1995; 61 FR 1115, Jan. 16, 1996; 61 FR 24675, May 16, 1996; 61 FR 29637, 29638, June 12, 1996; 62 FR 39091, July 21, 1997; 66 FR 24049, May 11, 2001; 73 FR 42675; Jul. 23, 2008]

§ 70.39 Specific licenses for the manufacture or initial transfer of calibration or reference sources.

[Top of File]

(a) An application for a specific license to manufacture or initially transfer calibration or reference sources containing plutonium, for distribution to persons generally licensed under § 70.19, will be approved if:

(1) The applicant satisfies the general requirements of § 70.23.

(2) The applicant submits sufficient information regarding each type of calibration or reference source pertinent to evaluation of the potential radiation exposure, including:

(i) Chemical and physical form and maximum quantity of plutonium in the source;

(ii) Details of construction and design;

(iii) Details of the method of incorporation and binding of the plutonium in the source;

(iv) Procedures for and results of prototype testing of sources, which are designed to contain more than 0.005 microcurie of plutonium, to demonstrate that the plutonium contained in each source will not be released or be removed from the source under normal conditions of use;

(v) Details of quality control procedures to be followed in manufacture of the source;

(vi) Description of labeling to be affixed to the source or the storage container for the source;

(vii) Any additional information, including experimental studies and tests, required by the Commission to facilitate a determination of the safety of the source.

(3) Each source will contain no more than 5 microcuries of plutonium.

(4) The Commission determines, with respect to any type of source containing more than 0.005 microcurie of plutonium, that:

(i) The method of incorporation and binding of the plutonium in the source is such that the plutonium will not be released or be removed from the source under normal conditions of use and handling of the source; and

(ii) The source has been subjected to and has satisfactorily passed the prototype tests prescribed by paragraph (a)(5) of this section.

(5) For any type of source which is designed to contain more than 0.005 microcurie of plutonium, the applicant has conducted prototype tests, in the order listed, on each of five prototypes of such source, which contains more than 0.005 microcurie of plutonium, as follows:

(i) *Initial measurement*. The quantity of radioactive material deposited on the source shall be measured by direct counting of the source.

(ii) *Dry wipe test*. The entire radioactive surface of the source shall be wiped with filter paper with the application of moderate finger pressure. Removal of radioactive material from the source shall be determined by measuring the radioactivity on the filter paper or by direct measurement of the radioactivity on the source following the dry wipe.

(iii) *Wet wipe test*. The entire radioactive surface of the source shall be wiped with filter paper, moistened with water, with the application of moderate finger pressure. Removal of radioactive material from the source shall be determined by measuring the radioactivity on the filter paper after it has dried or by direct measurement of the radioactivity on the source following the wet wipe.

(iv) *Water soak test*. The source shall be immersed in water at room temperature for a period of 24 consecutive hours. The source shall then be removed from the water. Removal of radioactive material from the source shall be determined by direct measurement of the radioactivity on the source after it has dried or by measuring the radioactivity in the residue obtained by evaporation of the water in which the source was immersed.

(v) *Dry wipe test*. On completion of the preceding tests in paragraphs (a)(5)(i) through (iv) of this section, the dry wipe test described in paragraph (a)(5)(ii) of this section shall be repeated.

(vi) *Observations*. Removal of more than 0.005 microcurie of radioactivity in any test prescribed by this paragraph shall be cause for rejection of the source design. Results of prototype tests submitted to the Commission shall be given in terms of radioactivity in microcuries and percent of removal from the total amount of radioactive material deposited on the source.

(b) Each person licensed under this section shall affix to each source, or storage container for the source, a label which shall contain sufficient information relative to safe use and storage of the source and shall include the following statement or a substantially similar statement which contains the information called for in the following statement.[1]

The receipt, possession, use and transfer of this source, Model-- --- , Serial No.-----, are subject to a general license and the regulations of the United States Nuclear Regulatory Commission or of a State with which the Commission has entered into an agreement for the exercise of regulatory authority. Do not remove this label.

> CAUTION—RADIOACTIVE MATERIAL—THIS SOURCE CONTAINS PLUTONIUM. DO NOT TOUCH RADIOACTIVE PORTION OF THIS SOURCE.

(Name of Manufacturer or Initial Transferor)

(c) Each person licensed under this section shall perform a dry wipe test upon each source containing more than 0.1 microcurie of plutonium prior to transferring the source to a general licensee under § 70.19. This test shall be performed by wiping the entire radioactive surface of the source with a filter paper with the application of moderate finger pressure. The radioactivity on the paper shall be measured by using radiation detection instrumentation capable of detecting 0.005 microcurie of plutonium. If any such test discloses more than 0.005 microcurie of radioactive material, the source shall be deemed to be leaking or losing plutonium and shall not be transferred to a general licensee under § 70.19.

[29 FR 5884, May 5, 1964, as amended at 32 FR 2563, Feb. 7, 1967; 38 FR 1272, Jan. 11, 1973; 40 FR 8792, Mar. 3, 1975; 42 FR 43966, Sept. 1, 1977; 43 FR 6925, Feb. 17, 1978]

1. Sources generally licensed under this section prior to January 19, 1975 may bear labels authorized by the regulations in effect on January 1, 1975.

§ 70.40 Ineligibility of certain applicants.

[Top of File]

A license may not be issued to the Corporation if the Commission determines that:

(a) The Corporation is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; or

(b) The issuance of such a license would be inimical to--

(1) The common defense and security of the United States; or

(2) The maintenance of a reliable and economical domestic source of enrichment services.

[62 FR 6669, Feb. 12, 1997]

Subpart F--Acquisition, Use, and Transfer of Special Nuclear Material, Creditors' Rights

[Top of File]

§ 70.41 Authorized use of special nuclear material.

(a) Each licensee shall confine his possession and use of special nuclear material to the locations and purposes authorized in his license. Except as otherwise provided in the license, each license issued pursuant to the regulations in this part shall carry with it the right to receive title to, own, acquire, receive, possess and use special nuclear material. Preparation for shipment and transport of special nuclear material shall be in accordance with the provisions of part 71 of this chapter.

(b) The possession, use and transfer of any special nuclear material produced by a licensee, in connection with or as a result of use of special nuclear material received under his license, shall be subject to the provisions of the license and the regulations in this part.

[21 FR 764, Feb. 3, 1956, as amended at 38 FR 33970, Dec. 10, 1973; 43 FR 6925, Feb. 17, 1978]

§ 70.42 Transfer of special nuclear material.

[Top of File]

(a) No licensee shall transfer special nuclear material except as authorized pursuant to this section.

(b) Except as otherwise provided in his license and subject to the provisions of paragraphs (c) and (d) of this section, any licensee may transfer special nuclear material:

(1) To the Department;

(2) To the agency in any Agreement State which regulates radioactive materials pursuant to an agreement with the Commission or the Atomic Energy Commission under section 274 of the Act, if the quantity transferred is not sufficient to form a critical mass;

(3) To any person exempt from the licensing requirements of the Act and regulations in this part, to the extent permitted under such exemption;

(4) To any person in an Agreement State, subject to the jurisdiction of that State, who has been exempted from the licensing requirements and regulations of that State, to the extent permitted under such exemption;

(5) To any person authorized to receive such special nuclear material under terms of a specific license or a general license or their equivalents issued by the Commission or an Agreement State;

(6) To any person abroad pursuant to an export license issued under part 110 of this chapter; or

(7) As otherwise authorized by the Commission in writing.

(c) Before transferring special nuclear material to a specific licensee of the Commission or an Agreement State or to a general licensee who is required to register with the Commission or with an Agreement State prior to receipt of the special nuclear material, the licensee transferring the material shall verify that the transferee's license authorizes receipt of the type, form, and quantity of special nuclear material to be transferred.

(d) The following methods for the verification required by paragraph (c) of this section are acceptable:

(1) The transferor may have in his or her possession, and read, a current copy of the transferee's specific license or registration certificate. The transferor shall retain a copy of each license or certificate for three years from the date that it was obtained.

(2) The transferor may have in its possession a written certification by the transferee that the transferee is authorized by license or registration certificate to receive the type, form, and quantity of special nuclear material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date. The transferor shall retain the written certification as a record for three years from the date of receipt of the certification;

(3) For emergency shipments the transferor may accept oral certification by the transferee that he or she is authorized by license or registration certification to receive the type, form, and quantity of special nuclear material to be transferred, specifying the license or registration certificate number, issuing agency, and expiration date, provided that the oral certification is confirmed in writing within ten days. The transferor shall retain the written confirmation of the oral certification for three years from the date of receipt of the confirmation;

(4) The transferor may obtain other sources of information compiled by a reporting service from official records of the Commission or the licensing agency of an Agreement State as to the identity of licensees and the scope and expiration dates of licenses and registrations. The transferor shall retain the compilation of information as a record for three years from the date that it was obtained; or

(5) When none of the methods of verification described in paragraphs (d) (1) to (4) of this section are readily available or when a transferor desires to verify that information received by one of these methods is correct or up-to-date, the transferor may obtain and record confirmation from the Commission or the licensing agency of an Agreement State that the transferee is licensed to receive the special nuclear material. The transferor shall retain the record of confirmation for three years from the date the record is made.

[38 FR 33970, Dec. 10, 1973, as amended at 40 FR 8792, Mar. 3, 1975; 43 FR 6925, Feb. 21, 1978; 53 FR 19253, May 27, 1988]

§ 70.44 Creditor regulations.

[Top of File]

(a) Pursuant to section 184 of the Act, the Commission consents, without individual application, to the creation of any mortgage, pledge, or other lien upon any special nuclear material, not owned by the United States, which is subject to licensing: Provided:

(1) That the rights of any creditor so secured may be exercised only in compliance with and subject to the same requirements and restrictions as would apply to the licensee pursuant to the provisions of the license, the Atomic Energy Act of 1954, as amended, and regulations issued by the Commission pursuant to said Act; and

(2) That no creditor so secured may take possession of the special nuclear material pursuant to the provisions of this section prior to either

the issuance of a license by the Commission authorizing such possession or the transfer of a license pursuant to § 70.36.

(b) Nothing contained in this section shall be deemed to affect the means of acquiring, or the priority of, any tax lien or other lien provided by law.

(c) As used in this section, creditor includes, without implied limitation, the trustee under any mortgage, pledge, or lien on special nuclear material made to secure any creditor, any trustee or receiver of the special nuclear material appointed by a court of competent jurisdiction in any action brought for the benefit of any creditor secured by such mortgage, pledge, or lien, any purchaser of such special nuclear material at the sale thereof upon foreclosure of such mortgage, pledge, or lien or upon exercise of any power of sale contained therein, or any assignee of any such purchaser.

[32 FR 2563, Feb. 7, 1967, as amended at 35 FR 11461, July 17, 1970]

Subpart G--Special Nuclear Material Control Records, Reports, and Inspections

[Top of File]

§ 70.50 Reporting requirements.

(a) *Immediate report*. Each licensee shall notify the NRC as soon as possible but not later than 4 hours after the discovery of an event that prevents immediate protective actions necessary to avoid exposures to radiation or radioactive materials that could exceed regulatory limits or releases of licensed material that could exceed regulatory limits (events may include fires, explosions, toxic gas releases, etc.).

(b) *Twenty-four hour report*. Each licensee shall notify the NRC within 24 hours after the discovery of any of the following events involving licensed material:

(1) An unplanned contamination event that:

(i) Requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area;

(ii) Involves a quantity of material greater than five times the lowest annual limit on intake specified in Appendix B of §§ 20.1001-20.2401 of 10 CFR part 20 for the material; and

(iii) Has access to the area restricted for a reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.

(2) An event in which equipment is disabled or fails to function as designed when:

(i) The equipment is required by regulation or licensee condition to prevent releases exceeding regulatory limits, to prevent exposures to radiation and radioactive materials exceeding regulatory limits, or to mitigate the consequences of an accident;

(ii) The equipment is required to be available and operable when it is disabled or fails to function; and

(iii) No redundant equipment is available and operable to perform the required safety function.

(3) An event that requires unplanned medical treatment at a medical facility of an individual with spreadable radioactive contamination on the individual's clothing or body.

(4) An unplanned fire or explosion damaging any licensed material or any device, container, or equipment containing licensed material when:

(i) The quantity of material involved is greater than five times the lowest annual limit on intake specified in appendix B of §§ 20.1001-20.2401 of 10 CFR part 20 for the material; and

(ii) The damage affects the integrity of the licensed material or its container.

(c) *Preparation and submission of reports*. Reports made by licensees in response to the requirements of this section must be made as follows:

(1) Licensees shall make reports required by paragraphs (a) and (b) of this section, and by § 70.74 and Appendix A of this part, if applicable, by telephone to the NRC Operations Center.[1] To the extent that the information is available at the time of notification, the information provided in these reports must include:

(i) Caller's name, position title, and call-back telephone number;

(ii) Date, time, and exact location of the event;

(iii) Description of the event, including:

(A) Radiological or chemical hazards involved, including isotopes, quantities, and chemical and physical form of any material released;

(B) Actual or potential health and safety consequences to the workers, the public, and the environment, including relevant chemical and radiation data for actual personnel exposures to radiation or radioactive materials or hazardous chemicals produced from licensed materials (e.g., level of radiation exposure, concentration of chemicals, and duration of exposure);

(C) The sequence of occurrences leading to the event, including degradation or failure of structures, systems, equipment, components, and activities of personnel relied on to prevent potential accidents or mitigate their consequences; and

(D) Whether the remaining structures, systems, equipment, components, and activities of personnel relied on to prevent potential accidents or mitigate their consequences are available and reliable to perform their function;

(iv) External conditions affecting the event;

(v) Additional actions taken by the licensee in response to the event;

(vi) Status of the event (e.g., whether the event is on-going or was terminated);

(vii) Current and planned site status, including any declared emergency class;

(viii) Notifications, related to the event, that were made or are planned to any local, State, or other Federal agencies;

(ix) Status of any press releases, related to the event, that were made or are planned.

(2) Written report. Each licensee that makes a report required by paragraph (a) or (b) of this section, or by § 70.74 and Appendix A of this part, if applicable, shall submit a written follow-up report within 30 days of the initial report. Written reports prepared pursuant to other regulations may be submitted to fulfill this requirement if the report contains all the necessary information, and the appropriate distribution is made. These written reports must be sent to the NRC's Document Control Desk, using an appropriate method listed in § 70.5(a), with a copy to the appropriate NRC regional office listed in appendix D to part 20 of this chapter. The reports must include the following:

(i) Complete applicable information required by § 70.50(c)(1);

(ii) The probable cause of the event, including all factors that contributed to the event and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

(iii) Corrective actions taken or planned to prevent occurrence of similar or identical events in the future and the results of any evaluations or assessments; and

(iv) For licensees subject to Subpart H of this part, whether the event was identified and evaluated in the Integrated Safety Analysis.

(d) The provisions of § 70.50 do not apply to licensees subject to § 50.72. They do apply to those Part 50 licensees possessing material licensed under Part 70 that are not subject to the notification requirements in § 50.72.

[56 FR 40769, Aug. 16, 1991; 56 FR 64980, Dec. 13, 1991, as amended at 59 FR 14087, Mar. 25, 1994; 65 FR 56226, Sept. 18, 2000; 68 FR 58817, Oct. 10, 2003]

[1] The commercial telephone number for the NRC Operations Center is (301) 816-5100.

§ 70.51 Records requirements.

[Top of File]

(a) Before license termination, licensees shall forward the following records to the appropriate NRC Regional Office:

(1) Records of disposal of licensed material made under 10 CFR 20.2002 (including burials authorized before January 28, 1981[1]), 20.2003, 20.2004, 20.2005;

(2) Records required by 10 CFR 20.2103(b)(4); and

(3) Records required by § 70.25(g).

(b) If licensed activities are transferred or assigned in accordance with § 70.32(a)(3), the licensee shall transfer the following records to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated:

(1) Records of disposal of licensed material made under 10 CFR 20.2002 (including burials authorized before January 28, 1981[1]), 20.2003, 20.2004, 20.2005;

(2) Records required by 10 CFR 20.2103(b)(4); and

(3) Records required by § 70.25(g).

(c)(1) Records which must be maintained pursuant to this part may be the original or a reproduced copy, or microform if the reproduced copy or microform is duly authenticated by authorized personnel, and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

(2) If there is a conflict between the Commission's regulations in this part, license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for these records shall apply unless the Commission, under § 70.17 has granted a specific exemption from the record retention requirements specified in the regulations in this part.

[38 FR 30544, Nov. 6, 1973, as amended at 38 FR 32784, Nov. 28, 1973; 41 FR 18303, May 3, 1976; 43 FR 6925, Feb. 17, 1978; 50 FR 7579, Feb. 25, 1985; 52 FR 10038, Mar. 30, 1987; 53 FR 19253, May 27, 1988; 56 FR 55998, Oct. 31, 1991; 61 FR 24675, May 16, 1996; 67 FR 78142, Dec. 23, 2002; 72 FR 35144, June 27, 2007]

[1]A previous § 20.304 permitted burial of small quantities of licensed materials in soil before January 28, 1981, without specific Commission authorization. See § 20.304 contained in the 10 CFR, parts 0 to 199, edition revised as of January 1, 1981.

§ 70.52 Reports of accidental criticality.

[Top of File]

(a) Each licensee shall notify the NRC Operations Center[1] within one hour after discovery of any case of accidental criticality.

(b) This notification must be made to the NRC Operations Center via the Emergency Notification System if the licensee is party to that system. If the Emergency Notification System is inoperative or unavailable, the licensee shall make the required notification via commercial telephonic service or other dedicated telephonic system or any other method that will ensure that a report is received by the NRC Operations Center within one hour.

[52 FR 21657, June 9, 1987, as amended at 59 FR 14087, Mar. 25, 1994; 67 FR 78143, Dec. 23, 2002]

[1]Commercial telephone number of the NRC Operations Center is (301) 816-5100.

§ 70.55 Inspections.

[Top of File]

(a) Each licensee shall afford to the Commission at all reasonable times opportunity to inspect special nuclear material and the premises and facilities wherein special nuclear material is used, produced, or stored.

(b) Each licensee shall make available to the Commission for inspection, upon reasonable notice, records kept by the licensee pertaining to his receipt, possession, use, acquisition, import, export, or transfer of special nuclear material.

(c)(1) In the case of fuel cycle facilities where nuclear reactor fuel is fabricated or processed each licensee shall upon request by the Director, Office of Nuclear Material Safety and Safeguards or the appropriate NRC Regional Administrator, provide rent-free office space for the exclusive use of Commission inspection personnel. Heat, air conditioning, light, electrical outlets and janitorial services shall be furnished by each licensee. The office shall be convenient to and have full access to the facility and, shall provide the inspector both visual and acoustic privacy.

(2) For a site with a single fuel facility licensed pursuant to part 70, the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary and transient NRC personnel and will be generally commensurate with other office facilities at the site. A space of 250 square feet either within the site's office complex or in an office trailer or other on site space is suggested as a guide. For sites containing multiple fuel facilities, additional space may be requested to accommodate additional full-time inspector(s). The office space that is provided shall be subject to the approval of the Director, Office of Nuclear Material Safety and Safeguards or the appropriate NRC Regional Administrator. All furniture, supplies and communication equipment will be furnished by the Commission.

(3) The licensee shall afford any NRC resident inspector assigned to that site or other NRC inspectors identified by the Director, Office of Nuclear Material Safety and Safeguards, as likely to inspect the facility, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection,

and personal safety.

[21 FR 764, Feb. 3, 1956. Redesignated at 25 FR 1607, Feb. 25, 1960, and 25 FR 12730, Dec. 13, 1960, and amended at 32 FR 2563, Feb. 7, 1967; 44 FR 47919, Aug. 16, 1979; 52 FR 31612, Aug. 21, 1987; 54 FR 6877, Feb. 15, 1989; 55 FR 5979, Feb. 21, 1990]

§ 70.56 Tests.

[Top of File]

Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administration of the regulations in this part, including tests of (a) special nuclear material, (b) facilities wherein special nuclear material is utilized, produced or stored, (c) radiation detection and monitoring instruments, and (d) other equipment and devices used in connection with the production, utilization or storage of special nuclear material.

[21 FR 764, Feb. 3, 1956. Redesignated at 25 FR 1607, Feb. 25, 1960, and 25 FR 12730, Dec. 13, 1960]

§ 70.59 Effluent monitoring reporting requirements.

[Top of File]

Within 60 days after January 1 and July 1 of each year, and using an appropriate method listed in § 70.5(a), each licensee authorized to possess and use special nuclear material for processing and fuel fabrication, scrap recovery, conversion of uranium hexafluoride, or in a uranium enrichment facility shall submit a report addressed: ATTN: Document Control Desk, Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, with a copy to the appropriate NRC Regional Office shown in appendix D to part 20 of this chapter. The report must specify the quantity of each of the principal radionuclides released to unrestricted areas in liquid and gaseous effluents during the previous six months of operation, and such other information as the Commission may require to estimate maximum potential annual radiation doses to the public resulting from effluent releases. If quantities of radioactive materials released during the reporting periods are significantly above the licensee's design objectives previously reviewed as part of the licensing action, the report must cover this specifically. On the basis of these reports and any additional information the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate.

[40 FR 53230, Nov. 17, 1975, as amended at 41 FR 21627, May 27, 1976; 42 FR 25721, May 19, 1977; 52 FR 31612, Aug. 21, 1987; 57 FR 18393, Apr. 30, 1992; 68 FR 58817, Oct. 10, 2003]

Subpart H--Additional Requirements for Certain Licensees Authorized To Possess a Critical Mass of Special Nuclear Material

[Top of File]

Source: 65 FR 56226, Sept. 18, 2000, unless otherwise noted.

§ 70.60 Applicability.

The regulations in § 70.61 through § 70.76 apply, in addition to other applicable Commission regulations, to each applicant or licensee that is or plans to be authorized to possess greater than a critical mass of special nuclear material, and engaged in enriched uranium processing, fabrication of uranium fuel or fuel assemblies, uranium enrichment, enriched uranium hexafluoride conversion, plutonium processing, fabrication of mixed-oxide fuel or fuel assemblies, scrap recovery of special nuclear material, or any other activity that the Commission determines could significantly affect public health and safety. The regulations in § 70.61 through § 70.76 do not apply to decommissioning activities performed pursuant to other applicable Commission regulations including § 70.25 and § 70.38 of this part. Also, the regulations in § 70.61 through § 70.76 do not apply to activities that are certified by the Commission pursuant to part 76 of this chapter or licensed by the Commission pursuant to other parts of this chapter. Unless specifically addressed in § 70.61 through § 70.76, implementation by current licensees of the Subpart H requirements shall be completed no later than the time of the ISA Summary submittal required in § 70.62 (c)(3)(ii).

§ 70.61 Performance requirements.

[Top of File]

(a) Each applicant or licensee shall evaluate, in the integrated safety analysis performed in accordance with § 70.62, its compliance with the performance requirements in paragraphs (b), (c), and (d) of this section.

(b) The risk of each credible high-consequence event must be limited. Engineered controls, administrative controls, or both, shall be applied to the extent needed to reduce the likelihood of occurrence of the event so that, upon implementation of such controls, the event is highly unlikely or its consequences are less severe than those in paragrahs (b)(1)-(4) of this section. High consequence events are those internally or externally initiated events that result in:

(1) An acute worker dose of 1 Sv (100 rem) or greater total effective dose equivalent;

(2) An acute dose of 0.25 Sv (25 rem) or greater total effective dose equivalent to any individual located outside the controlled area identified pursuant to paragraph (f) of this section;

(3) An intake of 30 mg or greater of uranium in soluble form by any individual located outside the controlled area identified pursuant to paragraph (f) of this section; or

(4) An acute chemical exposure to an individual from licensed material or hazardous chemicals produced from licensed material that:

(i) Could endanger the life of a worker, or

(ii) Could lead to irreversible or other serious, long-lasting health effects to any individual located outside the controlled area identified pursuant to paragraph (f) of this section. If an applicant possesses or plans to possess quantities of material capable of such chemical exposures, then the applicant shall propose appropriate quantitative standards for these health effects, as part of the information submitted pursuant to § 70.65 of this subpart.

(c) The risk of each credible intermediate-consequence event must be limited. Engineered controls, administrative controls, or both shall be applied to the extent needed so that, upon implementation of such controls, the event is unlikely or its consequences are less than those in paragraphs (c)(1)-(4) of this section. Intermediate consequence events are those internally or externally initiated events that are not high consequence events, that result in:

(1) An acute worker dose of 0.25 Sv (25 rem) or greater total effective dose equivalent;

(2) An acute dose of 0.05 Sv (5 rem) or greater total effective dose equivalent to any individual located outside the controlled area identified pursuant to paragraph (f) of this section;

(3) A 24-hour averaged release of radioactive material outside the restricted area in concentrations exceeding 5000 times the values in Table 2 of Appendix B to Part 20; or

(4) An acute chemical exposure to an individual from licensed material or hazardous chemicals produced from licensed material that:

(i) Could lead to irreversible or other serious, long-lasting health effects to a worker, or

(ii) Could cause mild transient health effects to any individual located outside the controlled area as specified in paragraph (f) of this section. If an applicant possesses or plans to possess quantities of material capable of such chemical exposures, then the applicant shall propose appropriate quantitative standards for these health effects, as part of the information submitted pursuant to § 70.65 of this subpart.

(d) In addition to complying with paragraphs (b) and (c) of this section, the risk of nuclear criticality accidents must be limited by assuring that under normal and credible abnormal conditions, all nuclear processes are subcritical, including use of an approved margin of subcriticality for safety. Preventive controls and measures must be the primary means of protection against nuclear criticality accidents.

(e) Each engineered or administrative control or control system necessary to comply with paragraphs (b), (c), or (d) of this section shall be designated as an item relied on for safety. The safety program, established and maintained pursuant to § 70.62 of this subpart, shall ensure that each item relied on for safety will be available and reliable to perform its intended function when needed and in the context of the performance requirements of this section.

(f) Each licensee must establish a controlled area, as defined in § 20.1003. In addition, the licensee must retain the authority to exclude or remove personnel and property from the area. For the purpose of complying with the performance requirements of this section, individuals who are not workers, as defined in § 70.4, may be permitted to perform ongoing activities (e.g., at a facility not related to the licensed activities) in the controlled area, if the licensee:

(1) Demonstrates and documents, in the integrated safety analysis, that the risk for those individuals at the location of their activities does not exceed the performance requirements of paragraphs (b)(2), (b)(3), (b)(4)(ii), (c)(2), and (c)(4)(ii) of this section; or

(2) Provides training that satisfies 10 CFR 19.12(a)(1)-(5) to these individuals and ensures that they are aware of the risks associated with accidents involving the licensed activities as determined by the integrated safety analysis, and conspicuously posts and maintains notices stating where the information in 10 CFR 19.11(a) may be examined by these individuals. Under these conditions, the performance requirements for workers specified in paragraphs (b) and (c) of this section may be applied to these individuals.

§ 70.62 Safety program and integrated safety analysis.

[Top of File]

(a) **Safety program.** (1) Each licensee or applicant shall establish and maintain a safety program that demonstrates compliance with the performance requirements of § 70.61. The safety program may be graded such that management measures applied are graded commensurate with the reduction of the risk attributable to that item. Three elements of this safety program; namely, process safety information, integrated safety analysis, and management measures, are described in paragraphs (b) through (d) of this section.

(2) Each licensee or applicant shall establish and maintain records that demonstrate compliance with the requirements of paragraphs (b)

through (d) of this section.

(3) Each licensee or applicant shall maintain records of failures readily retrievable and available for NRC inspection, documenting each discovery that an item relied on for safety or management measure has failed to perform its function upon demand or has degraded such that the performance requirements of § 70.61 are not satisfied. These records must identify the item relied on for safety or management measure that has failed and the safety function affected, the date of discovery, date (or estimated date) of the failure, duration (or estimated duration) of thetime that the item was unable to perform its function, any other affected items relied on for safety or management measures and their safety function, affected processes, cause of the failure, whether the failure was in the context of the performance requirements or upon demand or both, and any corrective or compensatory action that was taken. A failure must be recorded at the time of discovery and the record of that failure updated promptly upon the conclusion of each failure investigation of an item relied on for safety or management measure.

(b) *Process safety information.* Each licensee or applicant shall maintain process safety information to enable the performance and maintenance of an integrated safety analysis. This process safety information must include information pertaining to the hazards of the materials used or produced in the process, information pertaining to the technology of the process, and information pertaining to the equipment in the process.

(c) *Integrated safety analysis.* (1) Each licensee or applicant shall conduct and maintain an integrated safety analysis, that is of appropriate detail for the complexity of the process, that identifies:

(i) Radiological hazards related to possessing or processing licensed material at its facility;

(ii) Chemical hazards of licensed material and hazardous chemicals produced from licensed material;

(iii) Facility hazards that could affect the safety of licensed materials and thus present an increased radiological risk;

(iv) Potential accident sequences caused by process deviations or other events internal to the facility and credible external events, including natural phenomena;

(v) The consequence and the likelihood of occurrence of each potential accident sequence identified pursuant to paragraph (c)(1)(iv) of this section, and the methods used to determine the consequences and likelihoods; and

(vi) Each item relied on for safety identified pursuant to § 70.61(e) of this subpart, the characteristics of its preventive, mitigative, or other safety function, and the assumptions and conditions under which the item is relied upon to support compliance with the performance requirements of § 70.61.

(2) Integrated safety analysis team qualifications. To assure the adequacy of the integrated safety analysis, the analysis must be performed by a team with expertise in engineering and process operations. The team shall include at least one person who has experience and knowledge specific to each process being evaluated, and persons who have experience in nuclear criticality safety, radiation safety, fire safety, and chemical process safety. One member of the team must be knowledgeable in the specific integrated safety analysis methodology being used.

(3) Requirements for existing licensees. Individuals holding an NRC license on September 18, 2000 shall, with regard to existing licensed activities:

(i) By April 18, 2001, submit for NRC approval, a plan that describes the integrated safety analysis approach that will be used, the processes that will be analyzed, and the schedule for completing the analysis of each process.

(ii) By October 18, 2004, or in accordance with the approved plan submitted under § 70.62(c)(3)(i), complete an integrated safety analysis, correct all unacceptable performance deficiencies, and submit, for NRC approval, an integrated safety analysis summary, including a description of the management measures, in accordance with § 70.65. The Commission may approve a request for an alternative schedule for completing the correction of unacceptable performance deficiencies if the Commission determines that the alternative is warranted by consideration of the following:

(A) Adequate compensatory measures have been established;

(B) Whether it is technically feasible to complete the correction of the unacceptable performance deficiency within the allotted 4-year period;

(C) Other site-specific factors which the Commission may consider appropriate on a case-by-case basis and that are beyond the control of the licensee.

(iii) Pending the correction of unacceptable performance deficiencies identified during the conduct of the integrated safety analysis, the licensee shall implement appropriate compensatory measures to ensure adequate protection.

(d) *Management measures.* Each applicant or licensee shall establish management measures to ensure compliance with the performance requirements of § 70.61. The measures applied to a particular engineered or administrative control or control system may be graded commensurate with the reduction of the risk attributable to that control or control system. The management measures shall ensure that engineered and administrative controls and control systems that are identified as items relied on for safety pursuant to § 70.61(e) of this subpart are designed, implemented, and maintained, as necessary, to ensure they are available and reliable to perform their function when needed, to comply with the performance requirements of § 70.61 of this subpart.

§ 70.64 Requirements for new facilities or new processes at existing facilities.

[Top of File]

(a) *Baseline design criteria.* Each prospective applicant or licensee shall address the following baseline design criteria in the design of new facilities. Each existing licensee shall address the following baseline design criteria in the design of new processes at existing facilities that require a license amendment under § 70.72. The baseline design criteria must be applied to the design of new facilities and new processes, but do not require retrofits to existing facilities or existing processes (e.g., those housing or adjacent to the new process); however, all facilities and processes must comply with the performance requirements in § 70.61. Licensees shall maintain the application of these criteria unless the analysis performed pursuant to § 70.62(c) demonstrates that a given item is not relied on for safety or does not require adherence to the specified criteria.

(1) Quality standards and records. The design must be developed and implemented in accordance with management measures, to provide adequate assurance that items relied on for safety will be available and reliable to perform their function when needed. Appropriate records of these items must be maintained by or under the control of the licensee throughout the life of the facility.

(2) Natural phenomena hazards. The design must provide for adequate protection against natural phenomena with consideration of the most severe documented historical events for the site.

(3) Fire protection. The design must provide for adequate protection against fires and explosions.

(4) Environmental and dynamic effects. The design must provide for adequate protection from environmental conditions and dynamic effects associated with normal operations, maintenance, testing, and postulated accidents that could lead to loss of safety functions.

(5) Chemical protection. The design must provide for adequate protection against chemical risks produced from licensed material, facility conditions which affect the safety of licensed material, and hazardous chemicals produced from licensed material.

(6) Emergency capability. The design must provide for emergency capability to maintain control of:

(i) Licensed material and hazardous chemicals produced from licensed material;

(ii) Evacuation of on-site personnel; and

(iii) Onsite emergency facilities and services that facilitate the use of available offsite services.

(7) Utility services. The design must provide for continued operation of essential utility services.

(8) Inspection, testing, and maintenance. The design of items relied on for safety must provide for adequate inspection, testing, and maintenance, to ensure their availability and reliability to perform their function when needed.

(9) Criticality control. The design must provide for criticality control including adherence to the double contingency principle.

(10) Instrumentation and controls. The design must provide for inclusion of instrumentation and control systems to monitor and control the behavior of items relied on for safety.

(b) Facility and system design and facility layout must be based on defense-in-depth practices.[1] The design must incorporate, to the extent practicable:

(1) Preference for the selection of engineered controls over administrative controls to increase overall system reliability; and

(2) Features that enhance safety by reducing challenges to items relied on for safety.

[1] As used in § 70.64, Requirements for new facilities or new processes at existing facilities, defense-in-depth practices means a design philosophy, applied from the outset and through completion of the design, that is based on providing successive levels of protection such that health and safety will not be wholly dependent upon any single element of the design, construction, maintenance, or operation of the facility. The net effect of incorporating defense-in-depth practices is a conservatively designed facility and system that will exhibit greater tolerance to failures and external challenges. The risk insights obtained through performance of the integrated safety analysis can be then used to supplement the final design by focusing attention on the prevention and mitigation of the higher-risk potential accidents.

§ 70.65 Additional content of applications.

[Top of File]

(a) In addition to the contents required by § 70.22, each application must include a description of the applicant's safety program established under § 70.62.

(b) The integrated safety analysis summary must be submitted with the license or renewal application (and amendment application as necessary), but shall not be incorporated in the license. However, changes to the integrated safety analysis summary shall meet the conditions of § 70.72. The integrated safety analysis summary must contain:

(1) A general description of the site with emphasis on those factors that could affect safety (i.e., meteorology, seismology);

(2) A general description of the facility with emphasis on those areas that could affect safety, including an identification of the controlled area boundaries;

(3) A description of each process (defined as a single reasonably simple integrated unit operation within an overall production line) analyzed in the integrated safety analysis in sufficient detail to understand the theory of operation; and, for each process, the hazards that were identified in the integrated safety analysis pursuant to § 70.62(c)(1)(i)-(iii) and a general description of the types of accident sequences;

(4) Information that demonstrates the licensee's compliance with the performance requirements of § 70.61, including a description of the management measures; the requirements for criticality monitoring and alarms in § 70.24; and, if applicable, the requirements of § 70.64;

(5) A description of the team, qualifications, and the methods used to perform the integrated safety analysis;

(6) A list briefly describing each item relied on for safety which is identified pursuant to § 70.61(e) in sufficient detail to understand their functions in relation to the performance requirements of § 70.61;

(7) A description of the proposed quantitative standards used to assess the consequences to an individual from acute chemical exposure to licensed material or chemicals produced from licensed materials which are on-site, or expected to be on-site as described in § 70.61(b)(4) and (c)(4);

(8) A descriptive list that identifies all items relied on for safety that are the sole item preventing or mitigating an accident sequence that exceeds the performance requirements of § 70.61; and

(9) A description of the definitions of unlikely, highly unlikely, and credible as used in the evaluations in the integrated safety analysis.

§ 70.66 Additional requirements for approval of license application.

[Top of File]

(a) An application for a license from an applicant subject to subpart H will be approved if the Commission determines that the applicant has complied with the requirements of § 70.21, 70.22, 70.23, and 70.60 through 70.65.

(b) Submittals by existing licensees in accordance with § 70.62(c)(3)(i) will be approved if the Commission determines that:

(1) The integrated safety analysis approach is in accordance with the requirements of § 70.61, 70.62(c)(1), and 70.62(c)(2); and

(2) The schedule is in compliance with § 70.62(c)(3)(ii).

(c) Submittals by existing licensees in accordance with § 70.62(c)(3)(ii) will be approved if the Commission determines that:

(1) The requirements of § 70.65(b) are satisfied; and

(2) The performance requirements in § 70.61 (b), (c) and (d) are satisfied, based on the information in the ISA Summary, together with other information submitted to NRC or available to NRC at the licensee's site.

§ 70.72 Facility changes and change process.

[Top of File]

(a) The licensee shall establish a configuration management system to evaluate, implement, and track each change to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel. This system must be documented in written procedures and must assure that the following are addressed prior to implementing any change:

(1) The technical basis for the change;

(2) Impact of the change on safety and health or control of licensed material;

(3) Modifications to existing operating procedures including any necessary training or retraining before operation;

(4) Authorization requirements for the change;

(5) For temporary changes, the approved duration (e.g., expiration date) of the change; and

(6) The impacts or modifications to the integrated safety analysis, integrated safety analysis summary, or other safety program information, developed in accordance with § 70.62.

(b) Any change to site, structures, processes, systems, equipment, components, computer programs, and activities of personnel must be evaluated by the licensee as specified in paragraph (a) of this section, before the change is implemented. The evaluation of the change must determine, before the change is implemented, if an amendment to the license is required to be submitted in accordance with § 70.34.

(c) The licensee may make changes to the site, structures, processes, systems, equipment, components, computer programs, and activities of personnel, without prior Commission approval, if the change:

(1) Does not:

(i) Create new types of accident sequences that, unless mitigated or prevented, would exceed the performance requirements of § 70.61 and that have not previously been described in the integrated safety analysis summary; or

(ii) Use new processes, technologies, or control systems for which the licensee has no prior experience;

(2) Does not remove, without at least an equivalent replacement of the safety function, an item relied on for safety that is listed in the integrated safety analysis summary and is necessary for compliance with the performance requirements of § 70.61;

(3) Does not alter any item relied on for safety, listed in the integrated safety analysis summary, that is the sole item preventing or mitigating an accident sequence that exceeds the performance requirements of § 70.61; and

(4) Is not otherwise prohibited by this section, license condition, or order.

(d)(1) For changes that require pre-approval under § 70.72, the licensee shall submit an amendment request to the NRC in accordance with § 70.34 and § 70.65 of this chapter.

(2) For changes that do not require pre-approval under § 70.72, the licensee shall submit to NRC annually, within 30 days after the end of the calendar year during which the changes occurred, a brief summary of all changes to the records required by § 70.62(a)(2) of this subpart.

(3) For all changes that affect the integrated safety analysis summary, the licensee shall submit to NRC annually, within 30 days after the end of the calendar year during which the changes occurred, revised integrated safety analysis summary pages.

(e) If a change covered by § 70.72 is made, the affected on-site documentation must be updated promptly.

(f) The licensee shall maintain records of changes to its facility carried out under this section. These records must include a written evaluation that provides the bases for the determination that the changes do not require prior Commission approval under paragraph (c) or (d) of this section. These records must be maintained until termination of the license.

[71 FR 56344, Sep. 27, 2006]

§ 70.73 Renewal of licenses.

[Top of File]

Applications for renewal of a license must be filed in accordance with §§ 2.109, 70.21, 70.22, 70.33, 70.38, and 70.65 of this chapter. Information contained in previous applications, statements, or reports filed with the Commission under the license may be incorporated by reference, provided that these references are clear and specific.

§ 70.74 Additional reporting requirements.

[Top of File]

(a) Reports to NRC Operations Center. (1) Each licensee shall report to the NRC Operations Center the events described in Appendix A to Part 70.

(2) Reports must be made by a knowledgeable licensee representative and by any method that will ensure compliance with the required time period for reporting.

(3) The information provided must include a description of the event and other related information as described in § 70.50(c)(1).

(4) Follow-up information to the reports must be provided until all information required to be reported in § 70.50(c)(1) of this subpart is

complete.

(5) Each licensee shall provide reasonable assurance that reliable communication with the NRC Operations Center is available during each event.

(b) Written reports. Each licensee that makes a report required by paragraph (a)(1) of this section shall submit a written follow-up report within 30 days of the initial report. The written report must contain the information as described in § 70.50(c)(2).

§ 70.76 Backfitting.

[Top of File]

(a) For each licensee, this provision shall apply to Subpart H requirements as soon as the NRC approves that licensee's ISA Summary pursuant to § 70.66. For requirements other than Subpart H, this provision applies regardless of the status of the approval of a licensee's ISA Summary.

(1) Backfitting is defined as the modification of, or addition to, systems, structures, or components of a facility; or to the procedures or organization required to operate a facility; any of which may result from a new or amended provision in the Commission rules or the imposition of a regulatory staff position interpreting the Commission rules that is either new or different from a previous NRC staff position.

(2) Except as provided in paragraph (a)(4) of this section, the Commission shall require a systematic and documented analysis pursuant to paragraph (b) of this section for backfits which it seeks to impose.

(3) Except as provided in paragraph (a)(4) of this section, the Commission shall require the backfitting of a facility only when it determines, based on the analysis described in paragraph (b) of this section, that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of implementation for that facility are justified in view of this increased protection.

(4) The provisions of paragraphs (a)(2) and (a)(3) of this section are inapplicable and, therefore, backfit analysis is not required and the standards in paragraph (a)(3) of this section do not apply where the Commission finds and declares, with appropriately documented evaluation for its finding, any of the following:

(i) That a modification is necessary to bring a facility into compliance with Subpart H of this part;

(ii) That a modification is necessary to bring a facility into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by the licensee;

(iii) That regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public and is in accord with the common defense and security; or

(iv) That the regulatory action involves defining or redefining what level of protection to the public health and safety or common defense and security should be regarded as adequate.

(5) The Commission shall always require the backfitting of a facility if it determines that the regulatory action is necessary to ensure that the facility provides adequate protection to the health and safety of the public and is in accord with the common defense and security.

(6) The documented evaluation required by paragraph (a)(4) of this section must include a statement of the objectives of and reasons for the modification and the basis for invoking the exception. If immediate effective regulatory action is required, then the documented evaluation may follow, rather than precede, the regulatory action.

(7) If there are two or more ways to achieve compliance with a license or the rules or orders of the Commission, or with written license commitments, or there are two or more ways to reach an adequate level of protection, then ordinarily the licensee is free to choose the way that best suits its purposes. However, should it be necessary or appropriate for the Commission to prescribe a specific way to comply with its requirements or to achieve adequate protection, then cost may be a factor in selecting the way, provided that the objective of compliance or adequate protection is met.

(b) In reaching the determination required by paragraph (a)(3) of this section, the Commission will consider how the backfit should be scheduled in light of other ongoing regulatoryactivities at the facility and, in addition, will consider information available concerning any of the following factors as may be appropriate and any other information relevant and material to the proposed backfit:

(1) Statement of the specific objectives that the proposed backfit is designed to achieve;

(2) General description of the activity that would be required by the licensee in order to complete the backfit;

(3) Potential change in the risk to the public from the accidental release of radioactive material and hazardous chemicals produced from licensed material;

(4) Potential impact on radiological exposure or exposure to hazardous chemicals produced from licensed material of facility employees;

(5) Installation and continuing costs associated with the backfit, including the cost of facility downtime;

(6) The potential safety impact of changes in facility or operational complexity, including the relationship to proposed and existing regulatory requirements;

(7) The estimated resource burden on the NRC associated with the proposed backfit and the availability of such resources;

(8) The potential impact of differences in facility type, design, or age on the relevancy and practicality of the proposed backfit; and

(9) Whether the proposed backfit is interim or final and, if interim, the justification for imposing the proposed backfit on an interim basis.

(c) No license will be withheld during the pendency of backfit analyses required by the Commission's rules.

(d) The Executive Director for Operations shall be responsible for implementation of this section, and all analyses required by this section shall be approved by the Executive Director for Operations or his or her designee.

Subpart I--Modification and Revocation of Licenses

[Top of File]

§ 70.81 Modification and revocation of licenses.

(a) The terms and conditions of all licenses shall be subject to amendment, revision, or modification by reason of amendments to the Atomic Energy Act of 1954, or by reason of rules, regulations or orders issued in accordance with the Act or any amendments thereto;

(b) Any license may be revoked, suspended or modified for any material false statements in the application or any statement of fact required under section 182 of the Act or because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the Commission to refuse to grant a license on an original application, or for failure to construct or operate a facility in accordance with the terms of the construction permit or license, the technical specifications in the application, or for violation of, or failure to observe any of the terms and conditions of the Act, or of any regulation of the Commission.

(c) Upon revocation, suspension or modification of a license, the Commission may immediately retake possession of all special nuclear material held by the licensee. In cases found by the Commission to be of extreme importance to the national defense or security, or to the health and safety of the public, the Commission may recapture any special nuclear material held by the licensee prior to any of the procedures provided under section 551-558 of title 5 of the United States Code.

(d) Except in cases of willfulness or those in which the public health, interest or safety requires otherwise, no license shall be modified, suspended or revoked unless, prior to the institution of proceedings therefor, facts or conduct which may warrant such action shall have been called to the attention of the licensee in writing and the licensee shall have been accorded opportunity to demonstrate or achieve compliance with all lawful requirements.

[21 FR 764, Feb. 3, 1956, as amended at 35 FR 11461, July 17, 1970. Redesignated at 65 FR 56226, Sept. 18, 2000]

§ 70.82 Suspension and operation in war or national emergency.

[Top of File]

Whenever Congress declares that a state of war or national emergency exists, the Commission, if it finds it necessary to the common defense and security may,

(a) Suspend any license it has issued.

(b) Order the recapture of special nuclear material.

(c) Order the operation of any licensed facility.

(d) Order entry into any plant or facility in order to recapture special nuclear material or to operate the facility. Just compensation shall be paid for any damages caused by recapture of special nuclear material or by operation of any facility, pursuant to this section.

[21 FR 764, Feb. 3, 1956, as amended at 32 FR 4056, Mar. 15, 1967; 35 FR 11461, July 17, 1970. Redesignated at 65 FR 56226, Sept. 18, 2000]

Subpart J--Enforcement

[Top of File]

§ 70.91 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55077, Nov. 24, 1992. Redesignated at 65 FR 56226, Sept. 18, 2000]

§ 70.92 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 70 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 70 that are not issued under sections 161b, 161i, or 161o, for the purposes of section 223 are as follows: § 70.1, 70.2, 70.4, 70.5, 70.6, 70.8, 70.11, 70.12, 70.13, 70.14, 70.17, 70.18, 70.23, 70.31, 70.33, 70.34, 70.35, 70.37, 70.66, 70.73, 70.76, 70.81, 70.82, 70.63, 70.91, and 70.92.

[57 FR 55077, Nov. 24, 1992. Redesignated and amended at 65 FR 56226, Sept. 18, 2000]

Appendix A to Part 70--Reportable Safety Events

[Top of File]

Licensees must comply with reporting requirements in this appendix, except for (a)(1), (a)(2), and (b)(4), after they have submitted an ISA Summary in accordance with § 70.62(c)(3)(ii). Licensees must comply with (a)(1), (a)(2), and (b)(4) after October 18, 2000. As required by 10 CFR 70.74, licensees subject to the requirements in subpart H of part 70, shall report:

(a) One hour reports. Events to be reported to the NRC Operations Center within 1 hour of discovery, supplemented with the information in 10 CFR 70.50(c)(1) as it becomes available, followed by a written report within 30 days:

(1) An inadvertent nuclear criticality.

(2) An acute intake by an individual of 30 mg or greater of uranium in a soluble form.

(3) An acute chemical exposure to an individual from licensed material or hazardous chemicals produced from licensed material that exceeds the quantitative standards established to satisfy the requirements in § 70.61(b)(4).

(4) An event or condition such that no items relied on for safety, as documented in the Integrated Safety Analysis summary, remain available and reliable, in an accident sequence evaluated in the Integrated Safety Analysis, to perform their function:

(i) In the context of the performance requirements in § 70.61(b) and § 70.61(c), or

(ii) Prevent a nuclear criticality accident (i.e., loss of all controls in a particular sequence).

(5) Loss of controls such that only one item relied on for safety, as documented in the Integrated Safety Analysis summary, remains available and reliable to prevent a nuclear criticality accident, and has been in this state for greater than eight hours.

(b) Twenty-four hour reports. Events to be reported to the NRC Operations Center within 24 hours of discovery, supplemented with the information in 10 CFR 70.50(c)(1) as it becomes available, followed by a written report within 30 days:

(1) Any event or condition that results in the facility being in a state that was not analyzed, was improperly analyzed, or is different from that analyzed in the Integrated Safety Analysis, and which results in failure to meet the performance requirements of § 70.61.

(2) Loss or degradation of items relied on for safety that results in failure to meet the performance requirement of § 70.61.

(3) An acute chemical exposure to an individual from licensed material or hazardous chemicals produced from licensed materials that exceeds the quantitative standards that satisfy the requirements of § 70.61(c)(4).

(4) Any natural phenomenon or other external event, including fires internal and external to the facility, that has affected or may have affected the intended safety function or availability or reliability of one or more items relied on for safety.

(5) An occurrence of an event or process deviation that was considered in the Integrated Safety Analysis and:

(i) Was dismissed due to its likelihood; or

(ii) Was categorized as unlikely and whose associated unmitigated consequences would have exceeded those in § 70.61(b) had the item(s) relied on for safety not performed their safety function(s).

(c) Concurrent Reports. Any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made, shall be reported to the NRC Operations Center concurrent to the news release or other notification.

[65 FR 56231, Sept. 18, 2000]

PART 71--PACKAGING AND TRANSPORTATION OF RADIOACTIVE MATERIAL

[Top of File]

Subpart A--General Provisions

[Top of File]

Source: 69 FR 3786, Jan. 26, 2004, unless otherwise noted.

§ 71.0 Purpose and scope.

(a) This part establishes--

(1) Requirements for packaging, preparation for shipment, and transportation of licensed material; and

(2) Procedures and standards for NRC approval of packaging and shipping procedures for fissile material and for a quantity of other licensed material in excess of a Type A quantity.

(b) The packaging and transport of licensed material are also subject to other parts of this chapter (e.g., 10 CFR parts 20, 21, 30, 40, 70, and 73) and to the regulations of other agencies (e.g., the U.S. Department of Transportation (DOT) and the U.S. Postal Service)[1] having jurisdiction over means of transport. The requirements of this part are in addition to, and not in substitution for, other requirements.

(c) The regulations in this part apply to any licensee authorized by specific or general license issued by the Commission to receive, possess, use, or transfer licensed material, if the licensee delivers that material to a carrier for transport, transports the material outside the site of usage as specified in the NRC license, or transports that material on public highways. No provision of this part authorizes possession of licensed material.

(d)(1) Exemptions from the requirement for license in § 71.3 are specified in § 71.14. General licenses for which no NRC package approval is required are issued in §§ 71.20 through 71.23. The general license in § 71.17 requires that an NRC certificate of compliance or other package approval be issued for the package to be used under this general license.

(2) Application for package approval must be completed in accordance with subpart D of this part, demonstrating that the design of the package to be used satisfies the package approval standards contained in subpart E of this part, as related to the tests of subpart F of this part.

(3) A licensee transporting licensed material, or delivering licensed material to a carrier for transport, shall comply with the operating control requirements of subpart G of this part; the quality assurance requirements of subpart H of this part; and the general provisions of subpart A of this part, including DOT regulations referenced in § 71.5.

(e) The regulations of this part apply to any person holding, or applying for, a certificate of compliance, issued pursuant to this part, for a package intended for the transportation of radioactive material, outside the confines of a licensee's facility or authorized place of use.

(f) The regulations in this part apply to any person required to obtain a certificate of compliance, or an approved compliance plan, pursuant to part 76 of this chapter, if the person delivers radioactive material to a common or contract carrier for transport or transports the material outside the confines of the person's plant or other authorized place of use.

(g) This part also gives notice to all persons who knowingly provide to any licensee, certificate holder, quality assurance program approval holder, applicant for a license, certificate, or quality assurance program approval, or to a contractor, or subcontractor of any of them, components, equipment, materials, or other goods or services, that relate to a licensee's, certificate holder's, quality assurance program approval holder's, or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 71.8.

[1] Postal Service Manual (Domestic Mail Manual), section 124, which is incorporated by reference at 39 CFR 111.1.

§ 71.1 Communications and records.

[Top of File]

(a) Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent by mail addressed: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's website at *www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*,or by writing

the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. If the submission date falls on a Saturday, Sunday, or a Federal holiday, the next Federal working day becomes the official due date.

(b) Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[69 FR 3786, Jan. 26, 2004; 69 FR 58038, Sept. 29, 2004; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 71.2 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

§ 71.3 Requirement for license.

[Top of File]

Except as authorized in a general license or a specific license issued by the Commission, or as exempted in this part, no licensee may--

(a) Deliver licensed material to a carrier for transport; or

(b) Transport licensed material.

§ 71.4 Definitions.

[Top of File]

The following terms are as defined here for the purpose of this part. To ensure compatibility with international transportation standards, all limits in this part are given in terms of dual units: The International System of Units (SI) followed or preceded by U.S. standard or customary units. The U.S. customary units are not exact equivalents but are rounded to a convenient value, providing a functionally equivalent unit. For the purpose of this part, either unit may be used.

A_1 means the maximum activity of special form radioactive material permitted in a Type A package. This value is either listed in Appendix A, Table A-1, of this part, or may be derived in accordance with the procedures prescribed in Appendix A of this part.

A_2 means the maximum activity of radioactive material, other than special form material, LSA, and SCO material, permitted in a Type A package. This value is either listed in Appendix A, Table A-1, of this part, or may be derived in accordance with the procedures prescribed in Appendix A of this part.

Carrier means a person engaged in the transportation of passengers or property by land or water as a common, contract, or private carrier, or by civil aircraft.

Certificate holder means a person who has been issued a certificate of compliance or other package approval by the Commission.

Certificate of Compliance (CoC) means the certificate issued by the Commission under subpart D of this part which approves the design of a package for the transportation of radioactive material.

Close reflection by water means immediate contact by water of sufficient thickness for maximum reflection of neutrons.

Consignment means each shipment of a package or groups of packages or load of radioactive material offered by a shipper for transport.

Containment system means the assembly of components of the packaging intended to retain the radioactive material during transport.

Conveyance means:

(1) For transport by public highway or rail any transport vehicle or large freight container;

(2) For transport by water any vessel, or any hold, compartment, or defined deck area of a vessel including any transport vehicle on board

the vessel; and

(3) For transport by any aircraft.

Criticality Safety Index (CSI) means the dimensionless number (rounded up to the next tenth) assigned to and placed on the label of a fissile material package, to designate the degree of control of accumulation of packages containing fissile material during transportation. Determination of the criticality safety index is described in §§ 71.22, 71.23, and 71.59.

Deuterium means, for the purposes of §§ 71.15 and 71.22, deuterium and any deuterium compounds, including heavy water, in which the ratio of deuterium atoms to hydrogen atoms exceeds 1:5000.

DOT means the U.S. Department of Transportation.

Exclusive use means the sole use by a single consignor of a conveyance for which all initial, intermediate, and final loading and unloading are carried out in accordance with the direction of the consignor or consignee. The consignor and the carrier must ensure that any loading or unloading is performed by personnel having radiological training and resources appropriate for safe handling of the consignment. The consignor must issue specific instructions, in writing, for maintenance of exclusive use shipment controls, and include them with the shipping paper information provided to the carrier by the consignor.

Fissile material means the radionuclides uranium-233, uranium-235, plutonium-239, and plutonium-241, or any combination of these radionuclides. Fissile material means the fissile nuclides themselves, not material containing fissile nuclides. Unirradiated natural uranium and depleted uranium and natural uranium or depleted uranium, that has been irradiated in thermal reactors only, are not included in this definition. Certain exclusions from fissile material controls are provided in §71.15.

Graphite means, for the purposes of §§ 71.15 and 71.22, graphite with a boron equivalent content less than 5 parts per million and density greater than 1.5 grams per cubic centimeter.

Licensed material means byproduct, source, or special nuclear material received, possessed, used, or transferred under a general or specific license issued by the Commission pursuant to the regulations in this chapter.

Low Specific Activity (LSA) material means radioactive material with limited specific activity which is nonfissile or is excepted under §71.15, and which satisfies the descriptions and limits set forth below. Shielding materials surrounding the LSA material may not be considered in determining the estimated average specific activity of the package contents. LSA material must be in one of three groups:

(1) LSA--I.

(i) Uranium and thorium ores, concentrates of uranium and thorium ores, and other ores containing naturally occurring radioactive radionuclides which are not intended to be processed for the use of these radionuclides;

(ii) Solid unirradiated natural uranium or depleted uranium or natural thorium or their solid or liquid compounds or mixtures;

(iii) Radioactive material for which the A_2 value is unlimited; or

(iv) Other radioactive material in which the activity is distributed throughout and the estimated average specific activity does not exceed 30 times the value for exempt material activity concentration determined in accordance with Appendix A.

(2) LSA--II.

(i) Water with tritium concentration up to 0.8 TBq/liter (20.0 Ci/liter); or

(ii) Other material in which the activity is distributed throughout and the average specific activity does not exceed $10^{-4}A_2$/g for solids and gases, and $10^{-5}A_2$/g for liquids.

(3) LSA--III. Solids (e.g., consolidated wastes, activated materials), excluding powders, that satisfy the requirements of § 71.77, in which:

(i) The radioactive material is distributed throughout a solid or a collection of solid objects, or is essentially uniformly distributed in a solid compact binding agent (such as concrete, bitumen, ceramic, etc.);

(ii) The radioactive material is relatively insoluble, or it is intrinsically contained in a relatively insoluble material, so that even under loss of packaging, the loss of radioactive material per package by leaching, when placed in water for 7 days, would not exceed 0.1 A_2; and

(iii) The estimated average specific activity of the solid does not exceed $2 \times 10^{-3}A_2$/g.

Low toxicity alpha emitters means natural uranium, depleted uranium, natural thorium; uranium-235, uranium-238, thorium-232, thorium-228 or thorium-230 when contained in ores or physical or chemical concentrates or tailings; or alpha emitters with a half-life of less than 10 days.

Maximum normal operating pressure means the maximum gauge pressure that would develop in the containment system in a period of 1 year under the heat condition specified in §71.71(c)(1), in the absence of venting, external cooling by an ancillary system, or operational controls during transport.

Natural thorium means thorium with the naturally occurring distribution of thorium isotopes (essentially 100 weight percent thorium-232).

Normal form radioactive material means radioactive material that has not been demonstrated to qualify as "special form radioactive material."

Optimum interspersed hydrogenous moderation means the presence of hydrogenous material between packages to such an extent that the maximum nuclear reactivity results.

Package means the packaging together with its radioactive contents as presented for transport.

(1) Fissile material package or Type AF package, Type BF package, Type B(U)F package, or Type B(M)F package means a fissile material packaging together with its fissile material contents.

(2) Type A package means a Type A packaging together with its radioactive contents. A Type A package is defined and must comply with the DOT regulations in 49 CFR part 173.

(3) Type B package means a Type B packaging together with its radioactive contents. On approval, a Type B package design is designated by NRC as B(U) unless the package has a maximum normal operating pressure of more than 700 kPa (100 lbs/in^2) gauge or a pressure relief device that would allow the release of radioactive material to the environment under the tests specified in §71.73 (hypothetical accident conditions), in which case it will receive a designation B(M). B(U) refers to the need for unilateral approval of international shipments; B(M) refers to the need for multilateral approval of international shipments. There is no distinction made in how packages with these designations may be used in domestic transportation. To determine their distinction for international transportation, see DOT regulations in 49 CFR Part 173. A Type B package approved before September 6, 1983, was designated only as Type B. Limitations on its use are specified in §71.19.

Packaging means the assembly of components necessary to ensure compliance with the packaging requirements of this part. It may consist of one or more receptacles, absorbent materials, spacing structures, thermal insulation, radiation shielding, and devices for cooling or absorbing mechanical shocks. The vehicle, tie-down system, and auxiliary equipment may be designated as part of the packaging.

Special form radioactive material means radioactive material that satisfies the following conditions:

(1) It is either a single solid piece or is contained in a sealed capsule that can be opened only by destroying the capsule;

(2) The piece or capsule has at least one dimension not less than 5 mm (0.2 in); and

(3) It satisfies the requirements of §71.75. A special form encapsulation designed in accordance with the requirements of §71.4 in effect on June 30, 1983 (see 10 CFR part 71, revised as of January 1, 1983), and constructed before July 1, 1985, and a special form encapsulation designed in accordance with the requirements of §71.4 in effect on March 31, 1996 (see 10 CFR part 71, revised as of January 1, 1983), and constructed before April 1, 1998, may continue to be used. Any other special form encapsulation must meet the specifications of this definition.

Specific activity of a radionuclide means the radioactivity of the radionuclide per unit mass of that nuclide. The specific activity of a material in which the radionuclide is essentially uniformly distributed is the radioactivity per unit mass of the material.

Spent nuclear fuel or Spent fuel means fuel that has been withdrawn from a nuclear reactor following irradiation, has undergone at least 1 year's decay since being used as a source of energy in a power reactor, and has not been chemically separated into its constituent elements by reprocessing. Spent fuel includes the special nuclear material, byproduct material, source material, and other radioactive materials associated with fuel assemblies.

State means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.

Surface Contaminated Object (SCO) means a solid object that is not itself classed as radioactive material, but which has radioactive material distributed on any of its surfaces. SCO must be in one of two groups with surface activity not exceeding the following limits:

(1) SCO-I: A solid object on which:

(i) The nonfixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4 Bq/cm^2 (10^4 microcurie/cm^2) for beta and gamma and low toxicity alpha emitters, or 0.4 Bq/cm^2 (10^{-5} microcurie/cm^2) for all other alpha emitters;

(ii) The fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4 x 10^4 Bq/cm^2 (1.0 microcurie/cm^2) for beta and gamma and low toxicity alpha emitters, or 4 x 10^3 Bq/cm^2 (0.1 microcurie/cm^2) for all other alpha emitters; and

(iii) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 4 x 10^4 Bq/cm^2 (1 microcurie/cm^2) for beta and gamma and low toxicity alpha emitters, or 4 x 10^3 Bq/cm^2 (0.1 microcurie/cm^2) for all other alpha emitters.

(2) SCO-II: A solid object on which the limits for SCO-I are exceeded and on which:

(i) The nonfixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 400 Bq/cm^2 (10^2 microcurie/cm^2) for beta and gamma and low toxicity alpha emitters or 40 Bq/cm^2 (10^3 microcurie/cm^2) for all other alpha emitters;

(ii) The fixed contamination on the accessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 8 x 10^5 Bq/cm2 (20 microcuries/cm^2) for beta and gamma and low toxicity alpha emitters, or 8 x 10^4 Bq/cm^2 (2 microcuries/cm^2) for all other alpha emitters; and

(iii) The nonfixed contamination plus the fixed contamination on the inaccessible surface averaged over 300 cm^2 (or the area of the surface if less than 300 cm^2) does not exceed 8 x 10^5 Bq/cm^2 (20 microcuries/cm^2) for beta and gamma and low toxicity alpha emitters, or 8 x 10^4 Bq/cm^2 (2 microcuries/cm^2) for all other alpha emitters.

Transport index (TI) means the dimensionless number (rounded up to the next tenth) placed on the label of a package, to designate the degree of control to be exercised by the carrier during transportation. The transport index is the number determined by multiplying the maximum radiation level in millisievert (mSv) per hour at 1 meter (3.3 ft) from the external surface of the package by 100 (equivalent to the maximum radiation level in millirem per hour at 1 meter (3.3 ft)).

Type A quantity means a quantity of radioactive material, the aggregate radioactivity of which does not exceed A_1 for special form radioactive material, or A_2, for normal form radioactive material, where A_1 and A_2 are given in Table A-1 of this part, or may be determined by procedures described in Appendix A of this part.

Type B quantity means a quantity of radioactive material greater than a Type A quantity.

Unirradiated uranium means uranium containing not more than 2 x 10^3 Bq of plutonium per gram of uranium-235, not more than 9 x 10^6 Bq of fission products per gram of uranium-235, and not more than 5 x 10^{-3} g of uranium-236 per gram of uranium-235.

Uranium--natural, depleted, enriched:

(1) Natural uranium means uranium with the naturally occurring distribution of uranium isotopes (approximately 0.711 weight percent uranium-235, and the remainder by weight essentially uranium-238).

(2) Depleted uranium means uranium containing less uranium-235 than the naturally occurring distribution of uranium isotopes.

(3) Enriched uranium means uranium containing more uranium-235 than the naturally occurring distribution of uranium isotopes.

§ 71.5 Transportation of licensed material.

[Top of File]

(a) Each licensee who transports licensed material outside the site of usage, as specified in the NRC license, or where transport is on public highways, or who delivers licensed material to a carrier for transport, shall comply with the applicable requirements of the DOT regulations in 49 CFR parts 107, 171 through 180, and 390 through 397, appropriate to the mode of transport.

(1) The licensee shall particularly note DOT regulations in the following areas:

(i) Packaging--49 CFR part 173: subparts A, B, and I.

(ii) Marking and labeling--49 CFR part 172: subpart D; and §§ 172.400 through 172.407 and §§ 172.436 through 172.441 of subpart E.

(iii) Placarding--49 CFR part 172: subpart F, especially §§ 172.500 through 172.519 and 172.556; and appendices B and C.

(iv) Accident reporting--49 CFR part 171: §§ 171.15 and 171.16.

(v) Shipping papers and emergency information--49 CFR part 172: subparts C and G.

(vi) Hazardous material employee training--49 CFR part 172: subpart H.

(vii) Security plans--49 CFR part 172: subpart I.

(viii) Hazardous material shipper/carrier registration--49 CFR part 107: subpart G.

(2) The licensee shall also note DOT regulations pertaining to the following modes of transportation:

(i) Rail--49 CFR part 174: subparts A through D and K.

(ii) Air--49 CFR part 175.

(iii) Vessel--49 CFR part 176: subparts A through F and M.

(iv) Public Highway--49 CFR part 177 and parts 390 through 397.

(b) If DOT regulations are not applicable to a shipment of licensed material, the licensee shall conform to the standards and requirements of the DOT specified in paragraph (a) of this section to the same extent as if the shipment or transportation were subject to DOT regulations. A request for modification, waiver, or exemption from those requirements, and any notification referred to in those requirements, must be filed with, or made to, the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555- 0001.

§ 71.6 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0008.

(b) The approved information collection requirements contained in this part appear in §§ 71.5, 71.7, 71.9, 71.12, 71.17, 71.19, 71.20, 71.22, 71.23, 71.31, 71.33, 71.35, 71.37, 71.38, 71.39, 71.41, 71.47, 71.85, 71.87, 71.89, 71.91, 71.93, 71.95, 71.97, 71.101, 71.103, 71.105, 71.107, 71.109, 71.111, 71.113, 71.115, 71.117, 71.119, 71.121, 71.123, 71.125, 71.127, 71.129, 71.131, 71.133, 71.135, 71.137, and Appendix A, Paragraph II.

§ 71.7 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by a licensee, certificate holder, or an applicant for a license or CoC; or information required by statute or by the Commission's regulations, orders, license or CoC conditions, to be maintained by the licensee or certificate holder, must be complete and accurate in all material respects.

(b) Each licensee, certificate holder, or applicant for a license or CoC must notify the Commission of information identified by the licensee, certificate holder, or applicant for a license or CoC as having, for the regulated activity, a significant implication for public health and safety or common defense and security. A licensee, certificate holder, or an applicant for a license or CoC violates this paragraph only if the licensee, certificate holder, or applicant for a license or CoC fails to notify the Commission of information that the licensee, certificate holder, or applicant for a license or CoC has identified as having a significant implication for public health and safety or common defense and security. Notification must be provided to the Administrator of the appropriate Regional Office within 2 working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

§ 71.8 Deliberate misconduct.

[Top of File]

(a) This section applies to any--

(1) Licensee;

(2) Certificate holder;

(3) Quality assurance program approval holder;

(4) Applicant for a license, certificate, or quality assurance program approval;

(5) Contractor (including a supplier or consultant) or subcontractor, to any person identified in paragraph (a)(4) of this section; or

(6) Employees of any person identified in paragraphs (a)(1) through (a)(5) of this section.

(b) A person identified in paragraph (a) of this section who knowingly provides to any entity, listed in paragraphs (a)(1) through (a)(5) of this section, any components, materials, or other goods or services that relate to a licensee's, certificate holder's, quality assurance program approval holder's, or applicant's activities subject to this part may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, certificate holder, quality assurance program approval holder, or any applicant to be in violation of any rule, regulation, or order; or any term, condition or limitation of any license, certificate, or approval issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, a certificate holder, quality assurance program approval holder, an applicant for a license, certificate or quality assurance program approval, or a licensee's, applicant's, certificate holder's, or quality assurance program approval holder's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(c) A person who violates paragraph (b)(1) or (b)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(d) For the purposes of paragraph (b)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee, certificate holder, quality assurance program approval holder, or applicant for a license, certificate, or quality assurance program approval to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license or certificate issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, certificate holder, quality assurance program approval holder, applicant, or the contractor or subcontractor of any of them.

§ 71.9 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, certificate holder, an applicant for a Commission license or a CoC, or a contractor or subcontractor of any of these, against an employee for engaging in certain protected activities, is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act of 1954, as amended, or the Energy Reorganization Act of 1974, as amended.

(1) The protected activities include, but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in paragraph (a) of this section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) of this section or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) of this section; and

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee's assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a), (e), or (f) of this section by a Commission licensee, certificate holder, applicant for a Commission license or a CoC, or a contractor or subcontractor of any of these may be grounds for:

(1) Denial, revocation, or suspension of the license or the CoC;

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant; or

(3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) Each licensee, certificate holder, and applicant for a license or CoC must prominently post the current revision of NRC Form 3, "Notice to Employees," referenced in §19.11(c) of this chapter. This form must be posted at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. The premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license or CoC, and for 30 days following license or CoC termination.

(2) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in Appendix D to part 20 of this chapter or by calling the NRC Publishing Services Branch at 301-415-5877.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in a protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[72 FR 63975, Nov. 14, 2007]

§ 71.10 Public inspection of application.

[Top of File]

Applications for approval of a package design under this part, which are submitted to the Commission, may be made available for public inspection, in accordance with provisions of parts 2 and 9 of this chapter. This includes an application to amend or revise an existing package design, any associated documents and drawings submitted with the application, and any responses to NRC requests for additional information.

§ 71.11 Protection of Safeguards Information

[Top of File]

Each licensee, certificate holder, or applicant for a Certificate of Compliance for a transportation package for transport of irradiated reactor fuel, strategic special nuclear material, a critical mass of special nuclear material, or byproduct material in quantities determined by the Commission through order or regulation to be significant to the public health and safety or the common defense and security, shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

[73 FR 63572, Oct. 24, 2008]

Subpart B--Exemptions

[Top of File]

Source: 69 FR 3786, Jan. 26, 2004, unless otherwise noted.

§ 71.12 Specific exemptions.

On application of any interested person or on its own initiative, the Commission may grant any exemption from the requirements of the regulations in this part that it determines is authorized by law and will not endanger life or property nor the common defense and security.

§ 71.13 Exemption of physicians.

[Top of File]

Any physician licensed by a State to dispense drugs in the practice of medicine is exempt from § 71.5 with respect to transport by the physician of licensed material for use in the practice of medicine. However, any physician operating under this exemption must be licensed

under 10 CFR part 35 or the equivalent Agreement State regulations.

§ 71.14 Exemption for low-level materials.

[Top of File]

(a) A licensee is exempt from all the requirements of this part with respect to shipment or carriage of the following low-level materials:

(1) Natural material and ores containing naturally occurring radionuclides that are not intended to be processed for use of these radionuclides, provided the activity concentration of the material does not exceed 10 times the values specified in Appendix A, Table A-2, of this part.

(2) Materials for which the activity concentration is not greater than the activity concentration values specified in Appendix A, Table A-2 of this part, or for which the consignment activity is not greater than the limit for an exempt consignment found in Appendix A, Table A-2, of this part.

(b) A licensee is exempt from all the requirements of this part, other than §§ 71.5 and 71.88, with respect to shipment or carriage of the following packages, provided the packages do not contain any fissile material, or the material is exempt from classification as fissile material under § 71.15:

(1) A package that contains no more than a Type A quantity of radioactive material;

(2) A package transported within the United States that contains no more than 0.74 TBq (20 Ci) of special form plutonium-244; or

(3) The package contains only LSA or SCO radioactive material, provided--

(i) That the LSA or SCO material has an external radiation dose of less than or equal to 10 mSv/h (1 rem/h), at a distance of 3 m from the unshielded material; or

(ii) That the package contains only LSA-I or SCO-I material.

§ 71.15 Exemption from classification as fissile material.

[Top of File]

Fissile material meeting the requirements of at least one of the paragraphs (a) through (f) of this section are exempt from classification as fissile material and from the fissile material package standards of §§ 71.55 and 71.59, but are subject to all other requirements of this part, except as noted.

(a) Individual package containing 2 grams or less fissile material.

(b) Individual or bulk packaging containing 15 grams or less of fissile material provided the package has at least 200 grams of solid nonfissile material for every gram of fissile material. Lead, beryllium, graphite, and hydrogenous material enriched in deuterium may be present in the package but must not be included in determining the required mass for solid nonfissile material.

(c)(1) Low concentrations of solid fissile material commingled with solid nonfissile material, provided that:

(i) There is at least 2000 grams of solid nonfissile material for every gram of fissile material, and

(ii) There is no more than 180 grams of fissile material distributed within 360 kg of contiguous nonfissile material.

(2) Lead, beryllium, graphite, and hydrogenous material enriched in deuterium may be present in the package but must not be included in determining the required mass of solid nonfissile material.

(d) Uranium enriched in uranium-235 to a maximum of 1 percent by weight, and with total plutonium and uranium-233 content of up to 1 percent of the mass of uranium-235, provided that the mass of any beryllium, graphite, and hydrogenous material enriched in deuterium constitutes less than 5 percent of the uranium mass.

(e) Liquid solutions of uranyl nitrate enriched in uranium-235 to a maximum of 2 percent by mass, with a total plutonium and uranium-233 content not exceeding 0.002 percent of the mass of uranium, and with a minimum nitrogen to uranium atomic ratio (N/U) of 2. The material must be contained in at least a DOT Type A package.

(f) Packages containing, individually, a total plutonium mass of not more than 1000 grams, of which not more than 20 percent by mass may consist of plutonium-239, plutonium-241, or any combination of these radionuclides.

§ 71.16 [Reserved]

[Top of File]

Subpart C--General Licenses

[Top of File]

Source: 69 FR 3792, Jan. 26, 2004, unless otherwise noted.

§ 71.17 General license: NRC-approved package.

(a) A general license is issued to any licensee of the Commission to transport, or to deliver to a carrier for transport, licensed material in a package for which a license, certificate of compliance (CoC), or other approval has been issued by the NRC.

(b) This general license applies only to a licensee who has a quality assurance program approved by the Commission as satisfying the provisions of subpart H of this part.

(c) This general license applies only to a licensee who--

(1) Has a copy of the CoC, or other approval of the package, and has the drawings and other documents referenced in the approval relating to the use and maintenance of the packaging and to the actions to be taken before shipment;

(2) Complies with the terms and conditions of the license, certificate, or other approval, as applicable, and the applicable requirements of subparts A, G, and H of this part; and

(3) Before the licensee's first use of the package, submits in writing to: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, using an appropriate method listed in § 71.1(a), the licensee's name and license number and the package identification number specified in the package approval.

(d) This general license applies only when the package approval authorizes use of the package under this general license.

(e) For a Type B or fissile material package, the design of which was approved by NRC before April 1, 1996, the general license is subject to the additional restrictions of § 71.19.

§ 71.18 [Reserved]

[Top of File]

§ 71.19 Previously approved package.

[Top of File]

(a) A Type B package previously approved by NRC, but not designated as B(U), B(M), B(U)F, or B(M)F in the identification number of the NRC CoC, or Type AF packages approved by the NRC prior to September 6, 1983, may be used under the general license of § 71.17 with the following additional conditions:

(1) Fabrication of the packaging was satisfactorily completed by August 31, 1986, as demonstrated by application of its model number in accordance with § 71.85(c);

(2) A serial number that uniquely identifies each packaging which conforms to the approved design is assigned to, and legibly and durably marked on, the outside of each packaging; and

(3) Paragraph (a) of this section expires October 1, 2008.

(b) A Type B(U) package, a Type B(M) package, or a fissile material package, previously approved by the NRC but without the designation "- 85" in the identification number of the NRC CoC, may be used under the general license of § 71.17 with the following additional conditions:

(1) Fabrication of the package is satisfactorily completed by April 1, 1999, as demonstrated by application of its model number in accordance with § 71.85(c);

(2) A package used for a shipment to a location outside the United States is subject to multilateral approval as defined in DOT regulations at 49 CFR 173.403; and

(3) A serial number which uniquely identifies each packaging which conforms to the approved design is assigned to and legibly and durably marked on the outside of each packaging.

(c) A Type B(U) package, a Type B(M) package, or a fissile material package previously approved by the NRC with the designation "-85" in the identification number of the NRC CoC, may be used under the general license of § 71.17 with the following additional conditions:

(1) Fabrication of the package must be satisfactorily completed by December 31, 2006, as demonstrated by application of its model number in accordance with § 71.85(c); and

(2) After December 31, 2003, a package used for a shipment to a location outside the United States is subject to multilateral approval as defined in DOT regulations at 49 CFR 173.403.

(d) NRC will approve modifications to the design and authorized contents of a Type B package, or a fissile material package, previously approved by NRC, provided--

(1) The modifications of a Type B package are not significant with respect to the design, operating characteristics, or safe performance of the containment system, when the package is subjected to the tests specified in §§ 71.71 and 71.73;

(2) The modifications of a fissile material package are not significant, with respect to the prevention of criticality, when the package is subjected to the tests specified in §§ 71.71 and 71.73; and

(3) The modifications to the package satisfy the requirements of this part.

(e) NRC will revise the package identification number to designate previously approved package designs as B, BF, AF, B(U), B(M), B(U)F, B(M)F, B(U)-85, B(U)F-85, B(M)-85, B(M)F-85, or AF-85 as appropriate, and with the identification number suffix "-96" after receipt of an application demonstrating that the design meets the requirements of this part.

§ 71.20 General license: DOT specification container.

[Top of File]

(a) A general license is issued to any licensee of the Commission to transport, or to deliver to a carrier for transport, licensed material in a specification container for fissile material or for a Type B quantity of radioactive material as specified in DOT regulations at 49 CFR parts 173 and 178.

(b) This general license applies only to a licensee who has a quality assurance program approved by the Commission as satisfying the provisions of subpart H of this part.

(c) This general license applies only to a licensee who--

(1) Has a copy of the specification; and

(2) Complies with the terms and conditions of the specification and the applicable requirements of subparts A, G, and H of this part.

(d) This general license is subject to the limitation that the specification container may not be used for a shipment to a location outside the United States, except by multilateral approval, as defined in DOT regulations at 49 CFR 173.403.

(e) This section expires October 1, 2008.

§ 71.21 General license: Use of foreign approved package.

[Top of File]

(a) A general license is issued to any licensee of the Commission to transport, or to deliver to a carrier for transport, licensed material in a package, the design of which has been approved in a foreign national competent authority certificate, that has been revalidated by DOT as meeting the applicable requirements of 49 CFR 171.12.

(b) Except as otherwise provided in this section, the general license applies only to a licensee who has a quality assurance program approved by the Commission as satisfying the applicable provisions of subpart H of this part.

(c) This general license applies only to shipments made to or from locations outside the United States.

(d) This general license applies only to a licensee who--

(1) Has a copy of the applicable certificate, the revalidation, and the drawings and other documents referenced in the certificate, relating to the use and maintenance of the packaging and to the actions to be taken before shipment; and

(2) Complies with the terms and conditions of the certificate and revalidation, and with the applicable requirements of subparts A, G, and H of this part. With respect to the quality assurance provisions of subpart H of this part, the licensee is exempt from design, construction, and fabrication considerations.

§ 71.22 General license: Fissile material.

[Top of File]

(a) A general license is issued to any licensee of the Commission to transport fissile material, or to deliver fissile material to a carrier for transport, if the material is shipped in accordance with this section. The fissile material need not be contained in a package which meets the standards of subparts E and F of this part; however, the material must be contained in a Type A package. The Type A package must also meet the DOT requirements of 49 CFR 173.417(a).

(b) The general license applies only to a licensee who has a quality assurance program approved by the Commission as satisfying the provisions of subpart H of this part.

(c) The general license applies only when a package's contents:

(1) Contain no more than a Type A quantity of radioactive material; and

(2) Contain less than 500 total grams of beryllium, graphite, or hydrogenous material enriched in deuterium.

(d) The general license applies only to packages containing fissile material that are labeled with a CSI which:

(1) Has been determined in accordance with paragraph (e) of this section;

(2) Has a value less than or equal to 10; and

(3) For a shipment of multiple packages containing fissile material, the sum of the CSIs must be less than or equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).

(e)(1) The value for the CSI must be greater than or equal to the number calculated by the following equation:

Equation for CSI Equal to 10

(2) The calculated CSI must be rounded up to the first decimal place;

(3) The values of X, Y, and Z used in the CSI equation must be taken from Tables 71-1 or 71-2, as appropriate;

(4) If Table 71-2 is used to obtain the value of X, then the values for the terms in the equation for uranium-233 and plutonium must be assumed to be zero; and

(5) Table 71-1 values for X, Y, and Z must be used to determine the CSI if:

(i) Uranium-233 is present in the package;

(ii) The mass of plutonium exceeds 1 percent of the mass of uranium-235;

(iii) The uranium is of unknown uranium-235 enrichment or greater than 24 weight percent enrichment; or

(iv) Substances having a moderating effectiveness (i.e., an average hydrogen density greater than H_2O) (e.g., certain hydrocarbon oils or plastics) are present in any form, except as polyethylene used for packing or wrapping.

Table 71-1. Mass Limits for General License Packages Containing Mixed Quantities of Fissile Material or Uranium-235 of Unknown Enrichment per § 71.22(e)

Fissile material	Fissile material mass mixed with moderating substances having an average hydrogen density less than or equal to H_2O (grams)	Fissile material mass mixed with moderating substances having an average hydrogen density greater than H_2O[a] (grams)
^{235}U (X)	60	38
^{233}U (Y)	43	27
^{239}Pu or ^{241}Pu (Z)	37	24

[a] When mixtures of moderating substances are present, the lower mass limits shall be used if more than 15 percent of the moderating substance has an average hydrogen density greater than H_2O.

Table 71-2. Mass Limits for General License Packages Containing Uranium-235 of Known Enrichment per § 71.22(e)

Uranium enrichment in weight percent of ^{235}U not exceeding	Fissile material mass of ^{235}U (X) (grams)
24	60
20	63
15	67
11	72
10	76
9.5	78
9	81
8.5	82
8	85
7.5	88
7	90
6.5	93
6	97
5.5	102
5	108
4.5	114
4	120
3.5	132
3	150
2.5	180
2	246
1.5	408
1.35	480
1	1,020
0.92	1,800

[69 FR 3786, Jan. 26, 2004; 69 FR 58038, Sept. 29, 2004]

§ 71.23 General license: Plutonium-beryllium special form material.

[Top of File]

(a) A general license is issued to any licensee of the Commission to transport fissile material in the form of plutonium-beryllium (Pu-Be) special form sealed sources, or to deliver Pu-Be sealed sources to a carrier for transport, if the material is shipped in accordance with this section. This material need not be contained in a package which meets the standards of subparts E and F of this part; however, the material must be contained in a Type A package. The Type A package must also meet the DOT requirements of 49 CFR 173.417(a).

(b) The general license applies only to a licensee who has a quality assurance program approved by the Commission as satisfying the provisions of subpart H of this part.

(c) The general license applies only when a package's contents:

(1) Contain no more than a Type A quantity of radioactive material; and

(2) Contain less than 1000 g of plutonium, provided that: plutonium-239, plutonium-241, or any combination of these radionuclides, constitutes less than 240 g of the total quantity of plutonium in the package.

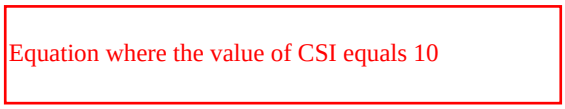
(d) The general license applies only to packages labeled with a CSI which:

(1) Has been determined in accordance with paragraph (e) of this section;

(2) Has a value less than or equal to 100; and

(3) For a shipment of multiple packages containing Pu-Be sealed sources, the sum of the CSIs must be less than or equal to 50 (for shipment on a nonexclusive use conveyance) and less than or equal to 100 (for shipment on an exclusive use conveyance).

(e)(1) The value for the CSI must be greater than or equal to the number calculated by the following equation:



(2) The calculated CSI must be rounded up to the first decimal place.

§ 71.24 [Reserved]

[Top of File]

§ 71.25 [Reserved]

[Top of File]

Subpart D--Application for Package Approval

[Top of File]

§ 71.31 Contents of application.

(a) An application for an approval under this part must include, for each proposed packaging design, the following information:

(1) A package description as required by § 71.33;

(2) A package evaluation as required by § 71.35; and

(3) A quality assurance program description, as required by § 71.37, or a reference to a previously approved quality assurance program.

(b) Except as provided in § 71.13, an application for modification of a package design, whether for modification of the packaging or authorized contents, must include sufficient information to demonstrate that the proposed design satisfies the package standards in effect at the time the application is filed.

(c) The applicant shall identify any established codes and standards proposed for use in package design, fabrication, assembly, testing, maintenance, and use. In the absence of any codes and standards, the applicant shall describe and justify the basis and rationale used to formulate the package quality assurance program.

§ 71.33 Package description.

[Top of File]

The application must include a description of the proposed package in sufficient detail to identify the package accurately and provide a sufficient basis for evaluation of the package. The description must include --

(a) With respect to the packaging --

(1) Classification as Type B(U), Type B(M), or fissile material packaging;

(2) Gross weight;

(3) Model number;

(4) Identification of the containment system;

(5) Specific materials of construction, weights, dimensions, and fabrication methods of --

(i) Receptacles;

(ii) Materials specifically used as nonfissile neutron absorbers or moderators;

(iii) Internal and external structures supporting or protecting receptacles;

(iv) Valves, sampling ports, lifting devices, and tie-down devices; and

(v) Structural and mechanical means for the transfer and dissipation of heat; and

(6) Identification and volumes of any receptacles containing coolant.

(b) With respect to the contents of the package --

(1) Identification and maximum radioactivity of radioactive constituents;

(2) Identification and maximum quantities of fissile constituents;

(3) Chemical and physical form;

(4) Extent of reflection, the amount and identity of nonfissile materials used as neutron absorbers or moderators, and the atomic ratio of moderator to fissile constituents;

(5) Maximum normal operating pressure;

(6) Maximum weight;

(7) Maximum amount of decay heat; and

(8) Identification and volumes of any coolants.

§ 71.35 Package evaluation.

[Top of File]

The application must include the following:

(a) A demonstration that the package satisfies the standards specified in subparts E and F of this part;

(b) For a fissile material package, the allowable number of packages that may be transported in the same vehicle in accordance with § 71.59; and

(c) For a fissile material shipment, any proposed special controls and precautions for transport, loading, unloading, and handling and any proposed special controls in case of an accident or delay.

§ 71.37 Quality assurance.

[Top of File]

(a) The applicant shall describe the quality assurance program (see Subpart H of this part) for the design, fabrication, assembly, testing, maintenance, repair, modification, and use of the proposed package.

(b) The applicant shall identify any specific provisions of the quality assurance program that are applicable to the particular package design under consideration, including a description of the leak testing procedures.

§ 71.38 Renewal of a certificate of compliance or quality assurance program approval.

[Top of File]

(a) Except as provided in paragraph (b) of this section, each Certificate of Compliance or Quality Assurance Program Approval expires at the end of the day, in the month and year stated in the approval.

(b) In any case in which a person, not less than 30 days before the expiration of an existing Certificate of Compliance or Quality Assurance Program Approval issued pursuant to the part, has filed an application in proper form for renewal of either of those approvals, the existing Certificate of Compliance or Quality Assurance Program Approval for which the renewal application was filed shall not be deemed to have expired until final action on the application for renewal has been taken by the Commission.

(c) In applying for renewal of an existing Certificate of Compliance or Quality Assurance Program Approval, an applicant may be required to submit a consolidated application that incorporates all changes to its program that, are incorporated by reference in the existing approval or certificate, into as few referenceable documents as reasonably achievable.

§ 71.39 Requirement for additional information.

[Top of File]

The Commission may at any time require additional information in order to enable it to determine whether a license, certificate of compliance, or other approval should be granted, renewed, denied, modified, suspended, or revoked.

Subpart E--Package Approval Standards

[Top of File]

§ 71.41 Demonstration of compliance.

(a) The effects on a package of the tests specified in § 71.71 ("Normal conditions of transport"), and the tests specified in § 71.73 ("Hypothetical accident conditions"), and § 71.61 ("Special requirements for Type B packages containing more than 10^5 A_2"), must be evaluated by subjecting a specimen or scale model to a specific test, or by another method of demonstration acceptable to the Commission, as appropriate for the particular feature being considered.

(b) Taking into account the type of vehicle, the method of securing or attaching the package, and the controls to be exercised by the shipper, the Commission may permit the shipment to be evaluated together with the transporting vehicle.

(c) Environmental and test conditions different from those specified in §§ 71.71 and 71.73 may be approved by the Commission if the controls proposed to be exercised by the shipper are demonstrated to be adequate to provide equivalent safety of the shipment.

(d) Packages for which compliance with the other provisions of these regulations is impracticable shall not be transported except under special package authorization. Provided the applicant demonstrates that compliance with the other provisions of the regulations is impracticable and that the requisite standards of safety established by these regulations have been demonstrated through means alternative to the other provisions, a special package authorization may be approved for one-time shipments. The applicant shall demonstrate that the overall level of safety in transport for these shipments is at least equivalent to that which would be provided if all the applicable requirements had been met.

[60 FR 50264, Sept. 28, 1995 as amended at 69 FR 3794, Jan. 26, 2004]

§ 71.43 General standards for all packages.

[Top of File]

(a) The smallest overall dimension of a package may not be less than 10 cm (4 in).

(b) The outside of a package must incorporate a feature, such as a seal, that is not readily breakable and that, while intact, would be evidence that the package has not been opened by unauthorized persons.

(c) Each package must include a containment system securely closed by a positive fastening device that cannot be opened unintentionally or by a pressure that may arise within the package.

(d) A package must be made of materials and construction that assure that there will be no significant chemical, galvanic, or other reaction among the packaging components, among package contents, or between the packaging components and the package contents, including possible reaction resulting from inleakage of water, to the maximum credible extent. Account must be taken of the behavior of materials under irradiation.

(e) A package valve or other device, the failure of which would allow radioactive contents to escape, must be protected against unauthorized operation and, except for a pressure relief device, must be provided with an enclosure to retain any leakage.

(f) A package must be designed, constructed, and prepared for shipment so that under the tests specified in § 71.71 ("Normal conditions of transport") there would be no loss or dispersal of radioactive contents, no significant increase in external surface radiation levels, and no substantial reduction in the effectiveness of the packaging.

(g) A package must be designed, constructed, and prepared for transport so that in still air at 38°C (100°F) and in the shade, no accessible surface of a package would have a temperature exceeding 50°C (122°F) in a nonexclusive use shipment, or 85°C (185°F) in an exclusive use shipment.

(h) A package may not incorporate a feature intended to allow continuous venting during transport.

§ 71.45 Lifting and tie-down standards for all packages.

[Top of File]

(a) Any lifting attachment that is a structural part of a package must be designed with a minimum safety factor of three against yielding when used to lift the package in the intended manner, and it must be designed so that failure of any lifting device under excessive load would not impair the ability of the package to meet other requirements of this subpart. Any other structural part of the package that could be used to lift the package must be capable of being rendered inoperable for lifting the package during transport, or must be designed with strength equivalent to that required for lifting attachments.

(b) Tie-down devices:

(1) If there is a system of tie-down devices that is a structural part of the package, the system must be capable of withstanding, without generating stress in any material of the package in excess of its yield strength, a static force applied to the center of gravity of the package having a vertical component of 2 times the weight of the package with its contents, a horizontal component along the direction in which the vehicle travels of 10 times the weight of the package with its contents, and a horizontal component in the transverse direction of 5 times the weight of the package with its contents.

(2) Any other structural part of the package that could be used to tie down the package must be capable of being rendered inoperable for tying down the package during transport, or must be designed with strength equivalent to that required for tie-down devices.

(3) Each tie-down device that is a structural part of a package must be designed so that failure of the device under excessive load would not impair the ability of the package to meet other requirements of this part.

§ 71.47 External radiation standards for all packages.

[Top of File]

(a) Except as provided in paragraph (b) of this section, each package of radioactive materials offered for transportation must be designed and prepared for shipment so that under conditions normally incident to transportation the radiation level does not exceed 2 mSv/h (200 mrem/h) at any point on the external surface of the package, and the transport index does not exceed 10.

(b) A package that exceeds the radiation level limits specified in paragraph (a) of this section must be transported by exclusive use shipment only, and the radiation levels for such shipment must not exceed the following during transportation:

(1) 2 mSv/h (200 mrem/h) on the external surface of the package, unless the following conditions are met, in which case the limit is 10 mSv/h (1000 mrem/h):

(i) The shipment is made in a closed transport vehicle;

(ii) The package is secured within the vehicle so that its position remains fixed during transportation; and

(iii) There are no loading or unloading operations between the beginning and end of the transportation;

(2) 2 mSv/h (200 mrem/h) at any point on the outer surface of the vehicle, including the top and underside of the vehicle; or in the case of a flat-bed style vehicle, at any point on the vertical planes projected from the outer edges of the vehicle, on the upper surface of the load or enclosure, if used, and on the lower external surface of the vehicle; and

(3) 0.1 mSv/h (10 mrem/h) at any point 2 meters (80 in) from the outer lateral surfaces of the vehicle (excluding the top and underside of the vehicle); or in the case of a flat-bed style vehicle, at any point 2 meters (6.6 feet) from the vertical planes projected by the outer edges of the vehicle (excluding the top and underside of the vehicle); and

(4) 0.02 mSv/h (2 mrem/h) in any normally occupied space, except that this provision does not apply to private carriers, if exposed personnel under their control wear radiation dosimetry devices in conformance with 10 CFR 20.1502.

(c) For shipments made under the provisions of paragraph (b) of this section, the shipper shall provide specific written instructions to the carrier for maintenance of the exclusive use shipment controls. The instructions must be included with the shipping paper information.

(d) The written instructions required for exclusive use shipments must be sufficient so that, when followed, they will cause the carrier to avoid actions that will unnecessarily delay delivery or unnecessarily result in increased radiation levels or radiation exposures to transport workers or members of the general public.

§ 71.51 Additional requirements for Type B packages.

[Top of File]

(a) A Type B package, in addition to satisfying the requirements of §§ 71.41 through 71.47, must be designed, constructed, and prepared

for shipment so that under the tests specified in:

(1) Section 71.71 ("Normal conditions of transport"), there would be no loss or dispersal of radioactive contents--as demonstrated to a sensitivity of 10^{-6} A_2 per hour, no significant increase in external surface radiation levels, and no substantial reduction in the effectiveness of the packaging; and

(2) Section 71.73 ("Hypothetical accident conditions"), there would be no escape of krypton-85 exceeding 10 A_2 in 1 week, no escape of other radioactive material exceeding a total amount A_2 in 1 week, and no external radiation dose rate exceeding 10 mSv/h (1 rem/h) at 1 m (40 in) from the external surface of the package.

(b) Where mixtures of different radionuclides are present, the provisions of appendix A, paragraph IV of this part shall apply, except that for Krypton-85, an effective A_2 value equal to 10 A_2 may be used.

(c) Compliance with the permitted activity release limits of paragraph (a) of this section may not depend on filters or on a mechanical cooling system.

(d) For packages which contain radioactive contents with activity greater than 10^5 A_2, the requirements of § 71.61 must be met.

[60 FR 50264, Sept. 28, 1995 as amended at 69 FR 3794, Jan. 26, 2004]

§ 71.53 [Reserved]

[Top of File]

[62 FR 5913, Feb. 10, 1997; 69 FR 3794, January 26, 2004]

§ 71.55 General requirements for fissile material packages.

[Top of File]

(a) A package used for the shipment of fissile material must be designed and constructed in accordance with §§ 71.41 through 71.47. When required by the total amount of radioactive material, a package used for the shipment of fissile material must also be designed and constructed in accordance with § 71.51.

(b) Except as provided in paragraph (c) or (g) of this section, a package used for the shipment of fissile material must be so designed and constructed and its contents so limited that it would be subcritical if water were to leak into the containment system, or liquid contents were to leak out of the containment system so that, under the following conditions, maximum reactivity of the fissile material would be attained:

(1) The most reactive credible configuration consistent with the chemical and physical form of the material;

(2) Moderation by water to the most reactive credible extent; and

(3) Close full reflection of the containment system by water on all sides, or such greater reflection of the containment system as may additionally be provided by the surrounding material of the packaging.

(c) The Commission may approve exceptions to the requirements of paragraph (b) of this section if the package incorporates special design features that ensure that no single packaging error would permit leakage, and if appropriate measures are taken before each shipment to ensure that the containment system does not leak.

(d) A package used for the shipment of fissile material must be so designed and constructed and its contents so limited that under the tests specified in § 71.71 ("Normal conditions of transport") --

(1) The contents would be subcritical;

(2) The geometric form of the package contents would not be substantially altered;

(3) There would be no leakage of water into the containment system unless, in the evaluation of undamaged packages under § 71.59(a)(1), it has been assumed that moderation is present to such an extent as to cause maximum reactivity consistent with the chemical and physical form of the material; and

(4) There will be no substantial reduction in the effectiveness of the packaging, including:

(i) No more than 5 percent reduction in the total effective volume of the packaging on which nuclear safety is assessed;

(ii) No more than 5 percent reduction in the effective spacing between the fissile contents and the outer surface of the packaging; and

(iii) No occurrence of an aperture in the outer surface of the packaging large enough to permit the entry of a 10 cm (4 in) cube.

(e) A package used for the shipment of fissile material must be so designed and constructed and its contents so limited that under the tests specified in § 71.73 ("Hypothetical accident conditions"), the package would be subcritical. For this determination, it must be assumed that:

(1) The fissile material is in the most reactive credible configuration consistent with the damaged condition of the package and the chemical and physical form of the contents;

(2) Water moderation occurs to the most reactive credible extent consistent with the damaged condition of the package and the chemical and physical form of the contents; and

(3) There is full reflection by water on all sides, as close as is consistent with the damaged condition of the package.

(f) For fissile material package designs to be transported by air:

(1) The package must be designed and constructed, and its contents limited so that it would be subcritical, assuming reflection by 20 cm (7.9 in) of water but no water inleakage, when subjected to sequential application of:

(i) The free drop test in § 71.73(c)(1);

(ii) The crush test in § 71.73(c)(2);

(iii) A puncture test, for packages of 250 kg or more, consisting of a free drop of the specimen through a distance of 3 m (120 in) in a position for which maximum damage is expected at the conclusion of the test sequence, onto the upper end of a solid, vertical, cylindrical, mild steel probe mounted on an essentially unyielding, horizontal surface. The probe must be 20 cm (7.9 in) in diameter, with the striking end forming the frustum of a right circular cone with the dimensions of 30 cm height, 2.5 cm top diameter, and a top edge rounded to a radius of not more than 6 mm (0.25 in). For packages less than 250 kg, the puncture test must be the same, except that a 250 kg probe must be dropped onto the specimen which must be placed on the surface; and

(iv) The thermal test in § 71.73(c)(4), except that the duration of the test must be 60 minutes.

(2) The package must be designed and constructed, and its contents limited, so that it would be subcritical, assuming reflection by 20 cm (7.9 in) of water but no water inleakage, when subjected to an impact on an unyielding surface at a velocity of 90 m/s normal to the surface, at such orientation so as to result in maximum damage. A separate, undamaged specimen can be used for this evaluation.

(3) Allowance may not be made for the special design features in paragraph (c) of this section, unless water leakage into or out of void spaces is prevented following application of the tests in paragraphs (f)(1) and (f)(2) of this section, and subsequent application of the immersion test in § 71.73(c)(5).

(g) Packages containing uranium hexafluoride only are excepted from the requirements of paragraph (b) of this section provided that:

(1) Following the tests specified in § 71.73 ("Hypothetical accident conditions"), there is no physical contact between the valve body and any other component of the packaging, other than at its original point of attachment, and the valve remains leak tight;

(2) There is an adequate quality control in the manufacture, maintenance, and repair of packagings;

(3) Each package is tested to demonstrate closure before each shipment; and

(4) The uranium is enriched to not more than 5 weight percent uranium-235.

[60 FR 50264, Sept. 28, 1995; 61 FR 28724, June 6, 1996; 69 FR 3794, Jan. 26, 2004]

§ 71.57 [Reserved]

[Top of File]

§ 71.59 Standards for arrays of fissile material packages.

[Top of File]

(a) A fissile material package must be controlled by either the shipper or the carrier during transport to assure that an array of such packages remains subcritical. To enable this control, the designer of a fissile material package shall derive a number "N" based on all the following conditions being satisfied, assuming packages are stacked together in any arrangement and with close full reflection on all sides of the stack by water:

(1) Five times "N" undamaged packages with nothing between the packages would be subcritical;

(2) Two times "N" damaged packages, if each package were subjected to the tests specified in § 71.73 ("Hypothetical accident conditions") would be subcritical with optimum interspersed hydrogenous moderation; and

(3) The value of "N" cannot be less than 0.5.

(b) The CSI must be determined by dividing the number 50 by the value of "N" derived using the procedures specified in paragraph (a) of this section. The value of the CSI may be zero provided that an unlimited number of packages are subcritical, such that the value of "N" is effectively equal to infinity under the procedures specified in paragraph (a) of this section. Any CSI greater than zero must be rounded up to the first decimal place.

(c) For a fissile material package which is assigned a CSI value--

(1) Less than or equal to 50, that package may be shipped by a carrier in a nonexclusive use conveyance, provided the sum of the CSIs is limited to less than or equal to 50.

(2) Less than or equal to 50, that package may be shipped by a carrier in an exclusive use conveyance, provided the sum of the CSIs is limited to less than or equal to 100.

(3) Greater than 50, that package must be shipped by a carrier in an exclusive use conveyance, provided the sum of the CSIs is limited to less than or equal to 100.

[69 FR 3795, Jan. 26, 2004]

§ 71.61 Special requirements for Type B packages containing more than 10^5A_2.

[Top of File]

A Type B package containing more than 10^5A_2 must be designed so that its undamaged containment system can withstand an external water pressure of 2 MPa (290 psi) for a period of not less than 1 hour without collapse, buckling, or inleakage of water.

[69 FR 3795, Jan. 26, 2004]

§ 71.63 Special requirement for plutonium shipments.

[Top of File]

Shipments containing plutonium must be made with the contents in solid form, if the contents contain greater than 0.74 TBq (20 Ci) of plutonium.

[69 FR 3795, Jan. 26, 2004]

§ 71.64 Special requirements for plutonium air shipments.

[Top of File]

(a) A package for the shipment of plutonium by air subject to § 71.88(a)(4), in addition to satisfying the requirements of §§ 71.41 through 71.63, as applicable, must be designed, constructed, and prepared for shipment so that under the tests specified in --

(1) Section 71.74 ("Accident conditions for air transport of plutonium") --

(i) The containment vessel would not be ruptured in its post-tested condition, and the package must provide a sufficient degree of containment to restrict accumulated loss of plutonium contents to not more than an A_2 quantity in a period of 1 week;

(ii) The external radiation level would not exceed 10 mSv/h (1 rem/h) at a distance of 1 m (40 in) from the surface of the package in its post-tested condition in air; and

(iii) A single package and an array of packages are demonstrated to be subcritical in accordance with this part, except that the damaged condition of the package must be considered to be that which results from the plutonium accident tests in § 71.74, rather than the hypothetical accident tests in § 71.73; and

(2) Section 71.74(c), there would be no detectable leakage of water into the containment vessel of the package.

(b) With respect to the package requirements of paragraph (a), there must be a demonstration or analytical assessment showing that --

(1) The results of the physical testing for package qualification would not be adversely affected to a significant extent by --

(i) The presence, during the tests, of the actual contents that will be transported in the package; and

(ii) Ambient water temperatures ranging from 0.6°C (+33°F) to 38°C (+100°F) for those qualification tests involving water, and ambient atmospheric temperatures ranging from -40°C (-40°F) to +54°C (+130°F) for the other qualification tests.

(2) The ability of the package to meet the acceptance standards prescribed for the accident condition sequential tests would not be adversely affected if one or more tests in the sequence were deleted.

§ 71.65 Additional requirements.

[Top of File]

The Commission may, by rule, regulation, or order, impose requirements on any licensee, in addition to those established in this part, as it deems necessary or appropriate to protect public health or to minimize danger to life or property.

Subpart F--Package, Special Form, and LSA-III Tests[2]

[Top of File]

§ 71.71 Normal conditions of transport.

(a) *Evaluation*. Evaluation of each package design under normal conditions of transport must include a determination of the effect on that design of the conditions and tests specified in this section. Separate specimens may be used for the free drop test, the compression test, and the penetration test, if each specimen is subjected to the water spray test before being subjected to any of the other tests.

(b) *Initial conditions*. With respect to the initial conditions for the tests in this section, the demonstration of compliance with the requirements of this part must be based on the ambient temperature preceding and following the tests remaining constant at that value between -29°C (-20°F) and +38°C (+100°F) which is most unfavorable for the feature under consideration. The initial internal pressure within the containment system must be considered to be the maximum normal operating pressure, unless a lower internal pressure consistent with the ambient temperature considered to precede and follow the tests is more unfavorable.

(c) *Conditions and tests*.

(1) *Heat.* An ambient temperature of 38°C (100°F) in still air, and insolation according to the following table:

INSOLATION DATA

Form and location of surface		Total insolation for a 12-hour period (g cal/cm^2)
Flat surfaces transported horizontally;		
	Base	None
	Other surfaces	800
Flat surfaces not transported horizontally		200
Curved surfaces		400

(2) *Cold*. An ambient temperature of -40°C (-40°F) in still air and shade.

(3) *Reduced external pressure*. An external pressure of 25 kPa (3.5 lbf/in^2) absolute.

(4) *Increased external pressure*. An external pressure of 140 kPa (20 lbf/in^2) absolute.

(5) *Vibration*. Vibration normally incident to transport.

(6) *Water spray*. A water spray that simulates exposure to rainfall of approximately 5 cm/h (2 in/h) for at least 1 hour.

(7) *Free drop*. Between 1.5 and 2.5 hours after the conclusion of the water spray test, a free drop through the distance specified below onto a flat, essentially unyielding, horizontal surface, striking the surface in a position for which maximum damage is expected.

Criteria for Free Drop Test (Weight/Distance)

Package weight		Free drop distance	
Kilograms	(Pounds)	Meters	(Feet)
Less than 5,000	(Less than 11,000)	1.2	(4)
5,000 to 10,000	(11,000 to 22,000)	0.9	(3)
10,000 to 15,000	(22,000 to 33,100)	0.6	(2)
More than 15,000	(More than 33,100)	0.3	(1)

(8) *Corner drop*. A free drop onto each corner of the package in succession, or in the case of a cylindrical package onto each quarter of each rim, from a height of 0.3 m (1 ft) onto a flat, essentially unyielding, horizontal surface. This test applies only to fiberboard, wood, or fissile material rectangular packages not exceeding 50 kg (110 lbs) and fiberboard, wood, or fissile material cylindrical packages not exceeding 100 kg (220 lbs).

(9) *Compression*. For packages weighing up to 5000 kg (11,000 lbs), the package must be subjected, for a period of 24 hours, to a compressive load applied uniformly to the top and bottom of the package in the position in which the package would normally be transported. The compressive load must be the greater of the following:

(i) The equivalent of 5 times the weight of the package; or

(ii) The equivalent of 13 kPa (2 lbf/in^2) multiplied by the vertically projected area of the package.

(10) *Penetration*. Impact of the hemispherical end of a vertical steel cylinder of 3.2 cm (1.25 in) diameter and 6 kg (13 lbs) mass, dropped from a height of 1 m (40 in) onto the exposed surface of the package that is expected to be most vulnerable to puncture. The long axis of the cylinder must be perpendicular to the package surface.

[2] The package standards related to the tests in this subpart are contained in subpart E of this part.

§ 71.73 Hypothetical accident conditions.

[Top of File]

(a) *Test procedures*. Evaluation for hypothetical accident conditions is to be based on sequential application of the tests specified in this section, in the order indicated, to determine their cumulative effect on a package or array of packages. An undamaged specimen may be used for the water immersion tests specified in paragraph (c)(6) of this section.

(b) *Test conditions*. With respect to the initial conditions for the tests, except for the water immersion tests, to demonstrate compliance with the requirements of this part during testing, the ambient air temperature before and after the tests must remain constant at that value between -29°C (-20°F) and +38°C (+100°F) which is most unfavorable for the feature under consideration. The initial internal pressure within the containment system must be the maximum normal operating pressure, unless a lower internal pressure, consistent with the ambient temperature assumed to precede and follow the tests, is more unfavorable.

(c) *Tests*. Tests for hypothetical accident conditions must be conducted as follows:

(1) *Free Drop*. A free drop of the specimen through a distance of 9 m (30 ft) onto a flat, essentially unyielding, horizontal surface, striking the surface in a position for which maximum damage is expected.

(2) *Crush*. Subjection of the specimen to a dynamic crush test by positioning the specimen on a flat, essentially unyielding horizontal surface so as to suffer maximum damage by the drop of a 500-kg (1100-lb) mass from 9 m (30 ft) onto the specimen. The mass must consist of a solid mild steel plate 1 m (40 in) by 1 m (40 in) and must fall in a horizontal attitude. The crush test is required only when the specimen has a mass not greater than 500 kg (1100 lb), an overall density not greater than 1000 kg/m^3 (62.4 lb/ft^3) based on external dimension, and radioactive contents greater than 1000 A_2 not as special form radioactive material. For packages containing fissile material, the radioactive contents greater than 1000 A_2 criterion does not apply.

(3) *Puncture*. A free drop of the specimen through a distance of 1 m (40 in) in a position for which maximum damage is expected, onto the upper end of a solid, vertical, cylindrical, mild steel bar mounted on an essentially unyielding, horizontal surface. The bar must be 15 cm (6 in) in diameter, with the top horizontal and its edge rounded to a radius of not more than 6 mm (0.25 in), and of a length as to cause maximum damage to the package, but not less than 20 cm (8 in) long. The long axis of the bar must be vertical.

(4) *Thermal*. Exposure of the specimen fully engulfed, except for a simple support system, in a hydrocarbon fuel/air fire of sufficient extent, and in sufficiently quiescent ambient conditions, to provide an average emissivity coefficient of at least 0.9, with an average flame temperature of at least 800°C (1475°F) for a period of 30 minutes, or any other thermal test that provides the equivalent total heat input to the package and which provides a time averaged environmental temperature of 800°C. The fuel source must extend horizontally at least 1 m (40 in), but may not extend more than 3 m (10 ft), beyond any external surface of the specimen, and the specimen must be positioned 1 m (40 in) above the surface of the fuel source. For purposes of calculation, the surface absorptivity coefficient must be either that value which the package may be expected to possess if exposed to the fire specified or 0.8, whichever is greater; and the convective coefficient must be that value which may be demonstrated to exist if the package were exposed to the fire specified. Artificial cooling may not be applied after cessation of external heat input, and any combustion of materials of construction, must be allowed to proceed until it

terminates naturally.

(5) *Immersion--fissile material*. For fissile material subject to § 71.55, in those cases where water inleakage has not been assumed for criticality analysis, immersion under a head of water of at least 0.9 m (3 ft) in the attitude for which maximum leakage is expected.

(6) *Immersion--all packages*. A separate, undamaged specimen must be subjected to water pressure equivalent to immersion under a head of water of at least 15 m (50 ft). For test purposes, an external pressure of water of 150 kPa (21.7 lbf/in^2) gauge is considered to meet these conditions.

[69 FR 3795, Jan. 26, 2004]

§ 71.74 Accident conditions for air transport of plutonium.

[Top of File]

(a) *Test conditions--Sequence of tests*. A package must be physically tested to the following conditions in the order indicated to determine their cumulative effect.

(1) Impact at a velocity of not less than 129 m/sec (422 ft/sec) at a right angle onto a flat, essentially unyielding, horizontal surface, in the orientation (e.g., side, end, corner) expected to result in maximum damage at the conclusion of the test sequence.

(2) A static compressive load of 31,800 kg (70,000 lbs) applied in the orientation expected to result in maximum damage at the conclusion of the test sequence. The force on the package must be developed between a flat steel surface and a 5 cm (2 in) wide, straight, solid, steel bar. The length of the bar must be at least as long as the diameter of the package, and the longitudinal axis of the bar must be parallel to the plane of the flat surface. The load must be applied to the bar in a manner that prevents any members or devices used to support the bar from contacting the package.

(3) Packages weighing less than 227 kg (500 lbs) must be placed on a flat, essentially unyielding, horizontal surface, and subjected to a weight of 227 kg (500 lbs) falling from a height of 3 m (10 ft) and striking in the position expected to result in maximum damage at the conclusion of the test sequence. The end of the weight contacting the package must be a solid probe made of mild steel. The probe must be the shape of the frustum of a right circular cone, 30 cm (12 in) long, 20 cm (8 in) in diameter at the base, and 2.5 cm (1 in) in diameter at the end. The longitudinal axis of the probe must be perpendicular to the horizontal surface. For packages weighing 227 kg (500 lbs) or more, the base of the probe must be placed on a flat, essentially unyielding horizontal surface, and the package dropped from a height of 3 m (10 ft) onto the probe, striking in the position expected to result in maximum damage at the conclusion of the test sequence.

(4) The package must be firmly restrained and supported such that its longitudinal axis is inclined approximately 45° to the horizontal. The area of the package that made first contact with the impact surface in paragraph (a)(1) of this section must be in the lowermost position. The package must be struck at approximately the center of its vertical projection by the end of a structural steel angle section falling from a height of at least 46 m (150 ft). The angle section must be at least 1.8 m (6 ft) in length with equal legs at least 13 cm (5 in) long and 1.3 cm (0.5 in) thick. The angle section must be guided in such a way as to fall end-on, without tumbling. The package must be rotated approximately 90° about its longitudinal axis and struck by the steel angle section falling as before.

(5) The package must be exposed to luminous flames from a pool fire of JP-4 or JP-5 aviation fuel for a period of at least 60 minutes. The luminous flames must extend an average of at least 0.9 m (3 ft) and no more than 3 m (10 ft) beyond the package in all horizontal directions. The position and orientation of the package in relation to the fuel must be that which is expected to result in maximum damage at the conclusion of the test sequence. An alternate method of thermal testing may be substituted for this fire test, provided that the alternate test is not of shorter duration and would not result in a lower heating rate to the package. At the conclusion of the thermal test, the package must be allowed to cool naturally or must be cooled by water sprinkling, whichever is expected to result in maximum damage at the conclusion of the test sequence.

(6) Immersion under at least 0.9 m (3 ft) of water.

(b) *Individual free-fall impact test*.

(1) An undamaged package must be physically subjected to an impact at a velocity not less than the calculated terminal free-fall velocity, at mean sea level, at a right angle onto a flat, essentially unyielding, horizontal surface, in the orientation (e.g., side, end, corner) expected to result in maximum damage.

(2) This test is not required if the calculated terminal free-fall velocity of the package is less than 129 m/sec (422 ft/sec), or if a velocity not less than either 129 m/sec (422 ft/sec) or the calculated terminal free-fall velocity of the package is used in the sequential test of paragraph (a)(1) of this section.

(c) Individual deep submersion test. An undamaged package must be physically submerged and physically subjected to an external water pressure of at least 4 MPa (600 lbs/in^2).

§ 71.75 Qualification of special form radioactive material.

[Top of File]

(a) Special form radioactive materials must meet the test requirements of paragraph (b) of this section. Each solid radioactive material or capsule specimen to be tested must be manufactured or fabricated so that it is representative of the actual solid material or capsule that will be transported, with the proposed radioactive content duplicated as closely as practicable. Any differences between the material to be transported and the test material, such as the use of non-radioactive contents, must be taken into account in determining whether the test requirements have been met. In addition:

(1) A different specimen may be used for each of the tests;

(2) The specimen may not break or shatter when subjected to the impact, percussion, or bending tests;

(3) The specimen may not melt or disperse when subjected to the heat test;

(4) After each test, leaktightness or indispersibility of the specimen must be determined by a method no less sensitive than the leaching assessment procedure prescribed in paragraph (c) of this section. For a capsule resistant to corrosion by water, and which has an internal void volume greater than 0.1 milliliter, an alternative to the leaching assessment is a demonstration of leaktightness of $x10^{-4}$ torr-liter/s ($1.3xx10^{-4}$ atm-cm^3/s) based on air at 25°C (77°F) and one atmosphere differential pressure for solid radioactive content, or $x10^{-6}$ torr-liter/s ($1.30xx10^{-6}$ atm-cm^3/s) for liquid or gaseous radioactive content; and

(5) A specimen that comprises or simulates radioactive material contained in a sealed capsule need not be subjected to the leaktightness procedure specified in this section, provided it is alternatively subjected to any of the tests prescribed in ISO/TR4826-1979(E), "Sealed radioactive sources leak test methods" which is available from the American National Standards Institute, 1430 Broadway, New York, N.Y. 10018.

(b) *Test methods*. (1) *Impact Test*. The specimen must fall onto the target from a height of 9 m (30 ft) or greater in the orientation expected to result in maximum damage. The target must be a flat, horizontal surface of such mass and rigidity that any increase in its resistance to displacement or deformation, on impact by the specimen, would not significantly increase the damage to the specimen.

(2) *Percussion Test*. (i) The specimen must be placed on a sheet of lead that is supported by a smooth solid surface, and struck by the flat face of a steel billet so as to produce an impact equivalent to that resulting from a free drop of 1.4 kg (3 lbs) through 1 m (40 in);

(ii) The flat face of the billet must be 25 millimeters (mm) (1 inch) in diameter with the edges rounded off to a radius of 3 mm±0.3 mm(.12 in±0.012 in);

(iii) The lead must be hardness number 3.5 to 4.5 on the Vickers scale and thickness 25 mm (1 in) or greater, and must cover an area greater than that covered by the specimen;

(iv) A fresh surface of lead must be used for each impact; and

(v) The billet must strike the specimen so as to cause maximum damage.

(3) *Bending test*. (i) This test applies only to long, slender sources with a length of 10 cm (4 inches) or greater and a length to width ratio of 10 or greater;

(ii) The specimen must be rigidly clamped in a horizontal position so that one half of its length protrudes from the face of the clamp;

(iii) The orientation of the specimen must be such that the specimen will suffer maximum damage when its free end is struck by the flat face of a steel billet;

(iv) The billet must strike the specimen so as to produce an impact equivalent to that resulting from a free vertical drop of 1.4 kg (3 lbs) through 1 m (40 in); and

(v) The flat face of the billet must be 25 mm (1 inch) in diameter with the edges rounded off to a radius of 3 mm±0.3 mm (.12 in±0.012 in).

(4) *Heat test*. The specimen must be heated in air to a temperature of not less than 800°C (1475°F), held at that temperature for a period of 10 minutes, and then allowed to cool.

(c) *Leaching assessment methods*. (1) For indispersible solid material --

(i) The specimen must be immersed for 7 days in water at ambient temperature. The water must have a pH of 6-8 and a maximum conductivity of 10 micromho per centimeter at 20° (68°F);

(ii) The water with specimen must then be heated to a temperature of 50°C±5°C (122°F±9°F) and maintained at this temperature for 4 hours.

(iii) The activity of the water must then be determined;

(iv) The specimen must then be stored for at least 7 days in still air of relative humidity not less than 90 percent at 30°C (86°F);

(v) The specimen must then be immersed in water under the same conditions as in paragraph (c)(1)(i) of this section, and the water with specimen must be heated to 50°C±5°C (122°F±9°F) and maintained at that temperature for 4 hours;

(vi) The activity of the water must then be determined. The sum of the activities determined here and in paragraph (c)(1)(iii) of this section must not exceed 2 kilobecquerels (kBq) (0.05 microcurie (μCi)).

(2) For encapsulated material --

(i) The specimen must be immersed in water at ambient temperature. The water must have a pH of 6-8 and a maximum conductivity of 10 micromho per centimeter;

(ii) The water and specimen must be heated to a temperature of 50°C±5°C (122°F±9°F) and maintained at this temperature for 4 hours;

(iii) The activity of the water must then be determined;

(iv) The specimen must then be stored for at least 7 days in still air at a temperature of 30°C (86°F) or greater;

(v) The process in paragraph (c)(2)(i), (ii), and (iii) of this section must be repeated; and

(vi) The activity of the water must then be determined. The sum of the activities determined here and in paragraph (c)(2)(iii) of this section must not exceed 2 kilobecquerels (kBq) (0.05 microcurie (Ci)).

(d) A specimen that comprises or simulates radioactive material contained in a sealed capsule need not be subjected to --

(1) The impact test and the percussion test of this section, provided that the specimen is alternatively subjected to the Class 4 impact test prescribed in ISO 2919-1980(e), "Sealed Radioactive Sources Classification" (see § 71.75(a)(5) for statement of availability); and

(2) The heat test of this section, provided the specimen is alternatively subjected to the Class 6 temperature test specified in the International Organization for Standardization document ISO 2919-1980(e), "Sealed Radioactive Sources Classification."

§ 71.77 Qualification of LSA-III Material

[Top of File]

(a) LSA-III material must meet the test requirements of paragraph (b) of this section. Any differences between the specimen to be tested and the material to be transported must be taken into account in determining whether the test requirements have been met.

(b) *Leaching Test*. (1) The specimen, representing no less than the entire contents of the package, must be immersed for 7 days in water at ambient temperature;

(2) The volume of water to be used in the test must be sufficient to ensure that at the end of the test period the free volume of the unabsorbed and unreacted water remaining will be at least 10% of the volume of the specimen itself;

(3) The water must have an initial pH of 6-8 and a maximum conductivity 10 micromho/cm at 20°C (68°F); and

(4) The total activity of the free volume of water must be measured following the 7 day immersion test and must not exceed 0.1 A_2.

Subpart G--Operating Controls and Procedures

[Top of File]

§ 71.81 Applicability of operating controls and procedures.

A licensee subject to this part, who, under a general or specific license, transports licensed material or delivers licensed material to a carrier for transport, shall comply with the requirements of this subpart G, with the quality assurance requirements of subpart H of this part, and with the general provisions of subpart A of this part.

§ 71.83 Assumptions as to unknown properties.

[Top of File]

When the isotopic abundance, mass, concentration, degree of irradiation, degree of moderation, or other pertinent property of fissile material in any package is not known, the licensee shall package the fissile material as if the unknown properties have credible values that will cause the maximum neutron multiplication.

§ 71.85 Preliminary determinations.

[Top of File]

Before the first use of any packaging for the shipment of licensed material --

(a) The licensee shall ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that could significantly reduce the effectiveness of the packaging;

(b) Where the maximum normal operating pressure will exceed 35 kPa (5 lbf/in^2) gauge, the licensee shall test the containment system at an internal pressure at least 50 percent higher than the maximum normal operating pressure, to verify the capability of that system to maintain its structural integrity at that pressure; and

(c) The licensee shall conspicuously and durably mark the packaging with its model number, serial number, gross weight, and a package identification number assigned by NRC. Before applying the model number, the licensee shall determine that the packaging has been fabricated in accordance with the design approved by the Commission.

§ 71.87 Routine determinations.

[Top of File]

Before each shipment of licensed material, the licensee shall ensure that the package with its contents satisfies the applicable requirements of this part and of the license. The licensee shall determine that --

(a) The package is proper for the contents to be shipped;

(b) The package is in unimpaired physical condition except for superficial defects such as marks or dents;

(c) Each closure device of the packaging, including any required gasket, is properly installed and secured and free of defects;

(d) Any system for containing liquid is adequately sealed and has adequate space or other specified provision for expansion of the liquid;

(e) Any pressure relief device is operable and set in accordance with written procedures;

(f) The package has been loaded and closed in accordance with written procedures;

(g) For fissile material, any moderator or neutron absorber, if required, is present and in proper condition;

(h) Any structural part of the package that could be used to lift or tie down the package during transport is rendered inoperable for that purpose, unless it satisfies the design requirements of § 71.45;

(i) The level of non-fixed (removable) radioactive contamination on the external surfaces of each package offered for shipment is as low as reasonably achievable, and within the limits specified in DOT regulations in 49 CFR 173.443;

(j) External radiation levels around the package and around the vehicle, if applicable, will not exceed the limits specified in § 71.47 at any time during transportation; and

(k) Accessible package surface temperatures will not exceed the limits specified in § 71.43(g) at any time during transportation.

§ 71.88 Air transport of plutonium.

[Top of File]

(a) Notwithstanding the provisions of any general licenses and notwithstanding any exemptions stated directly in this part or included indirectly by citation of 49 CFR chapter I, as may be applicable, the licensee shall assure that plutonium in any form, whether for import, export, or domestic shipment, is not transported by air or delivered to a carrier for air transport unless:

(1) The plutonium is contained in a medical device designed for individual human application; or

(2) The plutonium is contained in a material in which the specific activity is less than or equal to the activity concentration values for plutonium specified in Appendix A, Table A-2, of this part, and in which the radioactivity is essentially uniformly distributed; or

(3) The plutonium is shipped in a single package containing no more than an A_2 quantity of plutonium in any isotope or form, and is shipped in accordance with § 71.5; or

(4) The plutonium is shipped in a package specifically authorized for the shipment of plutonium by air in the Certificate of Compliance for that package issued by the Commission.

(b) Nothing in paragraph (a) of this section is to be interpreted as removing or diminishing the requirements of § 73.24 of this chapter.

(c) For a shipment of plutonium by air which is subject to paragraph (a)(4) of this section, the licensee shall, through special arrangement with the carrier, require compliance with 49 CFR 175.704, U.S. Department of Transportation regulations applicable to the air transport of plutonium.

[69 FR 3795, Jan. 26, 2004]

§ 71.89 Opening instructions.

[Top of File]

Before delivery of a package to a carrier for transport, the licensee shall ensure that any special instructions needed to safely open the package have been sent to, or otherwise made available to, the consignee for the consignee's use in accordance with 10 CFR 20.1906(e).

§ 71.91 Records.

[Top of File]

(a) Each licensee shall maintain, for a period of 3 years after shipment, a record of each shipment of licensed material not exempt under § 71.10, showing where applicable --

(1) Identification of the packaging by model number and serial number;

(2) Verification that there are no significant defects in the packaging, as shipped;

(3) Volume and identification of coolant;

(4) Type and quantity of licensed material in each package, and the total quantity of each shipment;

(5) For each item of irradiated fissile material --

(i) Identification by model number and serial number;

(ii) Irradiation and decay history to the extent appropriate to demonstrate that its nuclear and thermal characteristics comply with license conditions; and

(iii) Any abnormal or unusual condition relevant to radiation safety;

(6) Date of the shipment;

(7) For fissile packages and for Type B packages, any special controls exercised;

(8) Name and address of the transferee;

(9) Address to which the shipment was made; and

(10) Results of the determinations required by § 71.87 and by the conditions of the package approval.

(b) Each certificate holder shall maintain, for a period of 3 years after the life of the packaging to which they apply, records identifying the packaging by model number, serial number, and date of manufacture.

(c) The licensee, certificate holder, and an applicant for a CoC, shall make available to the Commission for inspection, upon reasonable notice, all records required by this part. Records are only valid if stamped, initialed, or signed and dated by authorized personnel, or otherwise authenticated.

(d) The licensee, certificate holder, and an applicant for a CoC shall maintain sufficient written records to furnish evidence of the quality of packaging. The records to be maintained include results of the determinations required by § 71.85; design, fabrication, and assembly records; results of reviews, inspections, tests, and audits; results of monitoring work performance and materials analyses; and results of maintenance, modification, and repair activities. Inspection, test, and audit records must identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any deficiencies noted. These records must be retained for 3 years after the life of the packaging to which they apply.

[69 FR 3796, Jan. 26, 2004]

§ 71.93 Inspection and tests.

[Top of File]

(a) The licensee, certificate holder, and applicant for a CoC shall permit the Commission, at all reasonable times, to inspect the licensed material, packaging, premises, and facilities in which the licensed material or packaging is used, provided, constructed, fabricated, tested, stored, or shipped.

(b) The licensee, certificate holder, and applicant for a CoC shall perform, and permit the Commission to perform, any tests the Commission deems necessary or appropriate for the administration of the regulations in this chapter.

(c) The certificate holder and applicant for a CoC shall notify the NRC, in accordance with § 71.1, 45 days in advance of starting fabrication of the first packaging under a CoC. This paragraph applies to any packaging used for the shipment of licensed material which has either--

(1) A decay heat load in excess of 5 kW; or

(2) A maximum normal operating pressure in excess of 103 kPa (15 lbf/in^2) gauge.

[69 FR 3796, Jan. 26, 2004]

§ 71.95 Reports.

[Top of File]

(a) The licensee, after requesting the certificate holder's input, shall submit a written report to the Commission of--

(1) Instances in which there is a significant reduction in the effectiveness of any NRC-approved Type B or Type AF packaging during use; or

(2) Details of any defects with safety significance in any NRC-approved Type B or fissile material packaging, after first use.

(3) Instances in which the conditions of approval in the Certificate of Compliance were not observed in making a shipment.

(b) The licensee shall submit a written report to the Commission of instances in which the conditions in the certificate of compliance were not followed during a shipment.

(c) Each licensee shall submit, in accordance with § 71.1, a written report required by paragraph (a) or (b) of this section within 60 days of the event or discovery of the event. The licensee shall also provide a copy of each report submitted to the NRC to the applicable certificate holder. Written reports prepared under other regulations may be submitted to fulfill this requirement if the reports contain all the necessary information, and the appropriate distribution is made. Using an appropriate method listed in § 71.1(a), the licensee shall report to: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards. These written reports must include the following:

(1) A brief abstract describing the major occurrences during the event, including all component or system failures that contributed to the event and significant corrective action taken or planned to prevent recurrence.

(2) A clear, specific, narrative description of the event that occurred so that knowledgeable readers conversant with the requirements of part 71, but not familiar with the design of the packaging, can understand the complete event. The narrative description must include the following specific information as appropriate for the particular event.

(i) Status of components or systems that were inoperable at the start of the event and that contributed to the event;

(ii) Dates and approximate times of occurrences;

(iii) The cause of each component or system failure or personnel error, if known;

(iv) The failure mode, mechanism, and effect of each failed component, if known;

(v) A list of systems or secondary functions that were also affected for failures of components with multiple functions;

(vi) The method of discovery of each component or system failure or procedural error;

(vii) For each human performance-related root cause, a discussion of the cause(s) and circumstances;

(viii) The manufacturer and model number (or other identification) of each component that failed during the event; and

(ix) For events occurring during use of a packaging, the quantities and chemical and physical form(s) of the package contents.

(3) An assessment of the safety consequences and implications of the event. This assessment must include the availability of other systems or components that could have performed the same function as the components and systems that failed during the event.

(4) A description of any corrective actions planned as a result of the event, including the means employed to repair any defects, and actions taken to reduce the probability of similar events occurring in the future.

(5) Reference to any previous similar events involving the same packaging that are known to the licensee or certificate holder.

(6) The name and telephone number of a person within the licensee's organization who is knowledgeable about the event and can provide additional information.

(7) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

(d) Report legibility. The reports submitted by licensees and/or certificate holders under this section must be of sufficient quality to permit reproduction and micrographic processing.

[60 FR 50264, Sept. 28, 1995, as amended at 67 FR 3585, Jan. 25, 2002; 68 FR 58818, Oct. 10, 2003; 69 FR 3796, Jan. 26, 2004]

§ 71.97 Advance notification of shipment of irradiated reactor fuel and nuclear waste.

[Top of File]

(a) As specified in paragraphs (b), (c) and (d) of this section, each licensee shall provide advance notification to the governor of a State, or the governor's designee, of the shipment of licensed material, through, or across the boundary of the State, before the transport, or delivery to a carrier, for transport, of licensed material outside the confines of the licensee's plant or other place of use or storage.

(b) Advance notification is required under this section for shipments of irradiated reactor fuel in quantities less than that subject to advance notification requirements of § 73.37(f) of this chapter. Advance notification is also required under this section for shipment of licensed material, other than irradiated fuel, meeting the following three conditions:

(1) The licensed material is required by this part to be in Type B packaging for transportation;

(2) The licensed material is being transported to or across a State boundary en route to a disposal facility or to a collection point for transport to a disposal facility; and

(3) The quantity of licensed material in a single package exceeds the least of the following:

(i) 3000 times the A_1 value of the radionuclides as specified in appendix A, Table A-1 for special form radioactive material;

(ii) 3000 times the A_2 value of the radionuclides as specified in appendix A, Table A-1 for normal form radioactive material; or

(iii) 1000 TBq (27,000 Ci).

(c) *Procedures for submitting advance notification*. (1) The notification must be made in writing to the office of each appropriate governor or governor's designee and to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response.

(2) A notification delivered by mail must be postmarked at least 7 days before the beginning of the 7-day period during which departure of the shipment is estimated to occur.

(3) A notification delivered by any other means than mail must reach the office of the governor or of the governor's designee at least 4 days before the beginning of the 7-day period during which departure of the shipment is estimated to occur.

(i) A list of the names and mailing addresses of the governors' designees receiving advance notification of transportation of nuclear waste was published in the Federal Register on June 30, 1995 (60 FR 34306).

(ii) The list will be published annually in the Federal Register on or about June 30 to reflect any changes in information.

(iii) A list of the names and mailing addresses of the governors' designees is available on request from the Director, Office of State Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(4) The licensee shall retain a copy of the notification as a record for 3 years.

(d) *Information to be furnished in advance notification of shipment*. Each advance notification of shipment of irradiated reactor fuel or

nuclear waste must contain the following information:

(1) The name, address, and telephone number of the shipper, carrier, and receiver of the irradiated reactor fuel or nuclear waste shipment;

(2) A description of the irradiated reactor fuel or nuclear waste contained in the shipment, as specified in the regulations of DOT in 49 CFR 172.202 and 172.203(d);

(3) The point of origin of the shipment and the 7-day period during which departure of the shipment is estimated to occur;

(4) The 7-day period during which arrival of the shipment at State boundaries is estimated to occur;

(5) The destination of the shipment, and the 7-day period during which arrival of the shipment is estimated to occur; and

(6) A point of contact, with a telephone number, for current shipment information.

(e) *Revision notice*. A licensee who finds that schedule information previously furnished to a governor or governor's designee, in accordance with this section, will not be met, shall telephone a responsible individual in the office of the governor of the State or of the governor's designee and inform that individual of the extent of the delay beyond the schedule originally reported. The licensee shall maintain a record of the name of the individual contacted for 3 years.

(f) *Cancellation notice*. (1) Each licensee who cancels an irradiated reactor fuel or nuclear waste shipment for which advance notification has been sent shall send a cancellation notice to the governor of each State or to the governor's designee previously notified, and to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response.

(2) The licensee shall state in the notice that it is a cancellation and identify the advance notification that is being canceled. The licensee shall retain a copy of the notice as a record for 3 years.

[60 FR 50264, Sept. 28, 1995, as amended at 67 FR 3586, Jan. 25, 2002; 68 FR 58818, Oct. 10, 2003]

§ 71.99 Violations.

[Top of File]

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of --

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or (3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of --

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section; or

(iv) Any term , condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

§ 71.100 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 71 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 71 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 71.0, 71.2, 71.4, 71.6, 71.7, 71.10, 71.31, 71.33, 71.35, 71.37, 71.38, 71.39, 71.40, 71.41, 71.43, 71.45, 71.47, 71.51, 71.55, 71.59, 71.65, 71.71, 71.73, 71.74, 71.75, 71.77, 71.99, and 71.100.

[69 FR 3796, Jan. 26, 2004]

Subpart H--Quality Assurance

[Top of File]

Source: 69 FR 3797, Jan. 26, 2004, unless otherwise noted.

§ 71.101 Quality assurance requirements.

(a) *Purpose.* This subpart describes quality assurance requirements applying to design, purchase, fabrication, handling, shipping, storing, cleaning, assembly, inspection, testing, operation, maintenance, repair, and modification of components of packaging that are important to safety. As used in this subpart, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a system or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to control of the physical characteristics and quality of the material or component to predetermined requirements. The licensee, certificate holder, and applicant for a CoC are responsible for the quality assurance requirements as they apply to design, fabrication, testing, and modification of packaging. Each licensee is responsible for the quality assurance provision which applies to its use of a packaging for the shipment of licensed material subject to this subpart.

(b) *Establishment of program.* Each licensee, certificate holder, and applicant for a CoC shall establish, maintain, and execute a quality assurance program satisfying each of the applicable criteria of §§ 71.101 through 71.137 and satisfying any specific provisions that are applicable to the licensee's activities including procurement of packaging. The licensee, certificate holder, and applicant for a CoC shall execute the applicable criteria in a graded approach to an extent that is commensurate with the quality assurance requirement's importance to safety.

(c) *Approval of program.* (1) Before the use of any package for the shipment of licensed material subject to this subpart, each licensee shall obtain Commission approval of its quality assurance program. Using an appropriate method listed in § 71.1(a), each licensee shall file a description of its quality assurance program, including a discussion of which requirements of this subpart are applicable and how they will be satisfied, by submitting the description to: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards.

(2) Before the fabrication, testing, or modification of any package for the shipment of licensed material subject to this subpart, each licensee, certificate holder, or applicant for a CoC shall obtain Commission approval of its quality assurance program. Each certificate holder or applicant for a CoC shall, in accordance with § 71.1, file a description of its quality assurance program, including a discussion of which requirements of this subpart are applicable and how they will be satisfied.

(d) *Existing package designs.* The provisions of this paragraph deal with packages that have been approved for use in accordance with this part before January 1, 1979, and which have been designed in accordance with the provisions of this part in effect at the time of application for package approval. Those packages will be accepted as having been designed in accordance with a quality assurance program that satisfies the provisions of paragraph (b) of this section.

(e) *Existing packages.* The provisions of this paragraph deal with packages that have been approved for use in accordance with this part before January 1, 1979, have been at least partially fabricated before that date, and for which the fabrication is in accordance with the provisions of this part in effect at the time of application for approval of package design. These packages will be accepted as having been fabricated and assembled in accordance with a quality assurance program that satisfies the provisions of paragraph (b) of this section.

(f) *Previously approved programs.* A Commission-approved quality assurance program that satisfies the applicable criteria of subpart H of this part, Appendix B of part 50 of this chapter, or subpart G of part 72 of this chapter, and that is established, maintained, and executed regarding transport packages, will be accepted as satisfying the requirements of paragraph (b) of this section. Before first use, the licensee, certificate holder, and applicant for a CoC shall notify the NRC, in accordance with § 71.1, of its intent to apply its previously approved subpart H, Appendix B, or subpart G quality assurance program to transportation activities. The licensee, certificate holder, and applicant for a CoC shall identify the program by date of submittal to the Commission, Docket Number, and date of Commission approval.

(g) *Radiography containers.* A program for transport container inspection and maintenance limited to radiographic exposure devices, source changers, or packages transporting these devices and meeting the requirements of § 34.31(b) of this chapter or equivalent Agreement State requirement, is deemed to satisfy the requirements of §§ 71.17(b) and 71.101(b).

§ 71.103 Quality assurance organization.

[Top of File]

(a) The licensee,[2] certificate holder, and applicant for a CoC shall be responsible for the establishment and execution of the quality assurance program. The licensee, certificate holder, and applicant for a CoC may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, or any part of the quality assurance program, but shall retain responsibility for the program. These activities include performing the functions associated with attaining quality objectives and the quality assurance functions.

(b) The quality assurance functions are--

(1) Assuring that an appropriate quality assurance program is established and effectively executed; and

(2) Verifying, by procedures such as checking, auditing, and inspection, that activities affecting the functions that are important to safety have been correctly performed.

(c) The persons and organizations performing quality assurance functions must have sufficient authority and organizational freedom to--

(1) Identify quality problems;

(2) Initiate, recommend, or provide solutions; and

(3) Verify implementation of solutions.

(d) The persons and organizations performing quality assurance functions shall report to a management level that assures that the required authority and organizational freedom, including sufficient independence from cost and schedule, when opposed to safety considerations, are provided.

(e) Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms, provided that the persons and organizations assigned the quality assurance functions have the required authority and organizational freedom.

(f) Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program, at any location where activities subject to this section are being performed, must have direct access to the levels of management necessary to perform this function.

[2] While the term "licensee" is used in these criteria, the requirements are applicable to whatever design, fabrication, assembly, and testing of the package is accomplished with respect to a package before the time a package approval is issued.

§ 71.105 Quality assurance program.

[Top of File]

(a) The licensee, certificate holder, and applicant for a CoC shall establish, at the earliest practicable time consistent with the schedule for accomplishing the activities, a quality assurance program that complies with the requirements of §§ 71.101 through 71.137. The licensee, certificate holder, and applicant for a CoC shall document the quality assurance program by written procedures or instructions and shall carry out the program in accordance with those procedures throughout the period during which the packaging is used. The licensee, certificate holder, and applicant for a CoC shall identify the material and components to be covered by the quality assurance program, the major organizations participating in the program, and the designated functions of these organizations.

(b) The licensee, certificate holder, and applicant for a CoC, through its quality assurance program, shall provide control over activities affecting the quality of the identified materials and components to an extent consistent with their importance to safety, and as necessary to assure conformance to the approved design of each individual package used for the shipment of radioactive material. The licensee, certificate holder, and applicant for a CoC shall assure that activities affecting quality are accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanliness; and assurance that all prerequisites for the given activity have been satisfied. The licensee, certificate holder, and applicant for a CoC shall take into account the need for special controls, processes, test equipment, tools, and skills to attain the required quality, and the need for verification of quality by inspection and test.

(c) The licensee, certificate holder, and applicant for a CoC shall base the requirements and procedures of its quality assurance program on the following considerations concerning the complexity and proposed use of the package and its components:

(1) The impact of malfunction or failure of the item to safety;

(2) The design and fabrication complexity or uniqueness of the item;

(3) The need for special controls and surveillance over processes and equipment;

(4) The degree to which functional compliance can be demonstrated by inspection or test; and

(5) The quality history and degree of standardization of the item.

(d) The licensee, certificate holder, and applicant for a CoC shall provide for indoctrination and training of personnel performing activities affecting quality, as necessary to assure that suitable proficiency is achieved and maintained. The licensee, certificate holder, and applicant for a CoC shall review the status and adequacy of the quality assurance program at established intervals. Management of other organizations participating in the quality assurance program shall review regularly the status and adequacy of that part of the quality assurance program they are executing.

§ 71.107 Package design control.

[Top of File]

(a) The licensee, certificate holder, and applicant for a CoC shall establish measures to assure that applicable regulatory requirements and the package design, as specified in the license or CoC for those materials and components to which this section applies, are correctly translated into specifications, drawings, procedures, and instructions. These measures must include provisions to assure that appropriate quality standards are specified and included in design documents and that deviations from standards are controlled. Measures must be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the functions of the materials, parts, and components of the packaging that are important to safety.

(b) The licensee, certificate holder, and applicant for a CoC shall establish measures for the identification and control of design interfaces and for coordination among participating design organizations. These measures must include the establishment of written procedures, among participating design organizations, for the review, approval, release, distribution, and revision of documents involving design interfaces. The design control measures must provide for verifying or checking the adequacy of design, by methods such as design reviews, alternate or simplified calculational methods, or by a suitable testing program. For the verifying or checking process, the licensee shall designate individuals or groups other than those who were responsible for the original design, but who may be from the same organization. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, the licensee, certificate holder, and applicant for a CoC shall include suitable qualification testing of a prototype or sample unit under the most adverse design conditions. The licensee, certificate holder, and applicant for a CoC shall apply design control measures to the following:

(1) Criticality physics, radiation shielding, stress, thermal, hydraulic, and accident analyses;

(2) Compatibility of materials;

(3) Accessibility for inservice inspection, maintenance, and repair;

(4) Features to facilitate decontamination; and

(5) Delineation of acceptance criteria for inspections and tests.

(c) The licensee, certificate holder, and applicant for a CoC shall subject design changes, including field changes, to design control measures commensurate with those applied to the original design. Changes in the conditions specified in the CoC require prior NRC approval.

§ 71.109 Procurement document control.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish measures to assure that adequate quality is required in the documents for procurement of material, equipment, and services, whether purchased by the licensee, certificate holder, and applicant for a CoC or by its contractors or subcontractors. To the extent necessary, the licensee, certificate holder, and applicant for a CoC shall require contractors or subcontractors to provide a quality assurance program consistent with the applicable provisions of this part.

§ 71.111 Instructions, procedures, and drawings.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall prescribe activities affecting quality by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall require that these instructions, procedures, and drawings be followed. The instructions, procedures, and drawings must include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

§ 71.113 Document control.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish measures to control the issuance of documents such as instructions, procedures, and drawings, including changes, that prescribe all activities affecting quality. These measures must assure that documents, including changes, are reviewed for adequacy, approved for release by authorized personnel, and distributed and used at the location where the prescribed activity is performed.

§ 71.115 Control of purchased material, equipment, and services.

[Top of File]

(a) The licensee, certificate holder, and applicant for a CoC shall establish measures to assure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures must include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products on delivery.

(b) The licensee, certificate holder, and applicant for a CoC shall have available documentary evidence that material and equipment conform to the procurement specifications before installation or use of the material and equipment. The licensee, certificate holder, and applicant for a CoC shall retain, or have available, this documentary evidence for the life of the package to which it applies. The licensee, certificate holder, and applicant for a CoC shall assure that the evidence is sufficient to identify the specific requirements met by the purchased material and equipment.

(c) The licensee, certificate holder, and applicant for a CoC shall assess the effectiveness of the control of quality by contractors and subcontractors at intervals consistent with the importance, complexity, and quantity of the product or services.

§ 71.117 Identification and control of materials, parts, and components.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish measures for the identification and control of materials, parts, and components. These measures must assure that identification of the item is maintained by heat number, part number, or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, installation, and use of the item. These identification and control measures must be designed to prevent the use of incorrect or defective materials, parts, and components.

§ 71.119 Control of special processes.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish measures to assure that special processes, including welding, heat treating, and nondestructive testing are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

§ 71.121 Internal inspection.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish and execute a program for inspection of activities affecting quality by or for the organization performing the activity, to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity. The inspection must be performed by individuals other than those who performed the activity being inspected. Examination, measurements, or tests of material or products processed must be performed for each work operation where necessary to assure quality. If direct inspection of processed material or products is not carried out, indirect control by monitoring processing methods, equipment, and personnel must be provided. Both inspection and process monitoring must be provided when quality control is inadequate without both. If mandatory inspection hold points, which require witnessing or inspecting by the licensee's designated representative and beyond which work should not proceed without the consent of its designated representative, are required, the specific hold points must be indicated in appropriate documents.

§ 71.123 Test control.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish a test program to assure that all testing required to demonstrate that the packaging components will perform satisfactorily in service is identified and performed in accordance with written test procedures that incorporate the requirements of this part and the requirements and acceptance limits contained in the package approval. The test procedures must include provisions for assuring that all prerequisites for the given test are met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. The licensee, certificate holder, and applicant for a CoC shall document and evaluate the test results to assure that test requirements have been satisfied.

§ 71.125 Control of measuring and test equipment.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish measures to assure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified times to maintain accuracy within necessary limits.

§ 71.127 Handling, storage, and shipping control.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish measures to control, in accordance with instructions, the handling, storage, shipping, cleaning, and preservation of materials and equipment to be used in packaging to prevent damage or deterioration. When necessary for particular products, special protective environments, such as inert gas atmosphere, and specific moisture content and

temperature levels must be specified and provided.

§ 71.129 Inspection, test, and operating status.

[Top of File]

(a) The licensee, certificate holder, and applicant for a CoC shall establish measures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items of the packaging. These measures must provide for the identification of items that have satisfactorily passed required inspections and tests, where necessary to preclude inadvertent bypassing of the inspections and tests.

(b) The licensee shall establish measures to identify the operating status of components of the packaging, such as tagging valves and switches, to prevent inadvertent operation.

§ 71.131 Nonconforming materials, parts, or components.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish measures to control materials, parts, or components that do not conform to the licensee's requirements to prevent their inadvertent use or installation. These measures must include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items must be reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures.

§ 71.133 Corrective action.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall establish measures to assure that conditions adverse to quality, such as deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected. In the case of a significant condition adverse to quality, the measures must assure that the cause of the condition is determined and corrective action taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken must be documented and reported to appropriate levels of management.

§ 71.135 Quality assurance records.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall maintain sufficient written records to describe the activities affecting quality. The records must include the instructions, procedures, and drawings required by § 71.111 to prescribe quality assurance activities and must include closely related specifications such as required qualifications of personnel, procedures, and equipment. The records must include the instructions or procedures which establish a records retention program that is consistent with applicable regulations and designates factors such as duration, location, and assigned responsibility. The licensee, certificate holder, and applicant for a CoC shall retain these records for 3 years beyond the date when the licensee, certificate holder, and applicant for a CoC last engage in the activity for which the quality assurance program was developed. If any portion of the written procedures or instructions is superseded, the licensee, certificate holder, and applicant for a CoC shall retain the superseded material for 3 years after it is superseded.

§ 71.137 Audits.

[Top of File]

The licensee, certificate holder, and applicant for a CoC shall carry out a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits must be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audited results must be documented and reviewed by management having responsibility in the area audited. Followup action, including reaudit of deficient areas, must be taken where indicated.

Appendix A to Part 71--Determination of A_1 and A_2

[Top of File]

I. Values of A_1 and A_2 for individual radionuclides, which are the bases for many activity limits elsewhere in these regulations, are given in Table A-1. The curie (Ci) values specified are obtained by converting from the Terabecquerel (TBq) value. The Terabecquerel values are the regulatory standard. The curie values are for information only and are not intended to be the regulatory standard. Where values of A_1 and A_2 are unlimited, it is for radiation control purposes only. For nuclear criticality safety, some materials are subject to controls placed on fissile material.

II. a. For individual radionuclides whose identities are known, but which are not listed in Table A-1, the A_1 and A_2 values contained in Table A-3 may be used. Otherwise, the licensee shall obtain prior Commission approval of the A_1 and A_2 values for radionuclides not listed in Table A-1, before shipping the material.

b. For individual radionuclides whose identities are known, but which are not listed in Table A-2, the exempt material activity concentration and exempt consignment activity values contained in Table A-3 may be used. Otherwise, the licensee shall obtain prior Commission approval of the exempt material activity concentration and exempt consignment activity values for radionuclides not listed in Table A-2, before shipping the material.

c. The licensee shall submit requests for prior approval, described under paragraphs II(a) and II(b) of this Appendix, to the Commission, in accordance with § 71.1 of this part.

III. In the calculations of A_1 and A_2 for a radionuclide not in Table A-1, a single radioactive decay chain, in which radionuclides are present in their naturally occurring proportions, and in which no daughter radionuclide has a half-life either longer than 10 days, or longer than that of the parent radionuclide, shall be considered as a single radionuclide, and the activity to be taken into account, and the A_1 or A_2 value to be applied, shall be those corresponding to the parent radionuclide of that chain. In the case of radioactive decay chains in which any daughter radionuclide has a half-life either longer than 10 days, or greater than that of the parent radionuclide, the parent and those daughter radionuclides shall be considered as mixtures of different radionuclides.

IV. For mixtures of radionuclides whose identities and respective activities are known, the following conditions apply:

a. For special form radioactive material, the maximum quantity transported in a Type A package is as follows:

$$\sum_i \frac{B(i)}{A_1(i)} \leq 1$$

where B(i) is the activity of radionuclide i, and $A_1(i)$ is the A_1 value for radionuclide I.

b. For normal form radioactive material, the maximum quantity transported in a Type A package is as follows:

$\sum B(i)/A2(i) \leq 1$

where B(i) is the activity of radionuclide i, and $A_2(i)$ is the A_2 value for radionuclide i.

c. Alternatively, the A_1 value for mixtures of special form material may be determined as follows:

$$A_1 \text{ for mixture} = \frac{1}{\sum_i \frac{f(i)}{A_1(i)}}$$

where f(i) is the fraction of activity for radionuclide I in the mixture, and $A_1(i)$ is the appropriate A_1 value for radionuclide I.

d. Alternatively, the A_2 value for mixtures of normal form material may be determined as follows:

$$A_2 \text{ for mixture} = \frac{1}{\sum_i \frac{f(i)}{A_2(i)}}$$

where f(i) is the fraction of activity for radionuclide I in the mixture, and $A_2(i)$ is the appropriate A_2 value for radionuclide I.

e. The exempt activity concentration for mixtures of nuclides may be determined as follows:

$$\text{Exempt activity concentration for mixture} = \frac{1}{\sum_i \frac{f(i)}{[A](i)}}$$

where f(i) is the fraction of activity concentration of radionuclide I in the mixture, and [A] is the activity concentration for exempt material containing radionuclide I.

f. The activity limit for an exempt consignment for mixtures of radionuclides may be determined as follows:

$$\text{Exempt consignment activity limit for mixture} = \frac{1}{\sum_i \frac{f(i)}{A(i)}}$$

where f(i) is the fraction of activity of radionuclide I in the mixture, and A is the activity limit for exempt consignments for radionuclide I.

V. When the identity of each radionuclide is known, but the individual activities of some of the radionuclides are not known, the radionuclides may be grouped, and the lowest A_1 or A_2 value, as appropriate, for the radionuclides in each group may be used in applying the formulas in paragraph IV. Groups may be based on the total alpha activity and the total beta/gamma activity when these are known, using the lowest A_1 or A_2 values for the alpha emitters and beta/gamma emitters.

Table A-1—A_1 and A_2 VALUES FOR RADIONUCLIDES

Symbol of radionuclide	Element and atomic number	A_1 (TBq)	A_1(Ci)[b]	A_2 (TBq)	A_2(Ci)[b]	Specific activity	
						(TBq/g)	(Ci/g)
Ac-225 (a)	Actinium (89)	$8.0X10^{-1}$	$2.2X10^{1}$	$6.0X10^{-3}$	$1.6X10^{-1}$	$2.1X10^{3}$	$5.8X10^{4}$
Ac-227 (a)		$9.0X10^{-1}$	$2.4X10^{1}$	$9.0X10^{-5}$	$2.4X10^{-3}$	2.7	$7.2X10^{1}$
Ac-228		$6.0X10^{-1}$	$1.6X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$8.4X10^{4}$	$2.2X10^{6}$
Ag-105	Silver (47)	2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$1.1X10^{3}$	$3.0X10^{4}$
Ag-108m (a)		$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$9.7X10^{-1}$	$2.6X10^{1}$
Ag-110m (a)		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$1.8X10^{2}$	$4.7X10^{3}$
Ag-111		2.0	$5.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$5.8X10^{3}$	$1.6X10^{5}$
Al-26	Aluminum (13)	$1.0X10^{-1}$	2.7	$1.0X10^{-1}$	2.7	$7.0X10^{-4}$	$1.9X10^{-2}$
Am-241	Americium (95)	$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$1.3X10^{-1}$	3.4
Am-242m (a)		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$3.6X10^{-1}$	$1.0X10^{1}$
Am-243 (a)		5.0	$1.4X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$7.4X10^{-3}$	$2.0X10^{-1}$
Ar-37	Argon (18)	$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$3.7X10^{3}$	$9.9X10^{4}$
Ar-39		$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{1}$	$5.4X10^{2}$	1.3	$3.4X10^{1}$
Ar-41		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$1.5X10^{6}$	$4.2X10^{7}$
As-72	Arsenic (33)	$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$6.2X10^{4}$	$1.7X10^{6}$
As-73		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$8.2X10^{2}$	$2.2X10^{4}$
As-74		1.0	$2.7X10^{1}$	$9.0X10^{-1}$	$2.4X10^{1}$	$3.7X10^{3}$	$9.9X10^{4}$
As-76		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$5.8X10^{4}$	$1.6X10^{6}$
As-77		$2.0X10^{1}$	$5.4X10^{2}$	$7.0X10^{-1}$	$1.9X10^{1}$	$3.9X10^{4}$	$1.0X10^{6}$
At-211 (a)	Astatine (85)	$2.0X10^{1}$	$5.4X10^{2}$	$5.0X10^{-1}$	$1.4X10^{1}$	$7.6X10^{4}$	$2.1X10^{6}$
Au-193	Gold (79)	7.0	$1.9X10^{2}$	2.0	$5.4X10^{1}$	$3.4X10^{4}$	$9.2X10^{5}$
Au-194		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$1.5X10^{4}$	$4.1X10^{5}$
Au-195		$1.0X10^{1}$	$2.7X10^{2}$	6.0	$1.6X10^{2}$	$1.4X10^{2}$	$3.7X10^{3}$
Au-198		1.0	$2.7X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$9.0X10^{3}$	$2.4X10^{5}$
Au-199		$1.0X10^{1}$	$2.7X10^{2}$	$6.0X10^{-1}$	$1.6X10^{1}$	$7.7X10^{3}$	$2.1X10^{5}$
Ba-131 (a)	Barium (56)	2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$3.1X10^{3}$	$8.4X10^{4}$
Ba-133		3.0	$8.1X10^{1}$	3.0	$8.1X10^{1}$	9.4	$2.6X10^{2}$
Ba-133m		$2.0X10^{1}$	$5.4X10^{2}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.2X10^{4}$	$6.1X10^{5}$
Ba-140 (a)		$5.0X10^{-1}$	$1.4X10^{1}$	$3.0X10^{-1}$	8.1	$2.7X10^{3}$	$7.3X10^{4}$
Be-7	Beryllium (4)	$2.0X10^{1}$	$5.4X10^{2}$	$2.0X10^{1}$	$5.4X10^{2}$	$1.3X10^{4}$	$3.5X10^{5}$
Be-10		$4.0X10^{1}$	$1.1X10^{3}$	$6.0X10^{-1}$	$1.6X10^{1}$	$8.3X10^{-4}$	$2.2X10^{-2}$

Bi-205	Bismuth (83)	$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$1.5X10^{3}$	$4.2X10^{4}$
Bi-206		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$3.8X10^{3}$	$1.0X10^{5}$
Bi-207		$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	1.9	$5.2X10^{1}$
Bi-210		1.0	$2.7X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$4.6X10^{3}$	$1.2X10^{5}$
Bi-210m (a)		$6.0X10^{-1}$	$1.6X10^{1}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$2.1X10^{-5}$	$5.7X10^{-4}$
Bi-212 (a)		$7.0X10^{-1}$	$1.9X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$5.4X10^{5}$	$1.5X10^{7}$
Bk-247	Berkelium (97)	8.0	$2.2X10^{2}$	$8.0X10^{-4}$	$2.2X10^{-2}$	$3.8X10^{-2}$	1.0
Bk-249 (a)		$4.0X10^{1}$	$1.1X10^{3}$	$3.0X10^{-1}$	8.1	$6.1X10^{1}$	$1.6X10^{3}$
Br-76	Bromine (35)	$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$9.4X10^{4}$	$2.5X10^{6}$
Br-77		3.0	$8.1X10^{1}$	3.0	$8.1X10^{1}$	$2.6X10^{4}$	$7.1X10^{5}$
Br-82		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{4}$	$1.1X10^{6}$
C-11	Carbon (6)	1.0	$2.7X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.1X10^{7}$	$8.4X10^{8}$
C-14		$4.0X10^{1}$	$1.1X10^{3}$	3.0	$8.1X10^{1}$	$1.6X10^{-1}$	4.5
Ca-41	Calcium (20)	Unlimited	Unlimited	Unlimited	Unlimited	$3.1X10^{-3}$	$8.5X10^{-2}$
Ca-45		$4.0X10^{1}$	$1.1X10^{3}$	1.0	$2.7X10^{1}$	$6.6X10^{2}$	$1.8X10^{4}$
Ca-47 (a)		3.0	$8.1X10^{1}$	$3.0X10^{-1}$	8.1	$2.3X10^{4}$	$6.1X10^{5}$
Cd-109	Cadmium (48)	$3.0X10^{1}$	$8.1X10^{2}$	2.0	$5.4X10^{1}$	$9.6X10^{1}$	$2.6X10^{3}$
Cd-113m		$4.0X10^{1}$	$1.1X10^{3}$	$5.0X10^{-1}$	$1.4X10^{1}$	8.3	$2.2X10^{2}$
Cd-115 (a)		3.0	$8.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$1.9X10^{4}$	$5.1X10^{5}$
Cd-115m		$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$9.4X10^{2}$	$2.5X10^{4}$
Ce-139	Cerium (58)	7.0	$1.9X10^{2}$	2.0	$5.4X10^{1}$	$2.5X10^{2}$	$6.8X10^{3}$
Ce-141		$2.0X10^{1}$	$5.4X10^{2}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.1X10^{3}$	$2.8X10^{4}$
Ce-143		$9.0X10^{-1}$	$2.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.5X10^{4}$	$6.6X10^{5}$
Ce-144 (a)		$2.0X10^{-1}$	5.4	$2.0X10^{-1}$	5.4	$1.2X10^{2}$	$3.2X10^{3}$
Cf-248	Californium (98)	$4.0X10^{1}$	$1.1X10^{3}$	$6.0X10^{-3}$	$1.6X10^{-1}$	$5.8X10^{1}$	$1.6X10^{3}$
Cf-249		3.0	$8.1X10^{1}$	$8.0X10^{-4}$	$2.2X10^{-2}$	$1.5X10^{-1}$	4.1
Cf-250		$2.0X10^{1}$	$5.4X10^{2}$	$2.0X10^{-3}$	$5.4X10^{-2}$	4.0	$1.1X10^{2}$
Cf-251		7.0	$1.9X10^{2}$	$7.0X10^{-4}$	$1.9X10^{-2}$	$5.9X10^{-2}$	1.6
Cf-252 (h)		$5.0X10^{-2}$	1.4	$3.0X10^{-3}$	$8.1X10^{-2}$	$2.0X10^{1}$	$5.4X10^{2}$
Cf-253 (a)		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{-2}$	1.1	$1.1X10^{3}$	$2.9X10^{4}$
Cf-254		$1.0X10^{-3}$	$2.7X10^{-2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$3.1X10^{2}$	$8.5X10^{3}$
Cl-36	Chlorine (17)	$1.0X10^{1}$	$2.7X10^{2}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.2X10^{-3}$	$3.3X10^{-2}$
Cl-38		$2.0X10^{-1}$	5.4	$2.0X10^{-1}$	5.4	$4.9X10^{6}$	$1.3X10^{8}$
Cm-240	Curium (96)	$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$7.5X10^{2}$	$2.0X10^{4}$
Cm-241		2.0	$5.4X10^{1}$	1.0	$2.7X10^{1}$	$6.1X10^{2}$	$1.7X10^{4}$
Cm-242		$4.0X10^{1}$	$1.1X10^{3}$	$1.0X10^{-2}$	$2.7X10^{-1}$	$1.2X10^{2}$	$3.3X10^{3}$
Cm-243		9.0	$2.4X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$1.9X10^{-3}$	$5.2X10^{1}$
Cm-244		$2.0X10^{1}$	$5.4X10^{2}$	$2.0X10^{-3}$	$5.4X10^{-2}$	3.0	$8.1X10^{1}$
Cm-245		9.0	$2.4X10^{2}$	$9.0X10^{-4}$	$2.4X10^{-2}$	$6.4X10^{-3}$	$1.7X10^{-1}$
Cm-246		9.0	$2.4X10^{2}$	$9.0X10^{-4}$	$2.4X10^{-2}$	$1.1X10^{-2}$	$3.1X10^{-1}$
Cm-247 (a)		3.0	$8.1X10^{1}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$3.4X10^{-6}$	$9.3X10^{-5}$
Cm-248		$2.0X10^{-2}$	$5.4X10^{-1}$	$3.0X10^{-4}$	$8.1X10^{-3}$	$1.6X10^{-4}$	$4.2X10^{-3}$

Co-55	Cobalt (27)	$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$1.1X10^{5}$	$3.1X10^{6}$
Co-56		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$1.1X10^{3}$	$3.0X10^{4}$
Co-57		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{1}$	$2.7X10^{2}$	$3.1X10^{2}$	$8.4X10^{3}$
Co-58		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$1.2X10^{3}$	$3.2X10^{4}$
Co-58m		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$2.2X10^{5}$	$5.9X10^{6}$
Co-60		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$4.2X10^{1}$	$1.1X10^{3}$
Cr-51	Chromium (24)	$3.0X10^{1}$	$8.1X10^{2}$	$3.0X10^{1}$	$8.1X10^{2}$	$3.4X10^{3}$	$9.2X10^{4}$
Cs-129	Cesium (55)	4.0	$1.1X10^{2}$	4.0	$1.1X10^{2}$	$2.8X10^{4}$	$7.6X10^{5}$
Cs-131		$3.0X10^{1}$	$8.1X10^{2}$	$3.0X10^{1}$	$8.1X10^{2}$	$3.8X10^{3}$	$1.0X10^{5}$
Cs-132		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$5.7X10^{3}$	$1.5X10^{5}$
Cs-134		$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$4.8X10^{1}$	$1.3X10^{3}$
Cs-134m		$4.0X10^{1}$	$1.1X10^{3}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.0X10^{5}$	$8.0X10^{6}$
Cs-135		$4.0X10^{1}$	$1.1X10^{3}$	1.0	$2.7X10^{1}$	$4.3X10^{-5}$	$1.2X10^{-3}$
Cs-136		$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$2.7X10^{3}$	$7.3X10^{4}$
Cs-137 (a)		2.0	$5.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	3.2	$8.7X10^{1}$
Cu-64	Copper (29)	6.0	$1.6X10^{2}$	1.0	$2.7X10^{1}$	$1.4X10^{5}$	$3.9X10^{6}$
Cu-67		$1.0X10^{1}$	$2.7X10^{2}$	$7.0X10^{-1}$	$1.9X10^{1}$	$2.8X10^{4}$	$7.6X10^{5}$
Dy-159	Dysprosium (66)	$2.0X10^{1}$	$5.4X10^{2}$	$2.0X10^{1}$	$5.4X10^{2}$	$2.1X10^{2}$	$5.7X10^{3}$
Dy-165		$9.0X10^{-1}$	$2.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.0X10^{5}$	$8.2X10^{6}$
Dy-166 (a)		$9.0X10^{-1}$	$2.4X10^{1}$	$3.0X10^{-1}$	8.1	$8.6X10^{3}$	$2.3X10^{5}$
Er-169	Erbium (68)	$4.0X10^{1}$	$1.1X10^{3}$	1.0	$2.7X10^{1}$	$3.1X10^{3}$	$8.3X10^{4}$
Er-171		$8.0X10^{-1}$	$2.2X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$9.0X10^{4}$	$2.4X10^{6}$
Eu-147	Europium (63)	2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$1.4X10^{3}$	$3.7X10^{4}$
Eu-148		$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$6.0X10^{2}$	$1.6X10^{4}$
Eu-149		$2.0X10^{1}$	$5.4X10^{2}$	$2.0X10^{1}$	$5.4X10^{2}$	$3.5X10^{2}$	$9.4X10^{3}$
Eu-150 (short lived)		2.0	$5.4X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$6.1X10^{4}$	$1.6X10^{6}$
Eu-150 (long lived)		$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$6.1X10^{4}$	$1.6X10^{6}$
Eu-152		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	6.5	$1.8X10^{2}$
Eu-152m		$8.0X10^{-1}$	$2.2X10^{1}$	$8.0X10^{-1}$	$2.2X10^{1}$	$8.2X10^{4}$	$2.2X10^{6}$
Eu-154		$9.0X10^{-1}$	$2.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	9.8	$2.6X10^{2}$
Eu-155		$2.0X10^{1}$	$5.4X10^{2}$	3.0	$8.1X10^{1}$	$1.8X10^{1}$	$4.9X10^{2}$
Eu-156		$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$2.0X10^{3}$	$5.5X10^{4}$
F-18	Fluorine (9)	1.0	$2.7X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.5X10^{6}$	$9.5X10^{7}$
Fe-52 (a)	Iron (26)	$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$2.7X10^{5}$	$7.3X10^{6}$
Fe-55		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$8.8X10^{1}$	$2.4X10^{3}$
Fe-59		$9.0X10^{-1}$	$2.4X10^{1}$	$9.0X10^{-1}$	$2.4X10^{1}$	$1.8X10^{3}$	$5.0X10^{4}$
Fe-60 (a)		$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{-1}$	5.4	$7.4X10^{-4}$	$2.0X10^{-2}$
Ga-67	Gallium (31)	7.0	$1.9X10^{2}$	3.0	$8.1X10^{1}$	$2.2X10^{4}$	$6.0X10^{5}$
Ga-68		$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$1.5X10^{6}$	$4.1X10^{7}$
Ga-72		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$1.1X10^{5}$	$3.1X10^{6}$
Gd-146 (a)	Gadolinium (64)	$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$6.9X10^{2}$	$1.9X10^{4}$
Gd-148		$2.0X10^{1}$	$5.4X10^{2}$	$2.0X10^{-3}$	$5.4X10^{-2}$	1.2	$3.2X10^{1}$

Gd-153		$1.0X10^{1}$	$2.7X10^{2}$	9.0	$2.4X10^{2}$	$1.3X10^{2}$	$3.5X10^{3}$
Gd-159		3.0	$8.1X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.9X10^{4}$	$1.1X10^{6}$
Ge-68 (a)	Germanium (32)	$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$2.6X10^{2}$	$7.1X10^{3}$
Ge-71		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$5.8X10^{3}$	$1.6X10^{5}$
Ge-77		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$1.3X10^{5}$	$3.6X10^{6}$
Hf-172 (a)	Hafnium (72)	$6.0X10^{-1}$	$1.6X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$4.1X10^{1}$	$1.1X10^{3}$
Hf-175		3.0	$8.1X10^{1}$	3.0	$8.1X10^{1}$	$3.9X10^{2}$	$1.1X10^{4}$
Hf-181		2.0	$5.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$6.3X10^{2}$	$1.7X10^{4}$
Hf-182		Unlimited	Unlimited	Unlimited	Unlimited	$8.1X10^{-6}$	$2.2X10^{-4}$
Hg-194 (a)	Mercury (80)	1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$1.3X10^{-1}$	3.5
Hg-195m (a)		3.0	$8.1X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$1.5X10^{4}$	$4.0X10^{5}$
Hg-197		$2.0X10^{1}$	$5.4X10^{2}$	$1.0X10^{1}$	$2.7X10^{2}$	$9.2X10^{3}$	$2.5X10^{5}$
Hg-197m		$1.0X10^{1}$	$2.7X10^{2}$	$4.0X10^{-1}$	$1.1X10^{1}$	$2.5X10^{4}$	$6.7X10^{5}$
Hg-203		5.0	$1.4X10^{2}$	1.0	$2.7X10^{1}$	$5.1X10^{2}$	$1.4X10^{4}$
Ho-166	Holmium (67)	$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$2.6X10^{4}$	$7.0X10^{5}$
Ho-166m		$6.0X10^{-1}$	$1.6X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$6.6X10^{-2}$	1.8
I-123	Iodine (53)	6.0	$1.6X10^{2}$	3.0	$8.1X10^{1}$	$7.1X10^{4}$	$1.9X10^{6}$
I-124		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$9.3X10^{3}$	$2.5X10^{5}$
I-125		$2.0X10^{1}$	$5.4X10^{2}$	3.0	$8.1X10^{1}$	$6.4X10^{2}$	$1.7X10^{4}$
I-126		2.0	$5.4X10^{1}$	1.0	$2.7X10^{1}$	$2.9X10^{3}$	$8.0X10^{4}$
I-129		Unlimited	Unlimited	Unlimited	Unlimited	$6.5X10^{-6}$	$1.8X10^{-4}$
I-131		3.0	$8.1X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$4.6X10^{3}$	$1.2X10^{5}$
I-132		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$3.8X10^{5}$	$1.0X10^{7}$
I-133		$7.0X10^{-1}$	$1.9X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$4.2X10^{4}$	$1.1X10^{6}$
I-134		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$9.9X10^{5}$	$2.7X10^{7}$
I-135 (a)		$6.0X10^{-1}$	$1.6X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.3X10^{5}$	$3.5X10^{6}$
In-111	Indium (49)	3.0	$8.1X10^{1}$	3.0	$8.1X10^{1}$	$1.5X10^{4}$	$4.2X10^{5}$
In-113m		4.0	$1.1X10^{2}$	2.0	$5.4X10^{1}$	$6.2X10^{5}$	$1.7X10^{7}$
In-114m (a)		$1.0X10^{1}$	$2.7X10^{2}$	$5.0X10^{-1}$	$1.4X10^{1}$	$8.6X10^{2}$	$2.3X10^{4}$
In-115m		7.0	$1.9X10^{2}$	1.0	$2.7X10^{1}$	$2.2X10^{5}$	$6.1X10^{6}$
Ir-189 (a)	Iridium (77)	$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{1}$	$2.7X10^{2}$	$1.9X10^{3}$	$5.2X10^{4}$
Ir-190		$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$2.3X10^{3}$	$6.2X10^{4}$
Ir-192 (c)		1.0	$2.7X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.4X10^{2}$	$9.2X10^{3}$
Ir-194		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$3.1X10^{4}$	$8.4X10^{5}$
K-40	Potassium (19)	$9.0X10^{-1}$	$2.4X10^{1}$	$9.0X10^{-1}$	$2.4X10^{1}$	$2.4X10^{-7}$	$6.4X10^{-6}$
K-42		$2.0X10^{-1}$	5.4	$2.0X10^{-1}$	5.4	$2.2X10^{5}$	$6.0X10^{6}$
K-43		$7.0X10^{-1}$	$1.9X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.2X10^{5}$	$3.3X10^{6}$
Kr-81	Krypton (36)	$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$7.8X10^{-4}$	$2.1X10^{-2}$
Kr-85		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{1}$	$2.7X10^{2}$	$1.5X10^{1}$	$3.9X10^{2}$
Kr-85m		8.0	$2.2X10^{2}$	3.0	$8.1X10^{1}$	$3.0X10^{5}$	$8.2X10^{6}$
Kr-87		$2.0X10^{-1}$	5.4	$2.0X10^{-1}$	5.4	$1.0X10^{6}$	$2.8X10^{7}$
La-137	Lanthanum (57)	$3.0X10^{1}$	$8.1X10^{2}$	6.0	$1.6X10^{2}$	$1.6X10^{-3}$	$4.4X10^{-2}$

La-140		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$2.1X10^{4}$	$5.6X10^{5}$
Lu-172	Lutetium (71)	$6.0X10^{-1}$	$1.6X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$4.2X10^{3}$	$1.1X10^{5}$
Lu-173		8.0	$2.2X10^{2}$	8.0	$2.2X10^{2}$	$5.6X10^{1}$	$1.5X10^{3}$
Lu-174		9.0	$2.4X10^{2}$	9.0	$2.4X10^{2}$	$2.3X10^{1}$	$6.2X10^{2}$
Lu-174m		$2.0X10^{1}$	$5.4X10^{2}$	$1.0X10^{1}$	$2.7X10^{2}$	$2.0X10^{2}$	$5.3X10^{3}$
Lu-177		$3.0X10^{1}$	$8.1X10^{2}$	$7.0X10^{-1}$	$1.9X10^{1}$	$4.1X10^{3}$	$1.1X10^{5}$
Mg-28 (a)	Magnesium (12)	$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$2.0X10^{5}$	$5.4X10^{6}$
Mn-52	Manganese (25)	$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$1.6X10^{4}$	$4.4X10^{5}$
Mn-53		Unlimited	Unlimited	Unlimited	Unlimited	$6.8X10^{-5}$	$1.8X10^{-3}$
Mn-54		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$2.9X10^{2}$	$7.7X10^{3}$
Mn-56		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$8.0X10^{5}$	$2.2X10^{7}$
Mo-93	Molybdenum (42)	$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{1}$	$5.4X10^{2}$	$4.1X10^{-2}$	1.1
Mo-99 (a) (i)		1.0	$2.7X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.8X10^{4}$	$4.8X10^{5}$
N-13	Nitrogen (7)	$9.0X10^{-1}$	$2.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$5.4X10^{7}$	$1.5X10^{9}$
Na-22	Sodium (11)	$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$2.3X10^{2}$	$6.3X10^{3}$
Na-24		$2.0X10^{-1}$	5.4	$2.0X10^{-1}$	5.4	$3.2X10^{5}$	$8.7X10^{6}$
Nb-93m	Niobium (41)	$4.0X10^{1}$	$1.1X10^{3}$	$3.0X10^{1}$	$8.1X10^{2}$	8.8	$2.4X10^{2}$
Nb-94		$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$6.9X10^{-3}$	$1.9X10^{-1}$
Nb-95		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$1.5X10^{3}$	$3.9X10^{4}$
Nb-97		$9.0X10^{-1}$	$2.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$9.9X10^{5}$	$2.7X10^{7}$
Nd-147	Neodymium (60)	6.0	$1.6X10^{2}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.0X10^{3}$	$8.1X10^{4}$
Nd-149		$6.0X10^{-1}$	$1.6X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$4.5X10^{5}$	$1.2X10^{7}$
Ni-59	Nickel (28)	Unlimited	Unlimited	Unlimited	Unlimited	$3.0X10^{-3}$	$8.0X10^{-2}$
Ni-63		$4.0X10^{1}$	$1.1X10^{3}$	$3.0X10^{1}$	$8.1X10^{2}$	2.1	$5.7X10^{1}$
Ni-65		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$7.1X10^{5}$	$1.9X10^{7}$
Np-235	Neptunium (93)	$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$5.2X10^{1}$	$1.4X10^{3}$
Np-236 (short-lived)		$2.0X10^{1}$	$5.4X10^{2}$	2.0	$5.4X10^{1}$	$4.7X10^{-4}$	$1.3X10^{-2}$
Np-236 (long-lived)		$9.0X10^{0}$	$2.4X10^{2}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$4.7X10^{-4}$	$1.3X10^{-2}$
Np-237		$2.0X10^{1}$	$5.4X10^{2}$	$2.0X10^{-3}$	$5.4X10^{-2}$	$2.6X10^{-5}$	$7.1X10^{-4}$
Np-239		7.0	$1.9X10^{2}$	$4.0X10^{-1}$	$1.1X10^{1}$	$8.6X10^{3}$	$2.3X10^{5}$
Os-185	Osmium (76)	1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$2.8X10^{2}$	$7.5X10^{3}$
Os-191		$1.0X10^{1}$	$2.7X10^{2}$	2.0	$5.4X10^{1}$	$1.6X10^{3}$	$4.4X10^{4}$
Os-191m		$4.0X10^{1}$	$1.1X10^{3}$	$3.0X10^{1}$	$8.1X10^{2}$	$4.6X10^{4}$	$1.3X10^{6}$
Os-193		2.0	$5.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.0X10^{4}$	$5.3X10^{5}$
Os-194 (a)		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$1.1X10^{1}$	$3.1X10^{2}$
P-32	Phosphorus (15)	$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$1.1X10^{4}$	$2.9X10^{5}$
P-33		$4.0X10^{1}$	$1.1X10^{3}$	1.0	$2.7X10^{1}$	$5.8X10^{3}$	$1.6X10^{5}$
Pa-230 (a)	Protactinium (91)	2.0	$5.4X10^{1}$	$7.0X10^{-2}$	1.9	$1.2X10^{3}$	$3.3X10^{4}$
Pa-231		4.0	$1.1X10^{2}$	$4.0X10^{-4}$	$1.1X10^{-2}$	$1.7X10^{-3}$	$4.7X10^{-2}$
Pa-233		5.0	$1.4X10^{2}$	$7.0X10^{-1}$	$1.9X10^{1}$	$7.7X10^{2}$	$2.1X10^{4}$
Pb-201	Lead (82)	1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$6.2X10^{4}$	$1.7X10^{6}$
Pb-202		$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{1}$	$5.4X10^{2}$	$1.2X10^{-4}$	$3.4X10^{-3}$

Pb-203		4.0	$1.1X10^{2}$	3.0	$8.1X10^{1}$	$1.1X10^{4}$	$3.0X10^{5}$
Pb-205		Unlimited	Unlimited	Unlimited	Unlimited	$4.5X10^{-6}$	$1.2X10^{-4}$
Pb-210 (a)		1.0	$2.7X10^{1}$	$5.0X10^{-2}$	1.4	2.8	$7.6X10^{1}$
Pb-212 (a)		$7.0X10^{-1}$	$1.9X10^{1}$	$2.0X10^{-1}$	5.4	$5.1X10^{4}$	$1.4X10^{6}$
Pd-103 (a)	Palladium (46)	$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$2.8X10^{3}$	$7.5X10^{4}$
Pd-107		Unlimited	Unlimited	Unlimited	Unlimited	$1.9X10^{-5}$	$5.1X10^{-4}$
Pd-109		2.0	$5.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$7.9X10^{4}$	$2.1X10^{6}$
Pm-143	Promethium (61)	3.0	$8.1X10^{1}$	3.0	$8.1X10^{1}$	$1.3X10^{2}$	$3.4X10^{3}$
Pm-144		$7.0X10^{-1}$	$1.9X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$9.2X10^{1}$	$2.5X10^{3}$
Pm-145		$3.0X10^{1}$	$8.1X10^{2}$	$1.0X10^{1}$	$2.7X10^{2}$	5.2	$1.4X10^{2}$
Pm-147		$4.0X10^{1}$	$1.1X10^{3}$	2.0	$5.4X10^{1}$	$3.4X10^{1}$	$9.3X10^{2}$
Pm-148m (a)		$8.0X10^{-1}$	$2.2X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$7.9X10^{2}$	$2.1X10^{4}$
Pm-149		2.0	$5.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.5X10^{4}$	$4.0X10^{5}$
Pm-151		2.0	$5.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.7X10^{4}$	$7.3X10^{5}$
Po-210	Polonium (84)	$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$1.7X10^{2}$	$4.5X10^{3}$
Pr-142	Praseodymium (59)	$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$4.3X10^{4}$	$1.2X10^{6}$
Pr-143		3.0	$8.1X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.5X10^{3}$	$6.7X10^{4}$
Pt-188 (a)	Platinum (78)	1.0	$2.7X10^{1}$	$8.0X10^{-1}$	$2.2X10^{1}$	$2.5X10^{3}$	$6.8X10^{4}$
Pt-191		4.0	$1.1X10^{2}$	3.0	$8.1X10^{1}$	$8.7X10^{3}$	$2.4X10^{5}$
Pt-193		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	1.4	$3.7X10^{1}$
Pt-193m		$4.0X10^{1}$	$1.1X10^{3}$	$5.0X10^{-1}$	$1.4X10^{1}$	$5.8X10^{3}$	$1.6X10^{5}$
Pt-195m		$1.0X10^{1}$	$2.7X10^{2}$	$5.0X10^{-1}$	$1.4X10^{1}$	$6.2X10^{3}$	$1.7X10^{5}$
Pt-197		$2.0X10^{1}$	$5.4X10^{2}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.2X10^{4}$	$8.7X10^{5}$
Pt-197m		$1.0X10^{1}$	$2.7X10^{2}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.7X10^{5}$	$1.0X10^{7}$
Pu-236	Plutonium (94)	$3.0X10^{1}$	$8.1X10^{2}$	$3.0X10^{-3}$	$8.1X10^{-2}$	$2.0X10^{1}$	$5.3X10^{2}$
Pu-237		$2.0X10^{1}$	$5.4X10^{2}$	$2.0X10^{1}$	$5.4X10^{2}$	$4.5X10^{2}$	$1.2X10^{4}$
Pu-238		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$6.3X10^{-1}$	$1.7X10^{1}$
Pu-239		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$2.3X10^{-3}$	$6.2X10^{-2}$
Pu-240		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$8.4X10^{-3}$	$2.3X10^{-1}$
Pu-241 (a)		$4.0X10^{1}$	$1.1X10^{3}$	$6.0X10^{-2}$	1.6	3.8	$1.0X10^{2}$
Pu-242		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$1.5X10^{-4}$	$3.9X10^{-3}$
Pu-244 (a)		$4.0X10^{-1}$	$1.1X10^{1}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$6.7X10^{-7}$	$1.8X10^{-5}$
Ra-223 (a)	Radium (88)	$4.0X10^{-1}$	$1.1X10^{1}$	$7.0X10^{-3}$	$1.9X10^{-1}$	$1.9X10^{3}$	$5.1X10^{4}$
Ra-224 (a)		$4.0X10^{-1}$	$1.1X10^{1}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$5.9X10^{3}$	$1.6X10^{5}$
Ra-225 (a)		$2.0X10^{-1}$	5.4	$4.0X10^{-3}$	$1.1X10^{-1}$	$1.5X10^{3}$	$3.9X10^{4}$
Ra-226 (a)		$2.0X10^{-1}$	5.4	$3.0X10^{-3}$	$8.1X10^{-2}$	$3.7X10^{-2}$	1.0
Ra-228 (a)		$6.0X10^{-1}$	$1.6X10^{1}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$1.0X10^{1}$	$2.7X10^{2}$
Rb-81	Rubidium (37)	2.0	$5.4X10^{1}$	$8.0X10^{-1}$	$2.2X10^{1}$	$3.1X10^{5}$	$8.4X10^{6}$
Rb-83 (a)		2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$6.8X10^{2}$	$1.8X10^{4}$
Rb-84		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$1.8X10^{3}$	$4.7X10^{4}$
Rb-86		$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$3.0X10^{3}$	$8.1X10^{4}$
Rb-87		Unlimited	Unlimited	Unlimited	Unlimited	$3.2X10^{-9}$	$8.6X10^{-8}$

Rb(nat)		Unlimited	Unlimited	Unlimited	Unlimited	$6.7X10^{6}$	$1.8X10^{8}$
Re-184	Rhenium (75)	1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$6.9X10^{2}$	$1.9X10^{4}$
Re-184m		3.0	$8.1X10^{1}$	1.0	$2.7X10^{1}$	$1.6X10^{2}$	$4.3X10^{3}$
Re-186		2.0	$5.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$6.9X10^{3}$	$1.9X10^{5}$
Re-187		Unlimited	Unlimited	Unlimited	Unlimited	$1.4X10^{-9}$	$3.8X10^{-8}$
Re-188		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$3.6X10^{4}$	$9.8X10^{5}$
Re-189 (a)		3.0	$8.1X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.5X10^{4}$	$6.8X10^{5}$
Re(nat)		Unlimited	Unlimited	Unlimited	Unlimited	0.0	$2.4X10^{-8}$
Rh-99	Rhodium (45)	2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$3.0X10^{3}$	$8.2X10^{4}$
Rh-101		4.0	$1.1X10^{2}$	3.0	$8.1X10^{1}$	$4.1X10^{1}$	$1.1X10^{3}$
Rh-102		$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$4.5X10^{1}$	$1.2X10^{3}$
Rh-102m		2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$2.3X10^{2}$	$6.2X10^{3}$
Rh-103m		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$1.2X10^{6}$	$3.3X10^{7}$
Rh-105		$1.0X10^{1}$	$2.7X10^{2}$	$8.0X10^{-1}$	$2.2X10^{1}$	$3.1X10^{4}$	$8.4X10^{5}$
Rn-222 (a)	Radon (86)	$3.0X10^{-1}$	8.1	$4.0X10^{-3}$	$1.1X10^{-1}$	$5.7X10^{3}$	$1.5X10^{5}$
Ru-97	Ruthenium (44)	5.0	$1.4X10^{2}$	5.0	$1.4X10^{2}$	$1.7X10^{4}$	$4.6X10^{5}$
Ru-103 (a)		2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$1.2X10^{3}$	$3.2X10^{4}$
Ru-105		1.0	$2.7X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.5X10^{5}$	$6.7X10^{6}$
Ru-106 (a)		$2.0X10^{-1}$	5.4	$2.0X10^{-1}$	5.4	$1.2X10^{2}$	$3.3X10^{3}$
S-35	Sulphur (16)	$4.0X10^{1}$	$1.1X10^{3}$	3.0	$8.1X10^{1}$	$1.6X10^{3}$	$4.3X10^{4}$
Sb-122	Antimony (51)	$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$1.5X10^{4}$	$4.0X10^{5}$
Sb-124		$6.0X10^{-1}$	$1.6X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$6.5X10^{2}$	$1.7X10^{4}$
Sb-125		2.0	$5.4X10^{1}$	1.0	$2.7X10^{1}$	$3.9X10^{1}$	$1.0X10^{3}$
Sb-126		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$3.1X10^{3}$	$8.4X10^{4}$
Sc-44	Scandium (21)	$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$6.7X10^{5}$	$1.8X10^{7}$
Sc-46		$5.0X10^{-1}$	$1.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$1.3X10^{3}$	$3.4X10^{4}$
Sc-47		$1.0X10^{1}$	$2.7X10^{2}$	$7.0X10^{-1}$	$1.9X10^{1}$	$3.1X10^{4}$	$8.3X10^{5}$
Sc-48		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$5.5X10^{4}$	$1.5X10^{6}$
Se-75	Selenium (34)	3.0	$8.1X10^{1}$	3.0	$8.1X10^{1}$	$5.4X10^{2}$	$1.5X10^{4}$
Se-79		$4.0X10^{1}$	$1.1X10^{3}$	2.0	$5.4X10^{1}$	$2.6X10^{-3}$	$7.0X10^{-2}$
Si-31	Silicon (14)	$6.0X10^{-1}$	$1.6X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.4X10^{6}$	$3.9X10^{7}$
Si-32		$4.0X10^{1}$	$1.1X10^{3}$	$5.0X10^{-1}$	$1.4X10^{1}$	3.9	$1.1X10^{2}$
Sm-145	Samarium (62)	$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{1}$	$2.7X10^{2}$	$9.8X10^{1}$	$2.6X10^{3}$
Sm-147		Unlimited	Unlimited	Unlimited	Unlimited	$8.5X10^{-1}$	$2.3X10^{-8}$
Sm-151		$4.0X10^{1}$	$1.1X10^{3}$	$1.0X10^{1}$	$2.7X10^{2}$	$9.7X10^{-1}$	$2.6X10^{1}$
Sm-153		9.0	$2.4X10^{2}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.6X10^{4}$	$4.4X10^{5}$
Sn-113 (a)	Tin (50)	4.0	$1.1X10^{2}$	2.0	$5.4X10^{1}$	$3.7X10^{2}$	$1.0X10^{4}$
Sn-117m		7.0	$1.9X10^{2}$	$4.0X10^{-1}$	$1.1X10^{1}$	$3.0X10^{3}$	$8.2X10^{4}$
Sn-119m		$4.0X10^{1}$	$1.1X10^{3}$	$3.0X10^{1}$	$8.1X10^{2}$	$1.4X10^{2}$	$3.7X10^{3}$
Sn-121m (a)		$4.0X10^{1}$	$1.1X10^{3}$	$9.0X10^{-1}$	$2.4X10^{1}$	2.0	$5.4X10^{1}$
Sn-123		$8.0X10^{-1}$	$2.2X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$3.0X10^{2}$	$8.2X10^{3}$
Sn-125		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{3}$	$1.1X10^{5}$

Sn-126 (a)		$6.0X10^{-1}$	$1.6X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$1.0X10^{-3}$	$2.8X10^{-2}$
Sr-82 (a)	Strontium (38)	$2.0X10^{-1}$	5.4	$2.0X10^{-1}$	5.4	$2.3X10^{3}$	$6.2X10^{4}$
Sr-85		2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$8.8X10^{2}$	$2.4X10^{4}$
Sr-85m		5.0	$1.4X10^{2}$	5.0	$1.4X10^{2}$	$1.2X10^{6}$	$3.3X10^{7}$
Sr-87m		3.0	$8.1X10^{1}$	3.0	$8.1X10^{1}$	$4.8X10^{5}$	$1.3X10^{7}$
Sr-89		$6.0X10^{-1}$	$1.6X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.1X10^{3}$	$2.9X10^{4}$
Sr-90 (a)		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	5.1	$1.4X10^{2}$
Sr-91 (a)		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$1.3X10^{5}$	$3.6X10^{6}$
Sr-92 (a)		1.0	$2.7X10^{1}$	$3.0X10^{-1}$	8.1	$4.7X10^{5}$	$1.3X10^{7}$
T(H-3)	Tritium (1)	$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$3.6X10^{2}$	$9.7X10^{3}$
Ta-178 (long-lived)	Tantalum (73)	1.0	$2.7X10^{1}$	$8.0X10^{-1}$	$2.2X10^{1}$	$4.2X10^{6}$	$1.1X10^{8}$
Ta-179		$3.0X10^{1}$	$8.1X10^{2}$	$3.0X10^{1}$	$8.1X10^{2}$	$4.1X10^{1}$	$1.1X10^{3}$
Ta-182		$9.0X10^{-1}$	$2.4X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$2.3X10^{2}$	$6.2X10^{3}$
Tb-157	Terbium (65)	$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$5.6X10^{-1}$	$1.5X10^{1}$
Tb-158		1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$5.6X10^{-1}$	$1.5X10^{1}$
Tb-160		1.0	$2.7X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$4.2X10^{2}$	$1.1X10^{4}$
Tc-95m (a)	Technetium (43)	2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$8.3X10^{2}$	$2.2X10^{4}$
Tc-96		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$1.2X10^{4}$	$3.2X10^{5}$
Tc-96m (a)		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$1.4X10^{6}$	$3.8X10^{7}$
Tc-97		Unlimited	Unlimited	Unlimited	Unlimited	$5.2X10^{-5}$	$1.4X10^{-3}$
Tc-97m		$4.0X10^{1}$	$1.1X10^{3}$	1.0	$2.7X10^{1}$	$5.6X10^{2}$	$1.5X10^{4}$
Tc-98		$8.0X10^{-1}$	$2.2X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$3.2X10^{-5}$	$8.7X10^{-4}$
Tc-99		$4.0X10^{1}$	$1.1X10^{3}$	$9.0X10^{-1}$	$2.4X10^{1}$	$6.3X10^{-4}$	$1.7X10^{-2}$
Tc-99m		$1.0X10^{1}$	$2.7X10^{2}$	4.0	$1.1X10^{2}$	$1.9X10^{5}$	$5.3X10^{6}$
Te-121	Tellurium (52)	2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$2.4X10^{3}$	$6.4X10^{4}$
Te-121m		5.0	$1.4X10^{2}$	3.0	$8.1X10^{1}$	$2.6X10^{2}$	$7.0X10^{3}$
Te-123m		8.0	$2.2X10^{2}$	1.0	$2.7X10^{1}$	$3.3X10^{2}$	$8.9X10^{3}$
Te-125m		$2.0X10^{1}$	$5.4X10^{2}$	$9.0X10^{-1}$	$2.4X10^{1}$	$6.7X10^{2}$	$1.8X10^{4}$
Te-127		$2.0X10^{1}$	$5.4X10^{2}$	$7.0X10^{-1}$	$1.9X10^{1}$	$9.8X10^{4}$	$2.6X10^{6}$
Te-127m (a)		$2.0X10^{1}$	$5.4X10^{2}$	$5.0X10^{-1}$	$1.4X10^{1}$	$3.5X10^{2}$	$9.4X10^{3}$
Te-129		$7.0X10^{-1}$	$1.9X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$7.7X10^{5}$	$2.1X10^{7}$
Te-129m (a)		$8.0X10^{-1}$	$2.2X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$1.1X10^{3}$	$3.0X10^{4}$
Te-131m (a)		$7.0X10^{-1}$	$1.9X10^{1}$	$5.0X10^{-1}$	$1.4X10^{1}$	$3.0X10^{4}$	$8.0X10^{5}$
Te-132 (a)		$5.0X10^{-1}$	$1.4X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$3.1X10^{4}$	$3.0X10^{5}$
Th-227	Thorium (90)	$1.0X10^{1}$	$2.7X10^{2}$	$5.0X10^{-3}$	$1.4X10^{-1}$	$1.1X10^{3}$	$3.1X10^{4}$
Th-228 (a)		$5.0X10^{-1}$	$1.4X10^{1}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$3.0X10^{1}$	$8.2X10^{2}$
Th-229		5.0	$1.4X10^{2}$	$5.0X10^{-4}$	$1.4X10^{-2}$	$7.9X10^{-3}$	$2.1X10^{-1}$
Th-230		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$7.6X10^{-4}$	$2.1X10^{-2}$
Th-231		$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$2.0X10^{4}$	$5.3X10^{5}$
Th-232		Unlimited	Unlimited	Unlimited	Unlimited	$4.0X10^{-9}$	$1.1X10^{-7}$
Th-234 (a)		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$8.6X10^{2}$	$2.3X10^{4}$
Th(nat)		Unlimited	Unlimited	Unlimited	Unlimited	$8.1X10^{-9}$	$2.2X10^{-7}$

Ti-44 (a)	Titanium (22)	$5.0X10^{-1}$	$1.4X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	6.4	$1.7X10^{2}$
Tl-200	Thallium (81)	$9.0X10^{-1}$	$2.4X10^{1}$	$9.0X10^{-1}$	$2.4X10^{1}$	$2.2X10^{4}$	$6.0X10^{5}$
Tl-201		$1.0X10^{1}$	$2.7X10^{2}$	4.0	$1.1X10^{2}$	$7.9X10^{3}$	$2.1X10^{5}$
Tl-202		2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$2.0X10^{3}$	$5.3X10^{4}$
Tl-204		$1.0X10^{1}$	$2.7X10^{2}$	$7.0X10^{-1}$	$1.9X10^{1}$	$1.7X10^{1}$	$4.6X10^{2}$
Tm-167	Thulium (69)	7.0	$1.9X10^{2}$	$8.0X10^{-1}$	$2.2X10^{1}$	$3.1X10^{3}$	$8.5X10^{4}$
Tm-170		3.0	$8.1X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.2X10^{2}$	$6.0X10^{3}$
Tm-171		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$
U-230 (fast lung absorption) (a)(d)	Uranium (92)	$4.0X10^{1}$	$1.1X10^{3}$	$1.0X10^{-1}$	2.7	$1.0X10^{3}$	$2.7X10^{4}$
U-230 (medium lung absorption) (a)(e)		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{-3}$	$1.1X10^{-1}$	$1.0X10^{3}$	$2.7X10^{4}$
U-230 (slow lung absorption) (a)(f)		$3.0X10^{1}$	$8.1X10^{2}$	$3.0X10^{-3}$	$8.1X10^{-2}$	$1.0X10^{3}$	$2.7X10^{4}$
U-232 (fast lung absorption) (d)		$4.0X10^{1}$	$1.1X10^{3}$	$1.0X10^{-2}$	$2.7X10^{-1}$	$8.3X10^{-1}$	$2.2X10^{1}$
U-232 (medium lung absorption) (e)		$4.0X10^{1}$	$1.1X10^{3}$	$7.0X10^{-3}$	$1.9X10^{-1}$	$8.3X10^{-1}$	$2.2X10^{1}$
U-232 (slow lung absorption) (f)		$1.0X10^{1}$	$2.7X10^{2}$	$1.0X10^{-3}$	$2.7X10^{-2}$	$8.3X10^{-1}$	$2.2X10^{1}$
U-233 (fast lung absorption) (d)		$4.0X10^{1}$	$1.1X10^{3}$	$9.0X10^{-2}$	2.4	$3.6X10^{-4}$	$9.7X10^{-3}$
U-233 (medium lung absorption) (e)		$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$3.6X10^{-4}$	$9.7X10^{-3}$
U-233 (slow lung absorption) (f)		$4.0X10^{1}$	$1.1X10^{3}$	$6.0X10^{-3}$	$1.6X10^{-1}$	$3.6X10^{-4}$	$9.7X10^{-3}$
U-234 (fast lung absorption) (d)		$4.0X10^{1}$	$1.1X10^{3}$	$9.0X10^{-2}$	2.4	$2.3X10^{-4}$	$6.2X10^{-3}$
U-234 (medium lung absorption) (e)		$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$2.3X10^{-4}$	$6.2X10^{-3}$
U-234 (slow lung absorption) (f)		$4.0X10^{1}$	$1.1X10^{3}$	$6.0X10^{-3}$	$1.6X10^{-1}$	$2.3X10^{-4}$	$6.2X10^{-3}$
U-235 (all lung absorption types) (a),(d),(e),(f)		Unlimited	Unlimited	Unlimited	Unlimited	$8.0X10^{-8}$	$2.2X10^{-6}$
U-236 (fast lung absorption) (d)		Unlimited	Unlimited	Unlimited	Unlimited	$2.4X10^{-6}$	$6.5X10^{-5}$
U-236 (medium lung absorption) (e)		$4.0X10^{1}$	$1.1X10^{3}$	$2.0X10^{-2}$	$5.4X10^{-1}$	$2.4X10^{-6}$	$6.5X10^{-5}$
U-236 (slow lung absorption) (f)		$4.0X10^{1}$	$1.1X10^{3}$	$6.0X10^{-3}$	$1.6X10^{-1}$	$2.4X10^{-6}$	$6.5X10^{-5}$
U-238 (all lung absorption types) (d),(e),(f)		Unlimited	Unlimited	Unlimited	Unlimited	$1.2X10^{-8}$	$3.4X10^{-7}$
U (nat)		Unlimited	Unlimited	Unlimited	Unlimited	$2.6X10^{-8}$	$7.1X10^{-7}$
U (enriched to 20% or less) (g)		Unlimited	Unlimited	Unlimited	Unlimited	See Table A-4	See Table A-4
U (dep)		Unlimited	Unlimited	Unlimited	Unlimited	See Table A-4	(See Table A-3)
V-48	Vanadium (23)	$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$6.3X10^{3}$	$1.7X10^{5}$
V-49		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$3.0X10^{2}$	$8.1X10^{3}$
W-178 (a)	Tungsten (74)	9.0	$2.4X10^{2}$	5.0	$1.4X10^{2}$	$1.3X10^{3}$	$3.4X10^{4}$
W-181		$3.0X10^{1}$	$8.1X10^{2}$	$3.0X10^{1}$	$8.1X10^{2}$	$2.2X10^{2}$	$6.0X10^{3}$
W-185		$4.0X10^{1}$	$1.1X10^{3}$	$8.0X10^{-1}$	$2.2X10^{1}$	$3.5X10^{2}$	$9.4X10^{3}$

W-187		2.0	$5.4X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$2.6X10^{4}$	$7.0X10^{5}$
W-188 (a)		$4.0X10^{-1}$	$1.1X10^{1}$	$3.0X10^{-1}$	8.1	$3.7X10^{2}$	$1.0X10^{4}$
Xe-122 (a)	Xenon (54)	$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$4.8X10^{4}$	$1.3X10^{6}$
Xe-123		2.0	$5.4X10^{1}$	$7.0X10^{-1}$	$1.9X10^{1}$	$4.4X10^{5}$	$1.2X10^{7}$
Xe-127		4.0	$1.1X10^{2}$	2.0	$5.4X10^{1}$	$1.0X10^{3}$	$2.8X10^{4}$
Xe-131m		$4.0X10^{1}$	$1.1X10^{3}$	$4.0X10^{1}$	$1.1X10^{3}$	$3.1X10^{3}$	$8.4X10^{4}$
Xe-133		$2.0X10^{1}$	$5.4X10^{2}$	$1.0X10^{1}$	$2.7X10^{2}$	$6.9X10^{3}$	$1.9X10^{5}$
Xe-135		3.0	$8.1X10^{1}$	2.0	$5.4X10^{1}$	$9.5X10^{4}$	$2.6X10^{6}$
Y-87 (a)	Yttrium (39)	1.0	$2.7X10^{1}$	1.0	$2.7X10^{1}$	$1.7X10^{4}$	$4.5X10^{5}$
Y-88		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$5.2X10^{2}$	$1.4X10^{4}$
Y-90		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$2.0X10^{4}$	$5.4X10^{5}$
Y-91		$6.0X10^{-1}$	$1.6X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$9.1X10^{2}$	$2.5X10^{4}$
Y-91m		2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$1.5X10^{6}$	$4.2X10^{7}$
Y-92		$2.0X10^{-1}$	5.4	$2.0X10^{-1}$	5.4	$3.6X10^{5}$	$9.6X10^{6}$
Y-93		$3.0X10^{-1}$	8.1	$3.0X10^{-1}$	8.1	$1.2X10^{5}$	$3.3X10^{6}$
Yb-169	Ytterbium (70)	4.0	$1.1X10^{2}$	1.0	$2.7X10^{1}$	$8.9X10^{2}$	$2.4X10^{4}$
Yb-175		$3.0X10^{1}$	$8.1X10^{2}$	$9.0X10^{-1}$	$2.4X10^{1}$	$6.6X10^{3}$	$1.8X10^{5}$
Zn-65	Zinc (30)	2.0	$5.4X10^{1}$	2.0	$5.4X10^{1}$	$3.0X10^{2}$	$8.2X10^{3}$
Zn-69		3.0	$8.1X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.8X10^{6}$	$4.9X10^{7}$
Zn-69m (a)		3.0	$8.1X10^{1}$	$6.0X10^{-1}$	$1.6X10^{1}$	$1.2X10^{5}$	$3.3X10^{6}$
Zr-88	Zirconium (40)	3.0	$8.1X10^{1}$	3.0	$8.1X10^{1}$	$6.6X10^{2}$	$1.8X10^{4}$
Zr-93		Unlimited	Unlimited	Unlimited	Unlimited	$9.3X10^{-5}$	$2.5X10^{-3}$
Zr-95 (a)		2.0	$5.4X10^{1}$	$8.0X10^{-1}$	$2.2X10^{1}$	$7.9X10^{2}$	$2.1X10^{4}$
Zr-97 (a)		$4.0X10^{-1}$	$1.1X10^{1}$	$4.0X10^{-1}$	$1.1X10^{1}$	$7.1X10^{4}$	$1.9X10^{6}$

[a] A_1 and/or A_2 values include contributions from daughter nuclides with half-lives less than 10 days.

[b] The values of A_1 and A_2 in Curies (Ci) are approximate and for information only; the regulatory standard units are Terabecquerels (TBq), (see Appendix A to Part 71 - Determination of A_1 and A_2, Section I.).

[c] The quantity may be determined from a measurement of the rate of decay or a measurement of the radiation level at a prescribed distance from the source.

[d] These values apply only to compounds of uranium that take the chemical form of UF_6, UO_2F_2 and $UO_2(NO_3)_2$ in both normal and accident conditions of transport.

[e] These values apply only to compounds of uranium that take the chemical form of UO_3, UF_4, UCl_4 and hexavalent compounds in both normal and accident conditions of transport.

[f] These values apply to all compounds of uranium other than those specified in notes (d) and (e) of this table.

[g] These values apply to unirradiated uranium only.

[h] A_1 = 0.1 TBq (2.7 Ci) and A_2 = 0.001 TBq (0.027 Ci) for Cf-252 for domestic use.

[i] A_2 = 0.74 TBq (20 Ci) for Mo-99 for domestic use.

Table A-2—EXEMPT MATERIAL ACTIVITY CONCENTRATIONS AND EXEMPT CONSIGNMENT ACTIVITY LIMITS FOR RADIONUCLIDES

Symbol of radionuclide	Element and atomic number	Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limit for exempt consignment (Bq)	Activity limit for exempt consignment (Ci)
Ac-225	Actinium (89)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Ac-227		$1.0X10^{-1}$	$2.7X10^{-12}$	$1.0X10^{3}$	$2.7X10^{-8}$
Ac-228		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$

Ag-105	Silver (47)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ag-108m (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ag-110m		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ag-111		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Al-26	Aluminum (13)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Am-241	Americium (95)	1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Am-242m (b)		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Am-243 (b)		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Ar-37	Argon (18)	$1.0X10^{6}$	$2.7X10^{-5}$	$1.0X10^{8}$	$2.7X10^{-3}$
Ar-39		$1.0X10^{7}$	$2.7X10^{-4}$	$1.0X10^{4}$	$2.7X10^{-7}$
Ar-41		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{9}$	$2.7X10^{-2}$
As-72	Arsenic (33)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
As-73		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
As-74		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
As-76		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
As-77		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
At-211	Astatine (85)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Au-193	Gold (79)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Au-194		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Au-195		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Au-198		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Au-199		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ba-131	Barium (56)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ba-133		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ba-133m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ba-140 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Be-7	Beryllium (4)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Be-10		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{6}$	$2.7X10^{-5}$
Bi-205	Bismuth (83)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Bi-206		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Bi-207		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Bi-210		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Bi-210m		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Bi-212 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Bk-247	Berkelium (97)	1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Bk-249		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Br-76	Bromine (35)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Br-77		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Br-82		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
C-11	Carbon (6)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
C-14		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Ca-41	Calcium (20)	$1.0X10^{5}$	$2.7X10^{-6}$	$1.0X10^{7}$	$2.7X10^{-4}$

Ca-45		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Ca-47		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Cd-109	Cadmium (48)	$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{6}$	$2.7X10^{-5}$
Cd-113m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Cd-115		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Cd-115m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ce-139	Cerium (58)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ce-141		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Ce-143		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ce-144 (b)		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cf-248	Californium (98)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Cf-249		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Cf-250		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Cf-251		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Cf-252		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Cf-253		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cf-254		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Cl-36	Chlorine (17)	$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{6}$	$2.7X10^{-5}$
Cl-38		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cm-240	Curium (96)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cm-241		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Cm-242		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cm-243		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Cm-244		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Cm-245		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Cm-246		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Cm-247		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Cm-248		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Co-55	Cobalt (27)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Co-56		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Co-57		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Co-58		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Co-58m		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Co-60		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cr-51	Chromium (24)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Cs-129	Cesium (55)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cs-131		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Cs-132		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cs-134		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Cs-134m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{5}$	$2.7X10^{-6}$
Cs-135		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Cs-136		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$

Cs-137 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Cu-64	Copper (29)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Cu-67		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Dy-159	Dysprosium (66)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Dy-165		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Dy-166		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Er-169	Erbium (68)	$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Er-171		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Eu-147	Europium (63)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Eu-148		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Eu-149		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Eu-150 (short lived)		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Eu-150 (long lived)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Eu-152		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Eu-152m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Eu-154		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Eu-155		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Eu-156		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
F-18	Fluorine (9)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Fe-52	Iron (26)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Fe-55		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{6}$	$2.7X10^{-5}$
Fe-59		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Fe-60		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Ga-67	Gallium (31)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ga-68		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Ga-72		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Gd-146	Gadolinium (64)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Gd-148		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Gd-153		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Gd-159		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ge-68	Germanium (32)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Ge-71		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{8}$	$2.7X10^{-3}$
Ge-77		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Hf-172	Hafnium (72)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Hf-175		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Hf-181		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Hf-182		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Hg-194	Mercury (80)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Hg-195m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Hg-197		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Hg-197m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Hg-203		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$

Ho-166	Holmium (67)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{5}$	$2.7X10^{-6}$
Ho-166m		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
I-123	Iodine (53)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
I-124		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
I-125		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
I-126		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
I-129		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
I-131		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
I-132		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
I-133		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
I-134		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
I-135		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
In-111	Indium (49)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
In-113m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
In-114m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
In-115m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ir-189	Iridium (77)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Ir-190		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ir-192		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Ir-194		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
K-40	Potassium (19)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
K-42		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
K-43		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Kr-81	Krypton (36)	$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Kr-85		$1.0X10^{5}$	$2.7X10^{-6}$	$1.0X10^{4}$	$2.7X10^{-7}$
Kr-85m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{10}$	$2.7X10^{-1}$
Kr-87		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{9}$	$2.7X10^{-2}$
La-137	Lanthanum (57)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
La-140		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Lu-172	Lutetium (71)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Lu-173		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Lu-174		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Lu-174m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Lu-177		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Mg-28	Magnesium (12)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Mn-52	Manganese (25)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Mn-53		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{9}$	$2.7X10^{-2}$
Mn-54		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Mn-56		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Mo-93	Molybdenum (42)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{8}$	$2.7X10^{-3}$
Mo-99		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
N-13	Nitrogen (7)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{9}$	$2.7X10^{-2}$

Na-22	Sodium (11)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Na-24		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Nb-93m	Niobium (41)	$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Nb-94		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Nb-95		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Nb-97		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Nd-147	Neodymium (60)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Nd-149		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ni-59	Nickel (28)	$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{8}$	$2.7X10^{-3}$
Ni-63		$1.0X10^{5}$	$2.7X10^{-6}$	$1.0X10^{8}$	$2.7X10^{-3}$
Ni-65		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Np-235	Neptunium (93)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Np-236 (short-lived)		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Np-236 (long-lived)		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Np-237 (b)		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Np-239		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Os-185	Osmium (76)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Os-191		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Os-191m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Os-193		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Os-194		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
P-32	Phosphorus (15)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{5}$	$2.7X10^{-6}$
P-33		$1.0X10^{5}$	$2.7X10^{-6}$	$1.0X10^{8}$	$2.7X10^{-3}$
Pa-230	Protactinium (91)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pa-231		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Pa-233		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Pb-201	Lead (82)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pb-202		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pb-203		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pb-205		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Pb-210 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Pb-212 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Pd-103	Palladium (46)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{8}$	$2.7X10^{-3}$
Pd-107		$1.0X10^{5}$	$2.7X10^{-6}$	$1.0X10^{8}$	$2.7X10^{-3}$
Pd-109		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pm-143	Promethium (61)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pm-144		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pm-145		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Pm-147		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Pm-148m		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pm-149		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pm-151		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$

Po-210	Polonium (84)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Pr-142	Praseodymium (59)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Pr-143		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pt-188	Platinum (78)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pt-191		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pt-193		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Pt-193m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Pt-195m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pt-197		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pt-197m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Pu-236	Plutonium (94)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Pu-237		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Pu-238		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Pu-239		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Pu-240		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Pu-241		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Pu-242		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Pu-244		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Ra-223 (b)	Radium (88)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Ra-224 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Ra-225		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Ra-226 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Ra-228 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Rb-81	Rubidium (37)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Rb-83		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Rb-84		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Rb-86		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Rb-87		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Rb(nat)		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Re-184	Rhenium (75)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Re-184m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Re-186		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Re-187		$1.0X10^{6}$	$2.7X10^{-5}$	$1.0X10^{9}$	$2.7X10^{-2}$
Re-188		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Re-189		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Re(nat)		$1.0X10^{6}$	$2.7X10^{-5}$	$1.0X10^{9}$	$2.7X10^{-2}$
Rh-99	Rhodium (45)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Rh-101		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Rh-102		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Rh-102m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Rh-103m		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{8}$	$2.7X10^{-3}$
Rh-105		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$

Rn-222 (b)	Radon (86)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{8}$	$2.7X10^{-3}$
Ru-97	Ruthenium (44)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Ru-103		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ru-105		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ru-106 (b)		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
S-35	Sulphur (16)	$1.0X10^{5}$	$2.7X10^{-6}$	$1.0X10^{8}$	$2.7X10^{-3}$
Sb-122	Antimony (51)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{4}$	$2.7X10^{-7}$
Sb-124		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sb-125		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sb-126		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Sc-44	Scandium (21)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Sc-46		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sc-47		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sc-48		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Se-75	Selenium (34)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Se-79		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Si-31	Silicon (14)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Si-32		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sm-145	Samarium (62)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Sm-147		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Sm-151		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{8}$	$2.7X10^{-3}$
Sm-153		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sn-113	Tin (50)	$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Sn-117m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sn-119m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Sn-121m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Sn-123		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sn-125		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Sn-126		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Sr-82	Strontium (38)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Sr-85		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sr-85m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Sr-87m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sr-89		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Sr-90 (b)		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{4}$	$2.7X10^{-7}$
Sr-91		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Sr-92		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
T(H-3)	Tritium (1)	$1.0X10^{6}$	$2.7X10^{-5}$	$1.0X10^{9}$	$2.7X10^{-2}$
Ta-178 (long-lived)	Tantalum (73)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Ta-179		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Ta-182		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Tb-157	Terbium (65)	$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$

Tb-158		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tb-160		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tc-95m	Technetium (43)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tc-96		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tc-96m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Tc-97		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{8}$	$2.7X10^{-3}$
Tc-97m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Tc-98		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tc-99		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
Tc-99m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Te-121	Tellurium (52)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Te-121m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Te-123m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Te-125m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Te-127		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Te-127m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Te-129		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Te-129m		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Te-131m		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Te-132		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Th-227	Thorium (90)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Th-228 (b)		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Th-229 (b)		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Th-230		1.0	$2.7X10^{-11}$	$1.0X10^{4}$	$2.7X10^{-7}$
Th-231		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Th-232		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
Th-234 (b)		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{5}$	$2.7X10^{-6}$
Th (nat) (b)		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
Ti-44	Titanium (22)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
Tl-200	Thallium (81)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tl-201		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tl-202		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tl-204		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{4}$	$2.7X10^{-7}$
Tm-167	Thulium (69)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tm-170		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Tm-171		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{8}$	$2.7X10^{-3}$
U-230 (fast lung absorption) (b),(d)	Uranium (92)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
U-230 (medium lung absorption) (e)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-230 (slow lung absorption) (f)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-232 (fast lung absorption) (b),(d)		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$

U-232 (medium lung absorption) (e)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-232 (slow lung absorption) (f)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-233 (fast lung absorption) (d)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-233 (medium lung absorption) (e)		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
U-233 (slow lung absorption) (f)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
U-234 (fast lung absorption) (d)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-234 (medium lung absorption) (e)		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
U-234 (slow lung absorption) (f)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
U-235 (all lung absorption types) (b), (d),(e),(f)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-236 (fast lung absorption) (d)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-236 (medium lung absorption) (e)		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
U-236 (slow lung absorption) (f)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U-238 (all lung absorption types) (b), (d),(e),(f)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{4}$	$2.7X10^{-7}$
U (nat) (b)		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
U (enriched to 20% or less) (g)		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
U (dep)		1.0	$2.7X10^{-11}$	$1.0X10^{3}$	$2.7X10^{-8}$
V-48	Vanadium (23)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$
V-49		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
W-178	Tungsten (74)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
W-181		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
W-185		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{7}$	$2.7X10^{-4}$
W-187		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
W-188		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Xe-122	Xenon (54)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{9}$	$2.7X10^{-2}$
Xe-123		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{9}$	$2.7X10^{-2}$
Xe-127		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{5}$	$2.7X10^{-6}$
Xe-131m		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{4}$	$2.7X10^{-7}$
Xe-133		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{4}$	$2.7X10^{-7}$
Xe-135		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{10}$	$2.7X10^{-1}$
Y-87	Yttrium (39)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Y-88		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Y-90		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{5}$	$2.7X10^{-6}$
Y-91		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{6}$	$2.7X10^{-5}$
Y-91m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$

Y-92		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Y-93		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{5}$	$2.7X10^{-6}$
Yb-169	Ytterbium (70)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{7}$	$2.7X10^{-4}$
Yb-175		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Zn-65	Zinc (30)	$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Zn-69		$1.0X10^{4}$	$2.7X10^{-7}$	$1.0X10^{6}$	$2.7X10^{-5}$
Zn-69m		$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Zr-88	Zirconium (40)	$1.0X10^{2}$	$2.7X10^{-9}$	$1.0X10^{6}$	$2.7X10^{-5}$
Zr-93 (b)		$1.0X10^{3}$	$2.7X10^{-8}$	$1.0X10^{7}$	$2.7X10^{-4}$
Zr-95		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{6}$	$2.7X10^{-5}$
Zr-97 (b)		$1.0X10^{1}$	$2.7X10^{-10}$	$1.0X10^{5}$	$2.7X10^{-6}$

[a] [Reserved]

[b] Parent nuclides and their progeny included in secular equilibrium are listed in the following:

Sr-90	Y-90
Zr-93	Nb-93m
Zr-97	Nb-97
Ru-106	Rh-106
Cs-137	Ba-137m
Ce-134	La-134
Ce-144	Pr-144
Ba-140	La-140
Bi-212	Tl-208 (0.36), Po-212 (0.64)
Pb-210	Bi-210, Po-210
Pb-212	Bi-212, Tl-208 (0.36), Po-212 (0.64)
Rn-220	Po-216
Rn-222	Po-218, Pb-214, Bi-214, Po-214
Ra-223	Rn-219, Po-215, Pb-211, Bi-211, Tl-207
Ra-224	Rn-220, Po-216, Pb-212, Bi-212, Tl-208(0.36), Po-212 (0.64)
Ra-226	Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
Ra-228	Ac-228
Th-226	Ra-222, Rn-218, Po-214
Th-228	Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-229	Ra-225, Ac-225, Fr-221, At-217, Bi-213, Po-213, Pb-209
Th-nat	Ra-228, Ac-228, Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
Th-234	Pa-234m
U-230	Th-226, Ra-222, Rn-218, Po-214
U-232	Th-228, Ra-224, Rn-220, Po-216, Pb-212, Bi-212, Tl-208 (0.36), Po-212 (0.64)
U-235	Th-231
U-238	Th-234, Pa-234m
U-nat	Th-234, Pa-234m, U-234, Th-230, Ra-226, Rn-222, Po-218, Pb-214, Bi-214, Po-214, Pb-210, Bi-210, Po-210
U-240	Np-240m
Np-237	Pa-233
Am-242m	Am-242
Am-243	Np-239

[c] [Reserved]

[d] These values apply only to compounds of uranium that take the chemical form of UF_6, UO_2F_2 and $UO_2(NO_3)_2$ in both normal and accident conditions of transport.

[e] These values apply only to compounds of uranium that take the chemical form of UO_3, UF_4, UCl_4 and hexavalent compounds in both normal and accident conditions of transport.

[f] These values apply to all compounds of uranium other than those specified in notes (d) and (e) of this table.

[g] These values apply to unirradiated uranium only.

TABLE A-3—GENERAL VALUES FOR A_1 AND A_2

Contents	A_1		A_2		Activity concentration for exempt material (Bq/g)	Activity concentration for exempt material (Ci/g)	Activity limits for exempt consignments (Bq)	Activity limits for exempt consignments (Ci)
	(TBq)	(Ci)	(TBq)	(Ci)				
Only beta or gamma emitting radionuclides are known to be present	1×10^{-1}	2.7×10^{0}	2×10^{-2}	5.4×10^{-1}	1×10^{1}	2.7×10^{-10}	1×10^{4}	2.7×10^{-7}
Only alpha emitting radionuclides are known to be present	2×10^{-1}	5.4×10^{0}	9×10^{-5}	2.4×10^{-3}	1×10^{-1}	2.7×10^{-12}	1×10^{3}	2.7×10^{-8}
No relevant data are available	1×10^{-3}	2.7×10^{-2}	9×10^{-5}	2.4×10^{-3}	1×10^{-1}	2.7×10^{-12}	1×10^{3}	2.7×10^{-8}

TABLE A-4—ACTIVITY-MASS RELATIONSHIPS FOR URANIUM

Uranium Enrichment[1] wt % U-235 present	Specific Activity	
	TBq/g	Ci/g
0.45	1.8×10^{-8}	5.0×10^{-7}
0.72	2.6×10^{-8}	7.1×10^{-7}
1	2.8×10^{-8}	7.6×10^{-7}
1.5	3.7×10^{-8}	1.0×10^{-6}
5	1.0×10^{-7}	2.7×10^{-6}
10	1.8×10^{-7}	4.8×10^{-6}
20	3.7×10^{-7}	1.0×10^{-5}
35	7.4×10^{-7}	2.0×10^{-5}
50	9.3×10^{-7}	2.5×10^{-5}
90	2.2×10^{-6}	5.8×10^{-5}
93	2.6×10^{-6}	7.0×10^{-5}
95	3.4×10^{-6}	9.1×10^{-5}

[1] The figures for uranium include representative values for the activity of the uranium-234 that is concentrated during the enrichment process.

[60 FR 50264, Sept. 28, 1995 as amended at 61 FR 28724, June 6, 1996; 69 FR 3800, Jan. 26, 2004]

PART 72—LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE, AND REACTOR-RELATED GREATER THAN CLASS C WASTE

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 72.1 Purpose.

The regulations in this part establish requirements, procedures, and criteria for the issuance of licenses to receive, transfer, and possess power reactor spent fuel, power reactor-related Greater than Class C (GTCC) waste, and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI) and the terms and conditions under which the Commission will issue these licenses. The regulations in this part also establish requirements, procedures, and criteria for the issuance of licenses to the Department of Energy (DOE) to receive, transfer, package, and possess power reactor spent fuel, high-level radioactive waste, power reactor-related GTCC waste, and other radioactive materials associated with the storage of these materials in a monitored retrievable storage installation (MRS). The term Monitored Retrievable Storage Installation or MRS, as defined in § 72.3, is derived from the Nuclear Waste Policy Act (NWPA) and includes any installation that meets this definition. The regulations in this part also establish requirements, procedures, and criteria for the issuance of Certificates of Compliance approving spent fuel storage cask designs.

[66 FR 51838, Oct. 11, 2001]

§ 72.2 Scope.

[Top of File]

(a) Except as provided in § 72.6(b), licenses issued under this part are limited to the receipt, transfer, packaging, and possession of:

(1) Power reactor spent fuel to be stored in a complex that is designed and constructed specifically for storage of power reactor spent fuel aged for at least one year, other radioactive materials associated with spent fuel storage, and power reactor-related GTCC waste in a solid form in an independent spent fuel storage installation (ISFSI); or

(2) Power reactor spent fuel to be stored in a monitored retrievable storage installation (MRS) owned by DOE that is designed and constructed specifically for the storage of spent fuel aged for at least one year, high-level radioactive waste that is in a solid form, other radioactive materials associated with storage of these materials, and power reactor-related GTCC waste that is in a solid form.

The term Monitored Retrievable Storage Installation or MRS, as defined § 72.3, is derived from the NWPA and includes any installation that meets this definition.

(b) The regulations in this part pertaining to an independent spent fuel storage installation (ISFSI) and a spent fuel storage cask apply to all persons in the United States, including persons in Agreement States. The regulations in this part pertaining to a monitored retrievable storage installation (MRS) apply only to DOE.

(c) The requirements of this regulation are applicable, as appropriate, to both wet and dry modes of storage of--

(1) spent fuel in an independent spent fuel storage installation (ISFSI) and

(2) spent fuel and solid high-level radioactive waste in a monitored retrievable storage installation (MRS).

(d) Licenses covering the storage of spent fuel in an existing spent fuel storage installation shall be issued in accordance with the requirements of this part as stated in § 72.40, as applicable.

(e) This part also gives notice to all persons who knowingly provide to any licensee, certificate holder, applicant for a license or certificate, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's, certificate holder's, or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 72.12.

(f) Certificates of Compliance approving spent fuel storage cask designs shall be issued in accordance with the requirements of subpart L of this part.

[53 FR 31658, Aug. 19, 1988, as amended at 56 FR 40692, Aug. 15, 1991; 63 FR 1900, Jan. 13, 1998; 64 FR 33183, June 22, 1999; 64 FR 56121, Oct. 15, 1999; 66 FR 51838, Oct. 11, 2001]

§ 72.3 Definitions.

[Top of File]

As used in this part:

Act means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

Affected Indian tribe means any Indian tribe--

(1) Within whose reservation boundaries a monitored retrievable storage facility is proposed to be located;

(2) Whose federally defined possessory or usage rights to other lands outside of the reservation's boundaries arising out of congressionally ratified treaties may be substantially and adversely affected by the locating of such a facility: Provided, That the Secretary of the Interior finds, upon the petition of the appropriate governmental officials of the tribe, that such effects are both substantial and adverse to the tribe.

Affected unit of local government means any unit of local government with jurisdiction over the site where an MRS is proposed to be located.

As low as is reasonably achievable (ALARA) means as low as is reasonably achievable taking into account the state of technology, and the economics of improvement in relation to--

(1) Benefits to the public health and safety,

(2) Other societal and socioeconomic considerations, and

(3) The utilization of atomic energy in the public interest.

Atomic energy means all forms of energy released in the course of nuclear fission or nuclear transformation.

Byproduct material means—

(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(2)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that—

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(3) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

Certificate holder means a person who has been issued a Certificate of Compliance by the Commission for a spent fuel storage cask design.

Certificate of Compliance or *CoC* means the certificate issued by the Commission that approves the design of a spent fuel storage cask in accordance with the provisions of subpart L of this part.

Commencement of construction means any clearing of land, excavation, or other substantial action that would adversely affect the natural environment of a site, but does not mean:

(1) Changes desirable for the temporary use of the land for public recreational uses, necessary borings or excavations to determine subsurface materials and foundation conditions, or other preconstruction monitoring to establish background information related to the suitability of the site or to the protection of environmental values;

(2) Construction of environmental monitoring facilities;

(3) Procurement or manufacture of components of the installation; or

(4) Construction of means of access to the site as may be necessary to accomplish the objectives of paragraphs (1) and (2) of this definition.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Confinement systems means those systems, including ventilation, that act as barriers between areas containing radioactive substances and the environment.

Controlled area means that area immediately surrounding an ISFSI or MRS for which the licensee exercises authority over its use and within which ISFSI or MRS operations are performed.

Decommission means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits--

(1) Release of the property for unrestricted use and termination of the license; or

(2) Release of the property under restricted conditions and termination of the license.

Design bases means that information that identifies the specific functions to be performed by a structure, system, or component of a facility or of a spent fuel storage cask and the specific values or ranges of values chosen for controlling parameters as reference bounds for design. These values may be restraints derived from generally accepted state-of-the-art practices for achieving functional goals or requirements derived from analysis (based on calculation or experiments) of the effects of a postulated event under which a structure, system, or component must meet its functional goals. The values for controlling parameters for external events include--

(1) Estimates of severe natural events to be used for deriving design bases that will be based on consideration of historical data on the associated parameters, physical data, or analysis of upper limits of the physical processes involved; and

(2) Estimates of severe external man-induced events to be used for deriving design bases that will be based on analysis of human activity in the region, taking into account the site characteristics and the risks associated with the event.

Design capacity means the quantity of spent fuel, high-level radioactive waste, or reactor-related GTCC waste, the maximum burn up of the spent fuel in MWD/MTU, the terabequerel (curie) content of the waste, and the total heat generation in Watts (btu/hour) that the storage installation is designed to accommodate.

DOE means the U.S. Department of Energy or its duly authorized representatives.

Floodplain means the lowland and relatively flat areas adjoining inland and coastal waters including floodprone areas of offshore islands. Areas subject to a one percent or greater chance of flooding in any given year are included.

Greater than Class C waste or *GTCC waste* means low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in § 61.55 of this chapter.

High-level radioactive waste or *HLW* means (1) the highly radioacive material resulting from the reprocessing of spent nuclear fuel, including liquid waste produced directly in reprocessing and any solid material derived from such liquid waste that contains fission products in sufficient concentrations; and (2) other highly radioactive material that the Commission, consistent with existing law, determines by rule requires permanent isolation.

Historical data means a compilation of the available published and unpublished information concerning a particular type of event.

Independent spent fuel storage installation or ISFSI means a complex designed and constructed for the interim storage of spent nuclear fuel, solid reactor-related GTCC waste, and other radioactive materials associated with spent fuel and reactor-related GTCC waste storage. An ISFSI which is located on the site of another facility licensed under this part or a facility licensed under part 50 of this chapter and which shares common utilities and services with that facility or is physically connected with that other facility may still be considered independent.

Indian Tribe means an Indian tribe as defined in the Indian Self Determination and Education Assistance Act (Pub. L. 93-638).

Monitored Retrievable Storage Installation or *MRS* means a complex designed, constructed, and operated by DOE for the receipt, transfer, handling, packaging, possession, safeguarding, and storage of spent nuclear fuel aged for at least one year, solidified high-level radioactive waste resulting from civilian nuclear activities, and solid reactor-related GTCC waste, pending shipment to a HLW repository or other disposal.

NEPA means the National Environmental Policy Act of 1969 including any amendments thereto.

NWPA means the Nuclear Waste Policy Act of 1982 including any amendments thereto.

Person means--

(1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy (DOE), except that the DOE shall be considered a person within the meaning of the

regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974, as amended (88 Stat. 1244), and Sections 131, 132, 133, 135, 137, and 141 of the Nuclear Waste Policy Act of 1982 (96 Stat. 2229, 2230, 2232, 2241);

(2) Any State, any political subdivision of a State, or any political entity within a State;

(3) Any foreign government or nation, or any political subdivision of any such government or nation, or other entity; and

(4) Any legal successor, representative, agent, or agency of the foregoing.

Population means the people that may be affected by the change in environmental conditions due to the construction, operation, or decommissioning of an ISFSI or MRS.

Principal activities, as used in this part, means activities authorized by the license which are essential to achieving the purpose(s) for which the license was issued or amended, excluding activities incidental to decontamination or decommissioning.

Reconciliation means the process of evaluating and comparing licensee reports required under this part to the projected material balances generated by the Nuclear Materials Management and Safeguards System. This process is considered complete when the licensee resolves any differences between the reported and projected balances, including those listed for foreign obligated materials.

Region means the geographical area surrounding and including the site, which is large enough to contain all the features related to a phenomenon or to a particular event that could potentially impact the safe or environmentally sound construction, operation, or decommissioning of an independent spent fuel storage or monitored retrievable storage installation.

Reservation means--

(1) Any Indian reservation or dependent Indian community referred to in clause (a) or (b) of section 1151 of title 18, United States Code; or

(2) Any land selected by an Alaska Native village or regional corporation under the provisions of the Alaska Native Claims Settlement Act (43 U.S.C. 1601 et seq.).

Site means the real property on which the ISFSI or MRS is located.

Source material means--

(1) Uranium or thorium, or any combination thereof, in any physical or chemical form or

(2) Ores that contain by weight one-twentieth of one percent (0.05%) or more of:

(i) Uranium,

(ii) Thorium, or

(iii) Any combination thereof.

Source material does not include special nuclear material.

Special nuclear material means--

(1) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or

(2) Any material artificially enriched by any of the foregoing but does not include source material.

Spent fuel storage cask or *cask* means all the components and systems associated with the container in which spent fuel or other radioactive materials associated with spent fuel are stored in an ISFSI.

Spent Nuclear Fuel or *Spent Fuel* means fuel that has been withdrawn from a nuclear reactor following irradiation, has undergone at least one year's decay since being used as a source of energy in a power reactor, and has not been chemically separated into its constituent elements by reprocessing. Spent fuel includes the special nuclear material, byproduct material, source material, and other radioactive materials associated with fuel assemblies.

Structures, systems, and components important to safety means those features of the ISFSI, MRS, and spent fuel storage cask whose functions are--

(1) To maintain the conditions required to store spent fuel, high-level radioactive waste, or reactor-related GTCC waste safely;

(2) To prevent damage to the spent fuel, the high-level radioactive waste, or reactor-related GTCC waste container during handling and storage; or

(3) To provide reasonable assurance that spent fuel, high-level radioactive waste, or reactor-related GTCC waste can be received, handled, packaged, stored, and retrieved without undue risk to the health and safety of the public.

[53 FR 31658, Aug. 19, 1988, as amended at 59 FR 36038, July 15, 1994; 62 FR 39092, July 21, 1997; 64 FR 53614, Oct. 4, 1999; 64 FR 56121, Oct. 15, 1999; 66 FR 51839, Oct. 11, 2001; 72 FR 55933 Oct. 1, 2007; 73 FR 32462, Jun. 9, 2008]

§ 72.4 Communications.

[Top of File]

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent by mail addressed: ATTN: Document Control Desk, Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at One White Flint North, 11555 Rockville Pike, Rockville, Maryland between 7:30 a.m. and 4:15 p.m. eastern time; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. If the submission deadline date falls on a Saturday, or Sunday, or a Federal holiday, the next Federal working day becomes the official due date.

[64 FR 33183, June 22, 1999; 68 FR 58818, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 72.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized to be binding upon the Commission.

§ 72.6 License required; types of licenses.

[Top of File]

(a) Licenses for the receipt, handling, storage, and transfer of spent fuel or high-level radioactive waste are of two types: general and specific. Licenses for the receipt, handling, storage, and transfer of reactor-related GTCC are specific licenses. Any general license provided in this part is effective without the filing of an application with the Commission or the issuance of a licensing document to a particular person. A specific license is issued to a named person upon application filed pursuant to regulations in this part.

(b) A general license is hereby issued to receive title to and own spent fuel, high-level radioactive waste, or reactor-related GTCC waste without regard to quantity. Notwithstanding any other provision of this chapter, a general licensee under this paragraph is not authorized to acquire, deliver, receive, possess, use, or transfer spent fuel, high-level radioactive waste, or reactor-related GTCC waste except as authorized in a specific license.

(c) Except as authorized in a specific license and in a general license under subpart K of this part issued by the Commission in accordance with the regulations in this part, no person may acquire, receive, or possess--

(1) Spent fuel for the purpose of storage in an ISFSI; or

(2) Spent fuel, high-level radioactive waste, or radioactive material associated with high-level radioactive waste for the purpose of storage in an MRS.

[66 FR 51839, Oct. 11, 2001]

§ 72.7 Specific exemptions.

[Top of File]

The Commission may, upon application by any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security and are otherwise in the public interest.

§ 72.8 Denial of licensing by Agreement States.

[Top of File]

Agreement States may not issue licenses covering the storage of spent fuel and reactor-related GTCC waste in an ISFSI or the storage of spent fuel, high-level radioactive waste, and reactor-related GTCC waste in an MRS.

[66 FR 51839, Oct. 11, 2001]

§ 72.9 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). OMB has approved the information collection requirements contained in this part under control number 3150-0132.

(b) The approved information collection requirements contained in this part appear in §§ 72.7, 72.11, 72.16, 72.22 through 72.34, 72.42, 72.44, 72.48 through 72.56, 72.62, 72.70, through 72.82, 72.90, 72.92, 72.94, 72.98, 72.100, 72.102, 72.103, 72.104, 72.108, 72.120, 72.126, 72.140 through 72.176, 72.180 through 72.186, 72.192, 72.206, 72.212, 72.216, 72.218, 72.230, 72.232, 72.234, 72.236, 72.240, 72.242, 72.244, 72.248.

(c) In § 72.79, Form N–71 and associated forms are approved under control number 3150–0056, and DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control number 0694–0135.

[64 FR 56122, Oct. 15, 1999, as amended at 67 FR 67101, Nov. 4, 2002; 68 FR 33615, June 5, 2003; 68 FR 54159, Sep. 16, 2003; 73 FR 78607, Dec. 23, 2008]

§ 72.10 Employee protection.

[Top of File]

(a) Discrimination by a Commission licensee, certificate holder, an applicant for a Commission license or a CoC, or a contractor or subcontractor of any of these, against an employee for engaging in certain protected activities, is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the statutes named in paragraph (a) introductory text of this section or possible violations of requirements imposed under either of those statutes;

(ii) Refusing to engage in any practice made unlawful under either of the statutes named in paragraph (a) introductory text or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the statutes named in paragraph (a) introductory text.

(v) Assisting or participating in, or is about to assist or participate in, these activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs. The employee may do this by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraph (a), (e), or (f) of this section by a Commission licensee, certificate holder, applicant for a Commission license or a CoC, or a contractor or subcontractor of any of these may be grounds for:

(1) Denial, revocation, or suspension of the license or the CoC.

(2) Imposition of a civil penalty on the licensee, applicant, or a contractor or subcontractor of the licensee or applicant.

(3) Other enforcement action.

(d) Actions taken by an employer, or others, which adversely affect an employee may be predicated upon nondiscriminatory grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) Each licensee, certificate holder, and applicant for a license or CoC must prominently post the revision of NRC Form 3, "Notice to Employees," referenced in 10 CFR 19.11(c). This form must be posted at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. The premises must be posted not later than 30 days after an application is docketed and remain posted while the application is pending before the Commission, during the term of the license or CoC, and for 30 days following license or CoC termination.

(2) Copies of NRC Form 3 may be obtained by writing to the Regional Administrator of the appropriate U.S. Nuclear Regulatory Commission Regional Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by visiting the NRC's Web site at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[58 FR 52414, Oct. 8, 1993, as amended at 60 FR 24552, May 9, 1995; 61 FR 6766, Feb. 22, 1996; 64 FR 56122, Oct. 15, 1999; 68 FR 58819, Oct. 10, 2003; 72 FR 63975, Nov. 14, 2007]

§ 72.11 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by a licensee, certificate holder, or an applicant for a license or CoC; or information required by statute or by the Commission's regulations, orders, license or CoC conditions, to be maintained by the licensee or certificate holder, must be complete and accurate in all material respects.

(b) Each licensee, certificate holder, or applicant for a license or CoC must notify the Commission of information identified by the licensee, certificate holder, or applicant for a license or CoC as having, for the regulated activity, a significant implication for public health and safety or common defense and security. A licensee, certificate holder, or an applicant for a license or CoC violates this paragraph only if the licensee, certificate holder, or applicant for a license or CoC fails to notify the Commission of information that the licensee, certificate holder, or applicant for a license or CoC has identified as having a significant implication for public health and safety or common defense and security. Notification must be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[64 FR 56122, Oct. 15, 1999]

§ 72.12 Deliberate misconduct.

[Top of File]

(a) Any licensee, certificate holder, applicant for a license or certificate, employee of a licensee, certificate holder, or applicant for a license or certificate; or any contractor (including a supplier or consultant) or subcontractor, employee of a contractor or subcontractor of any licensee, certificate holder, or applicant for a license or certificate who knowingly provides to any licensee, certificate holder, applicant for a license or certificate, contractor, or subcontractor, any components, materials, or other goods or services that relate to a licensee's, certificate holder's, or applicant's activities subject to this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee, certificate holder or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license or certificate issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, a certificate holder, an applicant for a license or certificate, or a licensee's, applicant's, or certificate holder's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee, certificate holder or applicant for a license or certificate to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license or certificate issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, certificate holder, applicant, contractor, or subcontractor.

[63 FR 1900, Jan. 13, 1998]

§ 72.13 Applicability.

[Top of File]

(a) This section identifies those sections, under this part, that apply to the activities associated with a specific license, a general license, or a certificate of compliance.

(b) The following sections apply to activities associated with a specific license: Secs. 72.1; 72.2(a) through (e); 72.3 through 72.13(b); 72.16 through 72.34; 72.40 through 72.62; 72.70 through 72.86; 72.90 through 72.108; 72.120 through 72.130; 72.140 through 72.176; 72.180 through 72.186; 72.190 through 72.194; and 72.200 through 72.206.

(c) The following sections apply to activities associated with a general license: Secs. 72.1; 72.2(a)(1), (b), (c), and (e); 72.3 through 72.6 (c)(1); 72.7 through 72.13(a) and (c); 72.30(c) and (d); 72.32(c) and (d); 72.44(b) and (f); 72.48; 72.50(a); 72.52(a), (b), (d), and (e); 72.60; 72.62; 72.72 through 72.80(f); 72.82 through 72.86; 72.104; 72.106; 72.122; 72.124; 72.126; 72.140 through 72.176; 72.190; 72.194; 72.210 through 72.220, and 72.240(a).

(d) The following sections apply to activities associated with a certificate of compliance: Secs. 72.1; 72.2(e) and (f); 72.3; 72.4; 72.5; 72.7; 72.9 through 72.13(a) and (d); 72.48; 72.84(a); 72.86; 72.124; 72.140 through 72.176; 72.214; and 72.230 through 72.248.

[65 FR 50616, Aug. 21, 2000]

Subpart B--License Application, Form, and Contents

[Top of File]

§ 72.16 Filing of application for specific license.

(a) *Place of filing*. Each application for a license, or amendment thereof, under this part should be filed with the Director of the NRC's Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards in accordance with § 72.4.

(b) *Oath or affirmation*. Each application for a license or license amendment (including amendments to such applications), except for those filed by DOE, must be executed in an original signed by the applicant or duly authorized officer thereof under oath or affirmation. Each application for a license or license amendment (including amendments to such applications) filed by DOE must be signed by the Secretary of Energy or the Secretary's authorized representative.

(c) *Copies of application on paper or CD-ROM.* If the application is on paper, it must be the signed original. The applicant shall maintain the capability to generate additional copies for distribution in accordance with instruction from the Director or the Director's designee.

(d) *Fees*. The application, amendment, and renewal fees applicable to a license covering an ISFSI are those shown in § 170.31 of this chapter.

(e) *Notice of docketing*. Upon receipt of an application for a license or license amendment under this part, the Director, Office of Nuclear Material Safety and Safeguards or the Director's designee will assign a docket number to the application, notify the applicant of the docket number, instruct the applicant to distribute copies retained by the applicant in accordance with paragraph (c) of this section, and cause a notice of docketing to be published in the Federal Register. The notice of docketing shall identify the site of the ISFSI or the MRS by locality and State and may include a notice of hearing or a notice of proposed action and opportunity for hearing as provided by § 72.46 of this part. In the case of an application for a license or an amendment to a license for an MRS, the Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee, in accordance with § 72.200 of this part, shall send a copy of the notice of docketing to the Governor and legislature of any State in which an MRS is or may be located, to the Chief Executive of the local municipality, to the Governors of any contiguous States and to the governing body of any affected Indian tribe.

[53 FR 31658, Aug. 19, 1988, as amended at 53 FR 43421, Oct. 27, 1988; 66 FR 51839, Oct. 11, 2001; 67 FR 3586, Jan. 25, 2002; 68 FR 58819, Oct. 10, 2003]

§ 72.18 Elimination of repetition.

[Top of File]

In any application under this part, the applicant may incorporate by reference information contained in previous applications, statements, or reports filed with the Commission: Provided, That such references are clear and specific.

§ 72.20 Public inspection of application.

[Top of File]

Applications and documents submitted to the Commission in connection with applications may be made available for public inspection in accordance with provisions of the regulations contained in parts 2 and 9 of this chapter.

§ 72.22 Contents of application: General and financial information.

[Top of File]

Each application must state:

(a) Full name of applicant;

(b) Address of applicant;

(c) Description of business or occupation of applicant;

(d) If applicant is:

(1) An individual: Citizenship and age;

(2) A partnership: Name, citizenship, and address of each partner and the principal location at which the partnership does business;

(3) A corporation or an unincorporated association:

(i) The State in which it is incorporated or organized and the principal location at which it does business; and

(ii) The names, addresses, and citizenship of its directors and principal officers;

(4) Acting as an agent or representative of another person in filing the application: The identification of the principal and the information required under this paragraph with respect to such principal.

(5) The Department of Energy:

(i) The identification of the DOE organization responsible for the construction and operation of the ISFSI or MRS, including a description of any delegations of authority and assignments of responsibilities.

(ii) For each application for a license for an MRS, the provisions of the public law authorizing the construction and operation of the MRS.

(e) Except for DOE, information sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out, in accordance with the regulations in this chapter, the activities for which the license is sought. The information must state the place at which the activity is to be performed, the general plan for carrying out the activity, and the period of time for which the license is requested. The information must show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary; funds or that by a combination of the two, the applicant will have the necessary funds available to cover the following:

(1) Estimated construction costs;

(2) Estimated operating costs over the planned life of the ISFSI; and

(3) Estimated decommissioning costs, and the necessary financial arrangements to provide reasonable assurance before licensing, that decommissioning will be carried out after the removal of spent fuel, high-level radioactive waste, and/or reactor-related GTCC waste from storage.

(f) Each applicant for a license under this part to receive, transfer, and possess power reactor spent fuel, power reactor-related Greater than Class C (GTCC) waste, and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation (ISFSI) shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements in § 73.21 and the requirements of § 73.22 or § 73.23, as applicable.

[53 FR 31658, Aug. 19, 1988, as amended at 66 FR 51839, Oct. 11, 2001; 73 FR 63573, Oct. 24, 2008]

§ 72.24 Contents of application: Technical information.

[Top of File]

Each application for a license under this part must include a Safety Analysis Report describing the proposed ISFSI or MRS for the receipt, handling, packaging, and storage of spent fuel, high-level radioactive waste, and/or reactor-related GTCC waste as appropriate, including how the ISFSI or MRS will be operated. The minimum information to be included in this report must consist of the following:

(a) A description and safety assessment of the site on which the ISFSI or MRS is to be located, with appropriate attention to the design bases for external events. Such assessment must contain an analysis and evaluation of the major structures, systems, and components of the ISFSI or MRS that bear on the suitability of the site when the ISFSI or MRS is operated at its design capacity. If the proposed ISFSI or MRS is to be located on the site of a nuclear power plant or other licensed facility, the potential interactions between the ISFSI or MRS and such other facility--including shared common utilities and services--must be evaluated.

(b) A description and discussion of the ISFSI or MRS structures with special attention to design and operating characteristics, unusual or novel design features, and principal safety considerations.

(c) The design of the ISFSI or MRS in sufficient detail to support the findings in § 72.40, including:

(1) The design criteria for the ISFSI or MRS pursuant to subpart F of this part, with identification and justification for any additions to or departures from the general design criteria;

(2) the design bases and the relation of the design bases to the design criteria;

(3) Information relative to materials of construction, general arrangement, dimensions of principal structures, and descriptions of all structures, systems, and components important to safety, in sufficient detail to support a finding that the ISFSI or MRS will satisfy the design bases with an adequate margin for safety; and

(4) Applicable codes and standards.

(d) An analysis and evaluation of the design and performance of structures, systems, and components important to safety, with the objective of assessing the impact on public health and safety resulting from operation of the ISFSI or MRS and including determination of:

(1) The margins of safety during normal operations and expected operational occurrences during the life of the ISFSI or MRS; and

(2) The adequacy of structures, systems, and components provided for the prevention of accidents and the mitigation of the consequences of accidents, including natural and manmade phenomena and events.

(e) The means for controlling and limiting occupational radiation exposures within the limits given in part 20 of this chapter, and for meeting the objective of maintaining exposures as low as is reasonably achievable.

(f) The features of ISFSI or MRS design and operating modes to reduce to the extent practicable radioactive waste volumes generated at the installation.

(g) An identification and justification for the selection of those subjects that will be probable license conditions and technical specifications. These subjects must cover the design, construction, preoperational testing, operation, and decommissioning of the ISFSI or MRS.

(h) A plan for the conduct of operations, including the planned managerial and administrative controls system, and the applicant's organization, and program for training of personnel pursuant to subpart I.

(i) If the proposed ISFSI or MRS incorporates structures, systems, or components important to safety whose functional adequacy or reliability have not been demonstrated by prior use for that purpose or cannot be demonstrated by reference to performance data in related applications or to widely accepted engineering principles, an identification of these structures, systems, or components along with a schedule showing how safety questions will be resolved prior to the initial receipt of spent fuel, high-level radioactive waste, and/or reactor-related GTCC waste as appropriate for storage at the ISFSI or MRS.

(j) The technical qualifications of the applicant to engage in the proposed activities, as required by § 72.28.

(k) A description of the applicant's plans for coping with emergencies, as required by § 72.32.

(l) A description of the equipment to be installed to maintain control over radioactive materials in gaseous and liquid effluents produced during normal operations and expected operational occurrences. The description must identify the design objectives and the means to be used for keeping levels of radioactive material in effluents to the environment as low as is reasonably achievable and within the exposure limits stated in § 72.104. The description must include:

(1) An estimate of the quantity of each of the principal radionuclides expected to be released annually to the environment in liquid and gaseous effluents produced during normal ISFSI or MRS operations;

(2) A description of the equipment and processes used in radioactive waste systems; and

(3) A general description of the provisions for packaging, storage, and disposal of solid wastes containing radioactive materials resulting from treatment of gaseous and liquid effluents and from other sources.

(m) An analysis of the potential dose equivalent or committed dose equivalent to an individual outside the controlled area from accidents or natural phenomena events that result in the release of radioactive material to the environment or direct radiation from the ISFSI or MRS. The calculations of individual dose equivalent or committed dose equivalent must be performed for direct exposure, inhalation, and ingestion occurring as a result of the postulated design basis event.

(n) A description of the quality assurance program that satisfies the requirements of subpart G to be applied to the design, fabrication, construction, testing, operation, modification, and decommissioning of the structures, systems, and components of the ISFSI or MRS important to safety. The description must identify the structures, systems, and components important to safety. The program must also apply to managerial and administrative controls used to ensure safe operation of the ISFSI or MRS.

(o) A description of the detailed security measures for physical protection, including design features and the plans required by subpart H. For an application from DOE for an ISFSI or MRS, DOE will provide a description of the physical protection plan for protection against radiological sabotage as required by subpart H.

(p) A description of the program covering preoperational testing and initial operations.

(q) A description of the decommissioning plan required under § 72.30.

[53 FR 31658, Aug. 19, 1988, as amended at 63 FR 26961, May 15, 1998; 64 FR 53615, Oct. 4, 1999; 66 FR 51839, Oct. 11, 2001]

§ 72.26 Contents of application: Technical specifications.

[Top of File]

Each application under this part shall include proposed technical specifications in accordance with the requirements of § 72.44 and a summary statement of the bases and justifications for these technical specifications.

§ 72.28 Contents of application: Applicant's technical qualifications.

[Top of File]

Each application under this part must include:

(a) The technical qualifications, including training and experience, of the applicant to engage in the proposed activities;

(b) A description of the personnel training program required under subpart I;

(c) A description of the applicant's operating organization, delegations of responsibility and authority and the minimum skills and experience qualifications relevant to the various levels of responsibility and authority; and

(d) A commitment by the applicant to have and maintain an adequate complement of trained and certified installation personnel prior to the receipt of spent fuel, high-level radioactive waste, and/or reactor-related GTCC waste as appropriate for storage.

[53 FR 31658, Aug. 19, 1988, as amended at 66 FR 51840, Oct. 11, 2001]

§ 72.30 Financial assurance and recordkeeping for decommissioning.

[Top of File]

(a) Each application under this part must include a proposed decommissioning plan that contains sufficient information on proposed practices and procedures for the decontamination of the site and facilities and for disposal of residual radioactive materials after all spent fuel, high-level radioactive waste, and reactor-related GTCC waste have been removed, in order to provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS at the end of its useful life will provide adequate protection to the health and safety of the public. This plan must identify and discuss those design features of the ISFSI or MRS that facilitate its decontamination and decommissioning at the end of its useful life.

(b) The proposed decommissioning plan must also include a decommissioning funding plan containing information on how reasonable assurance will be provided that funds will be available to decommission the ISFSI or MRS. This information must include a cost estimate for decommissioning and a description of the method of assuring funds for decommissioning from paragraph (c) of this section, including means of adjusting cost estimates and associated funding levels periodically over the life of the ISFSI or MRS.

(c) Financial assurance for decommissioning must be provided by one or more of the following methods:

(1) *Prepayment*. Prepayment is the deposit prior to the start of operation into an account segregated from licensee assets and outside the licensee's administrative control of cash or liquid assets such that the amount of funds would be sufficient to pay decommissioning costs. Prepayment may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities.

(2) A surety method, insurance, or other guarantee method. These methods guarantee that decommissioning costs will be paid. A surety method may be in the form of a surety bond, letter of credit, or line of credit. A parent company guarantee of funds for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix A to part 30. A parent company guarantee may not be used in combination with other financial methods to satisfy the requirements of this section. For commercial corporations that issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs based on a financial test may be used if the guarantee and test are as contained in appendix C to part 30. For commercial corporations that do not issue bonds, a guarantee of funds by the applicant or licensee for decommissioning costs may be used if the guarantee and test are as contained in appendix D to part 30. A guarantee by the applicant or licensee may not be used in combination with any other financial methods used to satisfy the requirements of this section or in any situation where the applicant or licensee has a parent company holding majority control of the voting stock of the company. Any surety method or insurance used to provide financial assurance for decommissioning must contain the following conditions

(i) The surety method or insurance must be open-ended or, if written for a specified term, such as five years, must be renewed automatically unless 90 days or more prior to the renewal date, the issuer notifies the Commission, the beneficiary, and the licensee of its intention not to renew. The surety method or insurance must also provide that the full face amount be paid to the beneficiary automatically prior to the expiration without proof of forfeiture if the licensee fails to provide a replacement acceptable to the Commission withing 30 days after receipt of notification or cancellation.

(ii) The surety method or insurance must be payable to a trust established for decommissioning costs. The trustee and trust must be acceptable to the Commission. An acceptable trustee includes an appropriate State or Federal government agency or an entity which has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal or State agency.

(iii) The surety or insurance must remain in effect until the Commission has terminated the license.

(3) An external sinking fund in which deposits are made at least annually, coupled with a surety method or insurance, the value of which may decrease by the amount being accumulated in the sinking fund. An external sinking fund is a fund establishing and maintained by setting aside funds periodically in an account segregated from licensee assets and outside the licensee's administrative control in which the total amount of funds would be sufficient to pay decommissioning costs at the time termination of operation is expected. An external sinking fund may be in the form of a trust, escrow account, government fund, certificate of deposit, or deposit of government securities. The surety or insurance provision must be as stated in paragraph (c)(2) of this section.

(4) In the case of Federal, State, or local government licensees, a statement of intent containing a cost estimate for decommissioning, and indicating that funds for decommissioning will be obtained when necessary.

(5) In the case of licensees who are issued a power reactor license under Part 50 of this chapter, the methods of 10 CFR 50.75(b), (e), and (h), as applicable.

(6) When a governmental entity is assuming custody and ownership of a site, an arrangement that is deemed acceptable by such governmental entity.

(d) Each person licensed under this part shall keep records of information important to the decommissioning of a facility in an identified location until the site is released for unrestricted use. If records important to the decommissioning of a facility are kept for other purposes, reference to these records and their locations may be used. Information the Commission considers important to decommissioning consists of--

(1) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site. These records may be limited to instances when contamination remains after any cleanup procedures or when there is reasonable likelihood that contaminants may have spread to inaccessible areas as in the case of possible seepage into porous materials such as concrete. These records must include any known information on identification of involved nuclides, quantities, forms, and concentrations.

(2) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and of locations of possible inaccessible contamination such as buried pipes which may be subject to contamination. If required drawings are referenced, each relevant document need not be indexed individually. If drawings are not available, the licensee shall substitute appropriate records of available information concerning these areas and locations.

(3) A list contained in a single document and updated no less than every 2 years of the following:

(i) All areas designated and formerly designated as restricted areas as defined under 10 CFR 20.1003; and

(ii) All areas outside of restricted areas that require documentation under § 72.30(d)(1).

(4) Records of the cost estimate performed for the decommissioning funding plan or of the amount certified for decommissioning, and records of the funding method used for assuring funds if either a funding plan or certification is used.

[53 FR 31658, Aug. 19, 1988, as amended at 55 FR 29191, July 18, 1990; 58 FR 39635, July 26, 1993; 58 FR 67662, Dec. 22, 1993; 58 FR 68732, Dec. 29, 1993; 59 FR 1618, Jan. 12, 1994; 61 FR 24675, May 16, 1996; 62 FR 39092, July 21, 1997; 63 FR 29544, June 1, 1998;

66 FR 51840, Oct. 11, 2001; 67 FR 78352, Dec. 24, 2002]

§ 72.32 Emergency Plan.

[Top of File]

(a) Each application for an ISFSI that is licensed under this part which is: Not located on the site of a nuclear power reactor, or not located within the exclusion area as defined in 10 CFR part 100 of a nuclear power reactor, or located on the site of a nuclear power reactor which does not have an operating license, or located on the site of a nuclear power reactor that is not authorized to operate must be accompanied by an Emergency Plan that includes the following information:

(1) *Facility description*. A brief description of the licensee's facility and area near the site.

(2) *Types of accidents*. An identification of each type of radioactive materials accident.

(3) *Classification of accidents*. A classification system for classifying accidents as "alerts."

(4) *Detection of accidents*. Identification of the means of detecting an accident condition.

(5) *Mitigation of consequences*. A brief description of the means of mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(6) *Assessment of releases*. A brief description of the methods and equipment to assess releases of radioactive materials.

(7) *Responsibilities*. A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC; also responsibilities for developing, maintaining, and updating the plan.

(8) *Notification and coordination*. A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the NRC operations center immediately after notifications of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency.[10]

(9) *Information to be communicated*. A brief description of the types of information on facility status; radioactive releases; and recommended protective actions, if necessary, to be given to offsite response organizations and to the NRC.

(10) *Training*. A brief description of the training the licensee will provide workers on how to respond to an emergency and any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel.

(11) *Safe condition*. A brief description of the means of restoring the facility to a safe condition after an accident.

(12) *Exercises*. (i) Provisions for conducting semiannual communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Radiological/Health Physics, Medical, and Fire drills shall be conducted annually. Semiannual communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the biennial exercise.

(ii) Participation of offsite response organizations in biennial exercises, although recommended, is not required. Exercises must use scenarios not known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for conducting the exercise. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.

(13) *Hazardous chemicals*. A certification that the applicant has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499, with respect to hazardous materials at the facility.

(14) *Comments on Plan*. The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the initial submittal of the licensee's emergency plan before submitting it to NRC. Subsequent plan changes need not have the offsite comment period unless the plan changes affect the offsite response organizations. The licensee shall provide any comments received within the 60 days to the NRC with the emergency plan.

(15) *Offsite assistance*. The applicant's emergency plans shall include a brief description of the arrangements made for requesting and effectively using offsite assistance on site and provisions that exist for using other organizations capable of augmenting the planned onsite response.

(16) Arrangements made for providing information to the public.

(b) Each application for an MRS that is licensed under this part and each application for an ISFSI that is licensed under this part and that may process and/or repackage spent fuel, must be accompanied by an Emergency Plan that includes the following information:

(1) *Facility description*. A brief description of the licensee facility and area near the site.

(2) *Types of accidents*. An identification of each type of radioactive materials accident.

(3) *Classification of accidents*. A classification system for classifying accidents as "alerts" or "site area emergencies."

(4) *Detection of accidents*. Identification of the means of detecting an accident condition.

(5) *Mitigation of consequences*. A brief description of the means of mitigating the consequences of each type of accident, including those provided to protect workers on site, and a description of the program for maintaining the equipment.

(6) *Assessment of releases*. A brief description of the methods and equipment to assess releases of radioactive materials.

(7) *Responsibilities*. A brief description of the responsibilities of licensee personnel should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC; also responsibilities for developing, maintaining, and updating the plan.

(8) *Notification and coordination*. A commitment to and a brief description of the means to promptly notify offsite response organizations and request offsite assistance, including medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the facility, and some equipment will not prevent the notification and coordination. The licensee shall also commit to notify the NRC operations center immediately after notifications of the appropriate offsite response organizations and not later than one hour after the licensee declares an emergency.[11]

(9) *Information to be communicated*. A brief description of the types of information on facility status; radioactive releases; and recommended protective actions, if necessary, to be given to offsite response organizations and to the NRC.

(10) *Training*. A brief description of the training the licensee will provide workers on how to respond to an emergency and any special instructions and orientation tours the licensee would offer to fire, police, medical and other emergency personnel.

(11) *Safe condition*. A brief description of the means of restoring the facility to a safe condition after an accident.

(12) *Exercises*. (i) Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Radiological/Health Physics, Medical, and Fire Drills shall be held semiannually. Quarterly communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The licensee shall invite offsite response organizations to participate in the biennial exercises.

(ii) Participation of offsite response organizations in the biennial exercises, although recommended, is not required. Exercises must use scenarios not known to most exercise participants. The licensee shall critique each exercise using individuals not having direct implementation responsibility for conducting the exercise. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.

(13) *Hazardous chemicals*. A certification that the applicant has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499, with respect to hazardous materials at the facility.

(14) *Comments on Plan*. The licensee shall allow the offsite response organizations expected to respond in case of an accident 60 days to comment on the initial submittal of the licensee's emergency plan before submitting it to NRC. Subsequent plan changes need not have the offsite comment period unless the plan changes affect the offsite response organizations. The licensee shall provide any comments received within the 60 days to the NRC with the emergency plan.

(15) *Offsite assistance*. The applicant's emergency plans shall include the following:

(i) A brief description of the arrangements made for requesting and effectively using offsite assistance on site and provisions that exist for using other organizations capable of augmenting the planned onsite response.

(ii) Provisions that exist for prompt communications among principal response organizations to offsite emergency personnel who would be responding onsite.

(iii) Adequate emergency facilities and equipment to support the emergency response onsite are provided and maintained.

(iv) Adequate methods, systems, and equipment for assessing and monitoring actual or potential consequences of a radiological emergency condition are available.

(v) Arrangements are made for medical services for contaminated and injured onsite individuals.

(vi) Radiological Emergency Response Training has been made available to those offsite who may be called to assist in an emergency onsite.

(16) Arrangements made for providing information to the public.

(c) For an ISFSI that is:

(1) located on the site, or

(2) located within the exclusion area as defined in 10 CFR part 100, of a nuclear power reactor licensed for operation by the Commission, the emergency plan required by 10 CFR 50.47 shall be deemed to satisfy the requirements of this section.

(d) A licensee with a license issued under this part may take reasonable action that departs from a license condition or a technical specification (contained in a license issued under this part) in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent.

[60 FR 32441, June 22, 1995]

10. These reporting requirements do not supersede or release licensees of complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499 or other State or Federal reporting requirements.

11. These reporting requirements do not supersede or release licensees of complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Pub. L. 99-499 or other State or Federal reporting requirements.

§ 72.34 Environmental report.

[Top of File]

Each application for an ISFSI or MRS license under this part must be accompanied by an Environmental Report which meets the requirements of subpart A of part 51 of this chapter.

Subpart C--Issuance and Conditions of License

[Top of File]

§ 72.40 Issuance of license.

(a) Except as provided in paragraph (c) of this section, the Commission will issue a license under this part upon a determination that the application for a license meets the standards and requirements of the Act and the regulations of the Commission, and upon finding that:

(1) The applicant's proposed ISFSI or MRS design complies with subpart F;

(2) The proposed site complies with the criteria in subpart E;

(3) If on the site of a nuclear power plant or other licensed activity or facility, the proposed ISFSI would not pose an undue risk to the safe operation of such nuclear power plant or other licensed activity or facility;

(4) The applicant is qualified by reason of training and experience to conduct the operation covered by the regulations in this part;

(5) The applicant's proposed operating procedures to protect health and to minimize danger to life or property are adequate;

(6) Except for DOE, the applicant for an ISFSI or MRS is financially qualified to engage in the proposed activities in accordance with the regulations in this part;

(7) The applicant's quality assurance plan complies with subpart G;

(8) The applicant's physical protection provisions comply with subpart H. DOE has complied with the safeguards and physical security provisions identified in § 72.24(o);

(9) The applicant's personnel training program complies with subpart I;

(10) Except for DOE, the applicant's decommissioning plan and its financing pursuant to § 72.30 provide reasonable assurance that the decontamination and decommissioning of the ISFSI or MRS at the end of its useful life will provide adequate protection to the health and safety of the public;

(11) The applicant's emergency plan complies with § 72.32;

(12) The applicable provisions of part 170 of this chapter have been satisfied;

(13) There is reasonable assurance that: (i) The activities authorized by the license can be conducted without endangering the health and safety of the public and (ii) these activities will be conducted in compliance with the applicable regulations of this chapter; and

(14) The issuance of the license will not be inimical to the common defense and security.

(b) A license to store spent fuel and reactor-related GTCC waste in the proposed ISFSI or to store spent fuel, high-level radioactive waste, and reactor-related GTCC waste in the proposed MRS may be denied if construction on the proposed facility begins before a finding approving issuance of the proposed license with any appropriate conditions to protect environmental values. Grounds for denial may be the commencement of construction prior to a finding by the Director, Office of Nuclear Materials Safety and Safeguards or designee or a finding after a public hearing by the presiding officer, Atomic Safety and Licensing Board, or the Commission acting as a collegial body, as appropriate, that the action called for is the issuance of the proposed license with any appropriate conditions to protect environmental values. This finding is to be made on the basis of information filed and evaluations made pursuant to subpart A of part 51 of this chapter or in the case of an MRS on the basis of evaluations made pursuant to sections 141(c) and (d) or 148(a) and (c) of NWPA (96 Stat. 2242, 2243, 42 U.S.C. 10161(c), (d); 101 Stat. 1330-235, 1330-236, 42 U.S.C. 10168(a), (c)), as appropriate, and after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives.

(c) For facilities that have been covered under previous licensing actions including the issuance of a construction permit under part 50 of this chapter, a reevaluation of the site is not required except where new information is discovered which could alter the original site evaluation findings. In this case, the site evaluation factors involved will be reevaluated.

[53 FR 31658, Aug. 19, 1988, as amended at 66 FR 51840, Oct. 11, 2001]

§ 72.42 Duration of license; renewal.

[Top of File]

(a) Each license issued under this part must be for a fixed period of time to be specified in the license. The license term for an ISFSI must not exceed 20 years from the date of issuance. The license term for an MRS must not exceed 40 years from the date of issuance. Licenses for either type of installation may be renewed by the Commission at the expiration of the license term upon application by the licensee and pursuant to the requirements of this rule.

(b) Applications for renewal of a license should be filed in accordance with the applicable provisions of subpart B at least two years prior to the expiration of the existing license. Information contained in previous applications, statements, or reports filed with the Commission under the license may be incorporated by reference: Provided, that such references are clear and specific.

(c) In any case in which a licensee, not less than two years prior to expiration of its existing license, has filed an application in proper form for renewal of a license, the existing license shall not expire until a final decision concerning the application for renewal has been made by the Commission.

§ 72.44 License conditions.

[Top of File]

(a) Each license issued under this part shall include license conditions. The license conditions may be derived from the analyses and evaluations included in the Safety Analysis Report and amendments thereto submitted pursuant to § 72.24. License conditions pertain to design, construction and operation. The Commission may also include additional license conditions as it finds appropriate.

(b) Each license issued under this part shall be subject to the following conditions, even if they are not explicitly stated therein;

(1) Neither the license nor any right thereunder shall be transferred, assigned, or disposed of in any manner, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission shall, after securing full information, find that the transfer is in accordance with the provisions of the Atomic Energy Act of 1954, as amended, and give its consent in writing.

(2) The license shall be subject to revocation, suspension, modification, or amendment in accordance with the procedures provided by the Atomic Energy Act of 1954, as amended, and Commission regulations.

(3) Upon request of the Commission, the licensee shall, at any time before expiration of the license, submit written statements, signed under oath or affirmation if appropriate, to enable the Commission to determine whether or not the license should be modified, suspended, or revoked.

(4) The licensee shall have an NRC-approved program in effect that covers the training and certification of personnel that meets the requirements of subpart I before the licensee may receive spent fuel and/or reactor-related GTCC waste for storage at an ISFSI or the receipt of spent fuel, high-level radioactive waste, and/or reactor-related GTCC waste for storage at an MRS.

(5) The license shall permit the operation of the equipment and controls that are important to safety of the ISFSI or the MRS only by

personnel whom the licensee has certified as being adequately trained to perform such operations, or by uncertified personnel who are under the direct visual supervision of a certified individual.

(6)(i) Each licensee shall notify the appropriate NRC Regional Administrator, in writing, immediately following the filing of a voluntary or involuntary petition for bankruptcy under any Chapter of Title II (Bankruptcy) of the United States Code by or against:

(A) The licensee;

(B) An entity (as that term is defined in 11 U.S.C. 101(14)) controlling the licensee or listing the license or licensee as property of the estate; or

(C) An affiliate (as that term is defined in 11 U.S.C. 101(2)) of the licensee.

(ii) This notification must indicate:

(A) The bankruptcy court in which the petition for bankruptcy was filed; and

(B) The date of the filing of the petition.

(c) Each license issued under this part must include technical specifications. Technical specifications must include requirements in the following categories:

(1) *Functional and operating limits and monitoring instruments and limiting control settings.* (i) Functional and operating limits for an ISFSI or MRS are limits on fuel or waste handling and storage conditions that are found to be necessary to protect the integrity of the stored fuel or waste container, to protect employees against occupational exposures and to guard against the uncontrolled release of radioactive materials; and

(ii) Monitoring instruments and limiting control settings for an ISFSI or MRS are those related to fuel or waste handling and storage conditions having significant safety functions.

(2) *Limiting conditions*. Limiting conditions are the lowest functional capability or performance levels of equipment required for safe operation.

(3) *Surveillance requirements*. Surveillance requirements include:

(i) Inspection and monitoring of spent fuel, high-level radioactive waste, or reactor-related GTCC waste in storage;

(ii) inspection, test and calibration activities to ensure that the necessary integrity of required systems and components is maintained;

(iii) confirmation that operation of the ISFSI or MRS is within the required functional and operating limits; and

(iv) confirmation that the limiting conditions required for safe storage are met.

(4) *Design features*. Design features include items that would have a significant effect on safety if altered or modified, such as materials of construction and geometric arrangements.

(5) *Administrative controls*. Administrative controls include the organization and management procedures, recordkeeping, review and audit, and reporting requirements necessary to assure that the operations involved in the storage of spent fuel and reactor-related GTCC waste in an ISFSI and the storage of spent fuel, high-level radioactive waste, and reactor-related GTCC waste in an MRS are performed in a safe manner.

(d) Each license authorizing the receipt, handling, and storage of spent fuel, high-level radioactive waste, and/or reactor-related GTCC waste under this part must include technical specifications that, in addition to stating the limits on the release of radioactive materials for compliance with limits of part 20 of this chapter and the "as low as is reasonably achievable" objectives for effluents, require that:

(1) Operating procedures for control of effluents be established and followed, and equipment in the radioactive waste treatment systems be maintained and used, to meet the requirements of § 72.104;

(2) An environmental monitoring program be established to ensure compliance with the technical specifications for effluents; and

(3) An annual report be submitted to the Commission in accordance with Sec. 72.4, specifying the quantity of each of the principal radionuclides released to the environment in liquid and in gaseous effluents during the previous 12 months of operation and such other information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent releases. On the basis of this report and any additional information that the Commission may obtain from the licensee or others, the Commission may from time to time require the licensee to take such action as the Commission deems appropriate. The report must be submitted within 60 days after the end of the 12-month monitoring period.

(e) The licensee shall make no change that would decrease the effectiveness of the physical security plan prepared pursuant to § 72.180

without the prior approval of the Commission. A licensee desiring to make such a change shall submit an application for an amendment to the license pursuant to § 72.56. A licensee may make changes to the physical security plan without prior Commission approval, provided that such changes do not decrease the effectiveness of the plan. The licensee shall furnish to the Commission a report containing a description of each change within two months after the change is made, and shall maintain records of changes to the plan made without prior Commission approval for a period of 3 years from the date of the change.

(f) A licensee shall follow and maintain in effect an emergency plan that is approved by the Commission. The licensee may make changes to the approved plan without Commission approval only if such changes do not decrease the effectiveness of the plan. Within six months after any change is made, the licensee shall submit, in accordance with § 72.4, a report containing a description of any changes made in the plan addressed to Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, with a copy to the appropriate NRC Regional Office shown in appendix D to part 20 of this chapter. Proposed changes that decrease the effectiveness of the approved emergency plan must not be implemented unless the licensee has received prior approval of such changes from the Commission.

(g) A license issued to DOE under this part for an MRS authorized by section 142(b) of NWPA (101 Stat. 1330-232, 42 U.S.C. 10162(b)) must include the following conditions:

(1) Construction of the MRS may not begin until the Commission has authorized the construction of a repository under section 114(d) of NWPA (96 Stat. 2215, as amended by 101 Stat. 1330-230, 42 U.S.C. 10134 (d)) and part 60 or 63 of this chapter;

(2) Construction of the MRS or acceptance of spent nuclear fuel, high-level radioactive waste, and/or reactor-related GTCC waste at the MRS is prohibited during such time as the repository license is revoked by the Commission or construction of the repository ceases.

(3) The quantity of spent nuclear fuel or high-level radioactive waste at the site of the MRS at any one time may not exceed 10,000 metric tons of heavy metal until a repository authorized under NWPA and part 60 or 63 of this chapter first accepts spent nuclear fuel or solidified high-level radioactive waste; and

(4) The quantity of spent nuclear fuel or high-level radioactive waste at the site of the MRS at any one time may not exceed 15,000 metric tons of heavy metal.

(h) Each licensee shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements of § 73.21 and the requirements of § 73.22 or § 73.23, as applicable.

[53 FR 31658, Aug. 19, 1988, as amended at 64 FR 33183, June 22, 1999; 66 FR 51840, Oct. 11, 2001; 66 FR 55815, Nov. 2, 2001; 67 FR 3586, Jan 25, 2002; 68 FR 58819, Oct. 10, 2003; 73 FR 63573, Oct. 24, 2008]

§ 72.46 Public hearings.

[Top of File]

(a) In connection with each application for a license under this part, the Commission shall issue or cause to be issued a notice of proposed action and opportunity for hearing in accordance with § 2.105 or § 2.1107 of this chapter, as appropriate, or, if the Commission finds that a hearing is required in the public interest, a notice of hearing in accordance with § 2.104 of this chapter.

(b)(1) In connection with each application for an amendment to a license under this part, the Commission shall, except as provided in paragraph (b)(2) of this section, issue or cause to be issued a notice of proposed action and opportunity for hearing in accordance with § 2.105 or § 2.1107 of this chapter, as appropriate, or, if the Commission finds that a hearing is required in the public interest, a notice of hearing in accordance with § 2.104 of this chapter.

(2) The Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee may dispense with a notice of proposed action and opportunity for hearing or a notice of hearing and take immediate action on an amendment to a license issued under this part upon a determination that the amendment does not present a genuine issue as to whether the health and safety of the public will be significantly affected. After taking the action, the Director or the Director's designee shall promptly publish a notice in the Federal Register of the action taken and of the right of interested persons to request a hearing on whether the action should be rescinded or modified. If the action taken amends an MRS license, the Director or the Director's designee shall also inform the appropriate State and local officials.

(c) The notice of proposed action and opportunity for hearing or the notice of hearing may be included in the notice of docketing required to be published by § 72.16 of this part.

(d) If no request for a hearing or petition for leave to intervene is filed within the time prescribed in the notice of proposed action and opportunity for hearing, the Director, Office of Nuclear Material Safety and Safeguards or the Director's designee may take the proposed action, and thereafter shall promptly inform the appropriate State and local officials and publish a notice in the Federal Register of the action taken. In accordance with § 2.764(c) of this chapter, the Director, Office of Nuclear Material Safety and Safeguards shall not issue an initial license for the construction and operation of an ISFSI located at a site other than a reactor site or an MRS until expressly authorized to do so by the Commission.

(e) If an application for (or an amendment to) a specific license issued under this part incorporates by reference information on the design of a spent fuel storage cask for which NRC approval pursuant to subpart L of this part has been issued or is being sought, the scope of any public hearing held to consider the application will not include any cask design issues.

[53 FR 31658, Aug. 19, 1988, as amended at 60 FR 20886, Apr. 28, 1995; 65 FR 50617, Aug. 21, 2000]

§ 72.48 Changes, tests, and experiments.

[Top of File]

(a) Definitions for the purposes of this section:

(1) *Change* means a modification or addition to, or removal from, the facility or spent fuel storage cask design or procedures that affects a design function, method of performing or controlling the function, or an evaluation that demonstrates that intended functions will be accomplished.

(2) *Departure from a method of evaluation described in the FSAR (as updated) used in establishing the design bases or in the safety analyses* means:

(i) Changing any of the elements the method described in the FSAR (as updated) unless the results of the analysis are conservative or essentially the same; or

(ii) Changing from a method described in the FSAR to another method unless that method has been approved by NRC for the intended application.

(3) *Facility* means either an independent spent fuel storage installation (ISFSI) or a Monitored Retrievable Storage facility (MRS).

(4) The *facility or spent fuel storage cask design as described in the Final Safety Analysis Report (FSAR) (as updated)* means:

(i) The structures, systems, and components (SSC) that are described in the FSAR (as updated).

(ii) The design and performance requirements for such SSCs described in the FSAR (as updated), and

(iii) The evaluations or methods of evaluation included in the FSAR (as updated) for such SSCs which demonstrate that their intended function(s) will be accomplished.

(5) *Final Safety Analysis Report (as updated)* means:

(i) For specific licensees, the Safety Analysis Report for a facility submitted and updated in accordance with § 72.70;

(ii) For general licensees, the Safety Analysis Report for a spent fuel storage cask design, as amended and supplemented; and

(iii) For certificate holders, the Safety Analysis Report for a spent fuel storage cask design submitted and updated in accordance with § 72.248.

(6) *Procedures as described in the Final Safety Analysis Report (as updated)* means those procedures that contain information described in the FSAR (as updated) such as how SSCs are operated and controlled (including assumed operator actions and response times).

(7) *Tests or experiments not described in the Final Safety Analysis Report (as updated)* means any activity where any SSC is utilized or controlled in a manner which is either:

(i) Outside the reference bounds of the design bases as described in the FSAR (as updated) or

(ii) Inconsistent with the analyses or descriptions in the FSAR (as updated).

(b) This section applies to:

(1) Each holder of a general or specific license issued under this part, and

(2) Each holder of a Certificate of Compliance (CoC) issued under this part.

(c)(1) A licensee or certificate holder may make changes in the facility or spent fuel storage cask design as described in the FSAR (as updated), make changes in the procedures as described in the FSAR (as updated), and conduct tests or experiments not described in the FSAR (as updated), without obtaining either:

(i) A license amendment pursuant to § 72.56 (for specific licensees) or

(ii) A CoC amendment submitted by the certificate holder pursuant to § 72.244 (for general licensees and certificate holders) if:

(A) A change to the technical specifications incorporated in the specific license is not required; or

(B) A change in the terms, conditions, or specifications incorporated in the CoC is not required; and

(C) The change, test, or experiment does not meet any of the criteria in paragraph (c)(2) of this section.

(2) A specific licensee shall obtain a license amendment pursuant to § 72.56, a certificate holder shall obtain a CoC amendment pursuant to § 72.44, and a general licensee shall request that the certificate holder obtain a CoC amendment pursuant to § 72.44, prior to implementing a proposed change, test, or experiment if the change, test, or experiment would:

(i) Result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the FSAR (as updated);

(ii) Result in more than a minimal increase in the likelihood of occurrence of a malfunction of a system, structure, or component (SSC) important to safety previously evaluated in the FSAR (as updated);

(iii) Result in more than a minimal increase in the consequences of an accident previously evaluated in the FSAR (as updated);

(iv) Result in more than a minimal increase in the consequences of a malfunction of an SSC important to safety previously evaluated in the FSAR (as updated);

(v) Create a possibility for an accident of a different type than any previously evaluated in the FSAR (as updated);

(vi) Create a possibility for a malfunction of an SSC important to safety with a different result than any previously evaluated in the FSAR (as updated);

(vii) Result in a design basis limit for a fission product barrier as described in the FSAR (as updated) being exceeded or altered; or

(viii) Result in a departure from a method of evaluation described in the FSAR (as updated) used in establishing the design bases or in the safety analyses.

(3) In implementing this paragraph, the FSAR (as updated) is considered to include FSAR changes resulting from evaluations performed pursuant to this section and analyses performed pursuant to § 72.56 or § 72.244 since the last update of the FSAR pursuant to § 72.70, or § 72.248 of this part.

(4) The provisions in this section do not apply to changes to the facility or procedures when the applicable regulations establish more specific criteria for accomplishing such changes.

(d)(1) The licensee and certificate holder shall maintain records of changes in the facility or spent fuel storage cask design, of changes in procedures, and of tests and experiments made pursuant to paragraph (c) of this section. These records must include a written evaluation which provides the bases for the determination that the change, test, or experiment does not require a license or CoC amendment pursuant to paragraph (c)(2) of this section.

(2) The licensee and certificate holder shall submit, as specified in § 72.4, a report containing a brief description of any changes, tests, and experiments, including a summary of the evaluation of each. A report shall be submitted at intervals not to exceed 24 months.

(3) The records of changes in the facility or spent fuel storage cask design shall be maintained until:

(i) Spent fuel is no longer stored in the facility or the spent fuel storage cask design is no longer being used, or

(ii) The Commission terminates the license or CoC issued pursuant to this part.

(4) The records of changes in procedures and of tests and experiments shall be maintained for a period of 5 years.

(5) The holder of a spent fuel storage cask design CoC, who permanently ceases operation, shall provide the records of changes to the new certificate holder or to the Commission, as appropriate, in accordance § 72.234(d)(3).

(6)(i) A general licensee shall provide a copy of the record for any changes to a spent fuel storage cask design to the applicable certificate holder within 60 days of implementing the change.

(ii) A specific licensee using a spent fuel storage cask design, approved pursuant to subpart L of this part, shall provide a copy of the record for any changes to a spent fuel storage cask design to the applicable certificate holder within 60 days of implementing the change.

(iii) A certificate holder shall provide a copy of the record for any changes to a spent fuel storage cask design to any general or specific licensee using the cask design within 60 days of implementing the change.

[64 FR 53615, Oct. 4, 1999 as amended at 66FR 11527, Feb. 26, 2001]

§ 72.50 Transfer of license.

[Top of File]

(a) No license or any part included in a license issued under this part for an ISFSI or MRS shall be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of the license to any person, unless the Commission gives its consent in writing.

(b)(1) An application for transfer of a license must include as much of the information described in §§ 72.22 and 72.28 with respect to the identity and the technical and financial qualifications of the proposed transferee as would be required by those sections if the application were for an initial license. The application must also include a statement of the purposes for which the transfer of the license is requested and the nature of the transaction necessitating or making desirable the transfer of the license.

(2) The Commission may require any person who submits an application for the transfer of a license pursuant to the provisions of this section to file a written consent from the existing licensee, or a certified copy of an order or judgment of a court of competent jurisdiction, attesting to the person's right--subject to the licensing requirements of the Act and these regulations--to possession of the radioactive materials and the storage installation involved.

(c) After appropriate notice to interested persons, including the existing licensee, and observance of such procedures as may be required by the Act or regulations or orders of the Commission, the Commission will approve an application for the transfer of a license, if the Commission determines that:

(1) The proposed transferee is qualified to be the holder of the license; and

(2) Transfer of the license is consistent with applicable provisions of the law, and the regulations and orders issued by the Commission.

§ 72.52 Creditor regulations.

[Top of File]

(a) This section does not apply to an ISFSI or MRS constructed and operated by DOE.

(b) Pursuant to section 184 of the Act, the Commission consents, without individual application, to the creation of any mortgage, pledge, or other lien on special nuclear material contained in spent fuel not owned by the United States that is the subject of a license or on any interest in special nuclear material in spent fuel; Provided:

(1) That the rights of any creditor so secured may be exercised only in compliance with and subject to the same requirements and restrictions as would apply to the licensee pursuant to the provisions of the license, the Atomic Energy Act of 1954, as amended, and regulations issued by the Commission pursuant to said Act; and

(2) That no creditor so secured may take possession of the spent fuel and/or reactor-related GTCC waste under the provisions of this section before--

(i) The Commission issues a license authorizing possession; or

(ii) The license is transferred.

(c) Any creditor so secured may apply for transfer of the license covering spent fuel and/or reactor-related GTCC waste by filing an application for transfer of the license under § 72.50(b). The Commission will act upon the application under § 72.50(c).

(d) Nothing contained in this regulation shall be deemed to affect the means of acquiring, or the priority of, any tax lien or other lien provided by law.

(e) As used in this section, "creditor" includes, without implied limitation--

(1) The trustee under any mortgage, pledge, or lien on spent fuel and/or reactor-related GTCC waste in storage made to secure any creditor;

(2) Any trustee or receiver of spent fuel and/or reactor-related GTCC waste appointed by a court of competent jurisdiction in any action brought for the benefit of any creditor secured by a mortgage, pledge, or lien;

(3) Any purchaser of the spent fuel and/or reactor-related GTCC waste at the sale thereof upon foreclosure of the mortgage, pledge, or lien or upon exercise of any power of sale contained therein; or

(4) Any assignee of any such purchaser.

[53 FR 31658, Aug. 19, 1988, as amended at 66 FR 51840, Oct. 11, 2001]

§ 72.54 Expiration and termination of licenses and decommissioning of sites and separate buildings or

outdoor areas.

[Top of File]

(a) Each specific license expires at the end of the day on the expiration date stated in the license except when a licensee has filed an application for renewal pursuant to § 72.42 not less than 24 months before the expiration of the existing license. If an application for renewal has been filed at least 24 months prior to the expiration date stated in the existing license, the existing license expires at the end of the day on which the Commission makes a final determination to deny the renewal application or, if the determination states an expiration date, the expiration date stated in the determination.

(b) Each specific license revoked by the Commission expires at the end of the day on the date of the Commission's final determination to revoke the license or on the expiration date stated in the determination or as otherwise provided by Commission Order.

(c) Each specific license continues in effect, beyond the expiration date if necessary, with respect to possession of licensed material until the Commission notifies the licensee in writing that the license is terminated. During this time, the licensee shall--

(1) Limit actions involving spent fuel, reactor-related GTCC waste, or other licensed material to those related to decommissioning; and

(2) Continue to control entry to restricted areas until they are suitable for release in accordance with NRC requirements.

(d) As required by § 72.42(b), or within 60 days of the occurrence of any of the following, consistent with the administrative directions in § 72.4, each licensee shall notify the NRC in writing, and submit within 12 months of this notification, a final decommissioning plan and begin decommissioning upon approval of the plan if--

(1) The licensee has decided to permanently cease principal activities, as defined in this part, at the entire site or any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements; or

(2) No principal activities under the license have been conducted for a period of 24 months; or

(3) No principal activities have been conducted for a period of 24 months in any separate building or outdoor area that contains residual radioactivity such that the building or outdoor area is unsuitable for release in accordance with NRC requirements.

(e) Coincident with the notification required by paragraph (d) of this section, the licensee shall maintain in effect all decommissioning financial assurances established by the licensee pursuant to § 72.30 in conjunction with a license issuance or renewal or as required by this section. The amount of the financial assurance must be increased, or may be decreased, as appropriate, to cover the detailed cost estimate for decommissioning established pursuant to paragraph (g)(5) of this section.

(1) Any licensee who has not provided financial assurance to cover the detailed cost estimate submitted with the decommissioning plan shall do so when this rule becomes effective November 24, 1995.

(2) Following approval of the decommissioning plan, a licensee may reduce the amount of the financial assurance as decommissioning proceeds and radiological contamination is reduced at the site with the approval of the Commission.

(f)(1) The Commission may grant a request to delay or postpone initiation of the decommissioning process if the Commission determines that this relief is not detrimental to the public health and safety and is otherwise in the public interest. The request must be submitted no later than 30 days before notification pursuant to paragraph (d) of this section. The schedule for decommissioning set forth in paragraph (d) of this section may not commence until the Commission has made a determination on the request.

(2) The Commission may approve an alternate schedule for submittal of the final decommissioning plan required pursuant to paragraph (d) of this section if the Commission determines that the alternate schedule is necessary to the effective conduct of decommissioning operations and presents no undue risk from radiation to the public health and safety, and is otherwise to the public interest.

(g) The proposed final decommissioning plan must include--

(1) A description of the current conditions of the site or separate building or outdoor area sufficient to evaluate the acceptability of the plan;

(2) The choice of the alternative for decommissioning with a description of the activities involved;

(3) A description of controls and limits on procedures and equipment to protect occupational and public health and safety;

(4) A description of the planned final radiation survey; and

(5) An updated detailed cost estimate for the chosen alternative for decommissioning, comparison of that estimate with present funds set aside for decommissioning, and plan for assuring the availability of adequate funds for completion of decommissioning including means for adjusting cost estimates and associated funding levels over any storage or surveillance period; and

(6) A description of technical specifications and quality assurance provisions in place during decommissioning.

(h) For final decommissioning plans in which the major dismantlement activities are delayed by first placing the ISFSI or MRS in storage, planning for these delayed activities may be less detailed. Updated detailed plans must be submitted and approved prior to the start of these activities.

(i) If the final decommissioning plan demonstrates that the decommissioning will be completed as soon as practicable, performed in accordance with the regulations in this chapter, and will not be inimical to the common defense and security or to the health and safety of the public, and after notice to interested persons, the Commission will approve the plan subject to any appropriate conditions and limitations and issue an order authorizing decommissioning.

(j)(1) Except as provided in paragraph (k) of this section, each licensee shall complete decommissioning of the site or separate building or outdoor area as soon as practicable but no later than 24 months following approval of the final decommissioning plan by the Commission.

(2) Except as provided in paragraph (k) of this section, when decommissioning involves the entire site, each licensee shall request license termination as soon as practicable but no later than 24 months following approval of the final decommissioning plan by the Commission.

(k) The Commission may approve a request for an alternate schedule for completion of decommissioning of the site or separate building or outdoor area, and license termination if appropriate, if the Commission determines that the alternate schedule is warranted by consideration of the following:

(1) Whether it is technically feasible to complete decommissioning within the allotted 24-month period;

(2) Whether sufficient waste disposal capacity is available to allow completion of decommissioning within the allotted 24-month period;

(3) Whether a significant volume reduction in wastes requiring disposal will be achieved by allowing short-lived radionuclides to decay;

(4) Whether a significant reduction in radiation exposure to workers can be achieved by allowing short-lived radionuclides to decay; and

(5) Other site-specific factors that the Commission may consider appropriate on a case-by-case basis, such as regulatory requirements of other government agencies, lawsuits, ground-water treatment activities, monitored natural ground-water restoration, actions that could result in more environmental harm than deferred cleanup, and other factors beyond the control of the licensee.

(l) As the final step in decommissioning, the licensee shall--

(1) Certify the disposition of all licensed material, including accumulated wastes, by submitting a completed NRC Form 314 or equivalent information; and

(2) Conduct a radiation survey of the premises where the licensed activities were conducted and submit a report of the results of this survey, unless the licensee demonstrates in some other manner that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E. The licensee shall, as appropriate--

(i) Report levels of gamma radiation in units of millisieverts (microroentgen) per hour at one meter from surfaces, and report levels of radioactivity, including alpha and beta, in units of megabecquerels (disintegrations per minute or microcuries) per 100 square centimeters removable and fixed for surfaces, megabecquerels (microcuries) per milliliter for water, and becquerels (picocuries) per gram for solids such as soils or concrete; and

(ii) Specify the survey instrument(s) used and certify that each instrument is properly calibrated and tested.

(m) Specific licenses, including expired licenses, will be terminated by written notice to the licensee when the Commission determines that--

(1) The decommissioning has been performed in accordance with the approved final decommissioning plan and the order authorizing decommissioning; and

(2)(i) A radiation survey has been performed which demonstrates that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E; or

(ii) Other information submitted by the licensee is sufficient to demonstrate that the premises are suitable for release in accordance with the criteria for decommissioning in 10 CFR part 20, subpart E.

(3) Records required by § 72.80(e) have been received.

[59 FR 36038, July 15, 1994, as amended at 60 FR 38240, July 26, 1995; 61 FR 24675, May 16, 1996; 61 FR 29638, June 12, 1996; 62 FR 59726, Nov. 3, 1997; 66 FR 51840, Oct. 11, 2001]

§ 72.56 Application for amendment of license.

[Top of File]

Whenever a holder of a specific license desires to amend the license (including a change to the license conditions), an application for an amendment shall be filed with the Commission fully describing the changes desired and the reasons for such changes, and following as far as applicable the form prescribed for original applications.

[64 FR 53616, Oct. 4, 1999]

§ 72.58 Issuance of amendment.

[Top of File]

In determining whether an amendment to a license will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of initial licenses.

§ 72.60 Modification, revocation, and suspension of license.

[Top of File]

(a) The terms and conditions of all licenses are subject to amendment, revision, or modification by reason of amendments to the Atomic Energy Act of 1954, as amended, or by reason or rules, regulations, or orders issued in accordance with the Act or any amendments thereto.

(b) Any license may be modified, revoked, or suspended in whole or in part for any of the following:

(1) Any material false statement in the application or in any statement of fact required under section 182 of the Act;

(2) Conditions revealed by the application or statement of fact or any report, record, inspection or other means which would warrant the Commission to refuse to grant a license on an original application;

(3) Failure to operate an ISFSI or MRS in accordance with the terms of the license;

(4) Violation of, or failure to observe, any of the terms and conditions of the Act, or of any applicable regulation, license, or order of the Commission.

(c) Upon revocation of a license, the Commission may immediately cause the retaking of possession of all special nuclear material contained in spent fuel and/or reactor-related GTCC waste held by the licensee. In cases found by the Commission to be of extreme importance to the national defense and security or to the health and safety of the public, the Commission may cause the taking of possession of any special nuclear material contained in spent fuel and/or reactor-related GTCC waste held by the licensee before following any of the procedures provided under sections 551-558 of title 5 of the United States Code.

[53 FR 31658, Aug. 19, 1988, as amended at 66 FR 51841, Oct. 11, 2001]

§ 72.62 Backfitting.

[Top of File]

(a) As used in this section, *backfitting* means the addition, elimination, or modification, after the license has been issued, of:

(1) Structures, systems, or components of an ISFSI or MRS, or

(2) Procedures or organization required to operate an ISFSI or MRS.

(b) The Commission will require backfitting of an ISFSI or MRS if it finds that such action is necessary to assure adequate protection to occupational or public health and safety, or to bring the ISFSI or MRS into compliance with a license or the rules or orders of the Commission, or into conformance with written commitments by a licensee.

(c) The Commission may require the backfitting of an ISFSI or MRS if it finds:

(1) That there is a substantial increase in the overall protection of the occupational or public health and safety to be derived from the backfit, and

(2) That the direct and indirect costs of implementation for that ISFSI or MRS are justified in view of this increased protection.

(d) The Commission may at any time require a holder of a license to submit such information concerning the backfitting or the proposed backfitting of an ISFSI or MRS as it deems appropriate.

Subpart D--Records, Reports, Inspections, and Enforcement

[Top of File]

§ 72.70 Safety analysis report updating.

(a) Each specific licensee for an ISFSI or MRS shall update periodically, as provided in paragraphs (b) and (c) of this section, the final safety analysis report (FSAR) to assure that the information included in the report contains the latest information developed.

(1) Each licensee shall submit an original FSAR to the Commission, in accordance with § 72.4, within 90 days after issuance of the license.

(2) The original FSAR shall be based on the safety analysis report submitted with the application and reflect any changes and applicant commitments developed during the license approval and/or hearing process.

(b) Each update shall contain all the changes necessary to reflect information and analyses submitted to the Commission by the licensee or prepared by the licensee pursuant to Commission requirement since the submission of the original FSAR or, as appropriate, the last update to the FSAR under this section. The update shall include the effects[1] of:

(1) All changes made in the ISFSI or MRS or procedures as described in the FSAR;

(2) All safety analyses and evaluations performed by the licensee either in support of approved license amendments, or in support of conclusions that changes did not require a license amendment in accordance with § 72.48;

(3) All final analyses and evaluations of the design and performance of structures, systems, and components that are important to safety taking into account any pertinent information developed during final design, construction, and preoperational testing; and

(4) All analyses of new safety issues performed by or on behalf of the licensee at Commission request. The information shall be appropriately located within the updated FSAR.

(c)(1) The update of the FSAR must be filed in accordance with § 72.4. If the update is filed on paper, it should be filed on a page-replacement basis; if filed electronically, it should be filed on a full replacement basis. See Guidance for Electronic Submissions to the Commission at http://www.nrc.gov/site-help/eie.html.

(2) A paper update filed on a page-replacement basis must include a list that identifies the current pages of the FSAR following page replacement. If the update is filed electronically on a full replacement basis, it must include a list of changed pages.

(3) Each replacement page shall include both a change indicator for the area changed, e.g., a bold line vertically drawn in the margin adjacent to the portion actually changed, and a page change identification (date of change or change number or both);

(4) The update shall include:

(i) A certification by a duly authorized officer of the licensee that either the information accurately presents changes made since the previous submittal, or that no such changes were made; and

(ii) An identification of changes made under the provisions of § 72.48, but not previously submitted to the Commission;

(5) The update shall reflect all changes implemented up to a maximum of 6 months prior to the date of filing; and

(6) Updates shall be filed every 24 months from the date of issuance of the license.

(d) The updated FSAR shall be retained by the licensee until the Commission terminates the license.

[64 FR 53616, Oct. 4, 1999; 68 FR 58819, Oct. 10, 2003]

1. Effects of changes includes appropriate revisions of descriptions in the FSAR such that the FSAR (as updated) is complete and accurate.

§ 72.72 Material balance, inventory, and records requirements for stored materials.

[Top of File]

(a) Each licensee shall keep records showing the receipt, inventory (including location), disposal, acquisition, and transfer of all special nuclear material with quantities as specified in § 74.13(a) of this chapter and for source material as specified in § 40.64 of this chapter. The records must include as a minimum the name of shipper of the material to the ISFSI or MRS, the estimated quantity of radioactive material per item (including special nuclear material in spent fuel and reactor-related GTCC waste), item identification and seal number, storage location, onsite movements of each fuel assembly or storage canister, and ultimate disposal. These records for spent fuel and reactor-related GTCC waste at an ISFSI or for spent fuel, high-level radioactive waste, and reactorrelated GTCC waste at an MRS must be retained for as long as the material is stored and for a period of 5 years after the material is disposed of or transferred out of the ISFSI or MRS.

(b) Each licensee shall conduct a physical inventory of all spent fuel, high-level radioactive waste, and reactor-related GTCC waste containing special nuclear material meeting the requirements in paragraph (a) of this section at intervals not to exceed 12 months unless otherwise directed by the Commission. The licensee shall retain a copy of the current inventory as a record until the Commission terminates the license.

(c) Each licensee shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for material in storage. The licensee shall retain a copy of the current material control and accounting procedures until the Commission terminates the license.

(d) Records of spent fuel, high-level radioactive waste, and reactor-related GTCC waste containing special nuclear material meeting the requirements in paragraph (a) of this section must be kept in duplicate. The duplicate set of records must be kept at a separate location sufficiently remote from the original records that a single event would not destroy both sets of records. Records of spent fuel or reactor-related GTCC waste containing special nuclear material transferred out of an ISFSI or of spent fuel, high-level radioactive waste, or reactor-related GTCC waste containing special nuclear material transferred out of an MRS must be preserved for a period of five years after the date of transfer.

[53 FR 31658, Aug. 19, 1988, as amended at 66 FR 51841, Oct. 11, 2001; 73 FR 32462, Jun. 9, 2008]

§ 72.74 Reports of accidental criticality or loss of special nuclear material.

[Top of File]

(a) Each licensee shall notify the NRC Operations Center[1] within one hour of discovery of accidental criticality or any loss of special nuclear material.

(b) This notification must be made to the NRC Operations Center via the Emergency Notification System if the licensee is party to that system. If the Emergency Notification System is inoperative or unavailable, the licensee shall make the required notification via commercial telephonic service or any other dedicated telephonic system or any other method that will ensure that a report is received by the NRC Operations Center within one hour. The exemption of § 73.21(g)(3) of this chapter applies to all telephonic reports required by this section.

(c) Reports required under § 73.71 of this chapter need not be duplicated under the requirements of this section.

[53 FR 31658, Aug. 19, 1988, as amended at 59 FR 14087, Mar. 25, 1994]

1. Commercial telephone number of the NRC Operations Center is (301) 816-5100.

§ 72.75 Reporting requirements for specific events and conditions.

[Top of File]

(a) *Emergency notifications:* Each licensee shall notify the NRC Headquarters Operations Center upon the declaration of an emergency as specified in the licensee's approved emergency plan addressed in § 72.32. The licensee shall notify the NRC immediately after notification of the appropriate State or local agencies, but not later than one hour after the time the licensee declares an emergency.

(b) *Non-emergency notifications:* Four-hour reports. Each licensee shall notify the NRC as soon as possible but not later than four hours after the discovery of any of the following events or conditions involving spent fuel, HLW, or reactor-related GTCC waste:

(1) An action taken in an emergency that departs from a condition or a technical specification contained in a license or certificate of compliance issued under this part when the action is immediately needed to protect the public health and safety, and no action consistent with license or certificate of compliance conditions or technical specifications that can provide adequate or equivalent protection is immediately apparent.

(2) Any event or situation related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other Government agencies has been or will be made. Such an event may include an onsite fatality or inadvertent release of radioactively contaminated materials.

(c) *Non-emergency notifications:* Eight-hour reports. Each licensee shall notify the NRC as soon as possible but not later than eight hours after the discovery of any of the following events or conditions involving spent fuel, HLW, or reactor-related GTCC waste:

(1) A defect in any spent fuel, HLW, or reactor-related GTCC waste storage structure, system, or component that is important to safety.

(2) A significant reduction in the effectiveness of any spent fuel, HLW, or reactor-related GTCC waste storage confinement system during use.

(3) Any event requiring the transport of a radioactively contaminated person to an offsite medical facility for treatment.

(d) *Non-emergency notifications:* 24-hour reports. Each licensee shall notify the NRC within 24 hours after the discovery of any of the following events involving spent fuel, HLW, or reactor-related GTCC waste:

(1) An event in which important to safety equipment is disabled or fails to function as designed when:

(i) The equipment is required by regulation, license condition, or certificate of compliance to be available and operable to prevent releases that could exceed regulatory limits, to prevent exposures to radiation or radioactive materials that could exceed regulatory limits, or to mitigate the consequences of an accident; and

(ii) No redundant equipment was available and operable to perform the required safety function.

(2) For notifications made under this paragraph, the licensee may delay the notification to the NRC if the end of the 24-hour period occurs outside of the NRC's normal working day (i.e., 7:30 a.m. to 5:00 p.m. Eastern time), on a weekend, or a Federal holiday. In these cases, the licensee shall notify the NRC before 8:00 a.m. Eastern time on the next working day.

(e) *Initial notification:* Reports made by licensees in response to the requirements of this section must be made as follows:

(1) Licensees shall make reports required by paragraphs (a), (b), (c), or (d) of this section by telephone to the NRC Headquarters Operations Center.[2]

(2) When making a report under paragraphs (a), (b), (c), or (d) of this section, the licensee shall identify:

(i) The Emergency Class declared; or

(ii) Paragraph (b), "four-hour reports," paragraph (c), "eight- hour reports," or paragraph (d), "24-hour reports," as the paragraph of this section requiring notification of the non-emergency event.

(3) To the extent that the information is available at the time of notification, the information provided in these reports must include:

(i) The caller's name and call back telephone number;

(ii) A description of the event, including date and time;

(iii) The exact location of the event;

(iv) The quantities and chemical and physical forms of the spent fuel, HLW, or reactor-related GTCC waste involved in the event; and

(v) Any personnel radiation exposure data.

(f) *Follow-up notification:* With respect to the telephone notifications made under paragraphs (a), (b), (c) or (d) of this section, in addition to making the required initial notification, each licensee shall during the course of the event:

(1) Immediately report any further degradation in the level of safety of the ISFSI or MRS or other worsening conditions, including those that require the declaration of any of the Emergency Classes, if such a declaration has not been previously made; or any change from one Emergency Class to another; or a termination of the Emergency Class.

(2) Immediately report the results of ensuing evaluations or assessments of ISFSI or MRS conditions; the effectiveness of response or protective measures taken; and information related to ISFSI or MRS behavior that is not understood.

(3) Maintain an open, continuous communication channel with the NRC Headquarters Operations Center upon request by the NRC.

(g) *Preparation and submission of written reports.* Each licensee who makes an initial notification required by paragraphs (b)(1), (c)(1), (c)(2), or (d)(1) of this section shall also submit a written follow-up report to the Commission within 60 days of the initial notification. Written reports prepared pursuant to other regulations may be submitted to fulfill this requirement if the reports contain all the necessary information and the appropriate distribution is made. These written reports must be of sufficient quality to permit legible reproduction and optical scanning and must be submitted to the NRC in accordance with § 72.4. These reports must include the following information:

(1) A brief abstract describing the major occurrences during the event, including all component or system failures that contributed to the event and significant corrective action taken or planned to prevent recurrence;

(2) A clear, specific, narrative description of the event that occurred so that knowledgeable readers conversant with the design of an ISFSI or MRS, but not familiar with the details of a particular facility, can understand the complete event. The narrative description must include the following specific information as appropriate for the particular event:

(i) The ISFSI or MRS operating conditions before the event;

(ii) The status of structures, components, or systems that were inoperable at the start of the event and that contributed to the event;

(iii) The dates and approximate times of occurrences;

(iv) The cause of each component or system failure or personnel error, if known;

(v) The failure mode, mechanism, and effect of each failed component, if known;

(vi) A list of systems or secondary functions that were also affected for failures of components with multiple functions;

(vii) For wet spent fuel storage systems only, after the failure that rendered a train of a safety system inoperable, an estimate of the elapsed time from the discovery of the failure until the train was returned to service;

(viii) The method of discovery of each component or system failure or procedural error;

(ix) For each human performance related root cause, the licensee shall discuss the cause(s) and circumstances;

(x) For wet spent fuel storage systems only, any automatically and manually initiated safety system responses;

(xi) The manufacturer and model number (or other identification) of each component that failed during the event; and

(xii) The quantities and chemical and physical forms of the spent fuel, HLW, or reactor-related GTCC waste involved in the event;

(3) An assessment of the safety consequences and implications of the event. This assessment must include the availability of other systems or components that could have performed the same function as the components and systems that failed during the event;

(4) A description of any corrective actions planned as a result of the event, including those to reduce the probability of similar events occurring in the future;

(5) Reference to any previous similar events at the same facility that are known to the licensee;

(6) The name and telephone number of a person within the licensee's organization who is knowledgeable about the event and can provide additional information concerning the event and the facility's characteristics; and

(7) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name.

(h) *Supplemental information:* The Commission may require the licensee to submit specific additional information beyond that required by paragraph (g) of this section if the Commission finds that supplemental material is necessary for complete understanding of an unusually complex or significant event. These requests for supplemental information will be made in writing, and the licensee shall submit, as specified in § 72.4, the requested information as a supplement to the initial written report.

(i) *Applicability:* The requirements of this section apply to:

(1)(i) Licensees issued a specific license under § 72.40; and

(ii) Licensees issued a general license under § 72.210, after the licensee has placed spent fuel on the ISFSI storage pad (if the ISFSI is located inside the collocated protected area, for a reactor licensed under part 50 of this chapter) or after the licensee has transferred spent fuel waste outside the reactor licensee's protected area to the ISFSI storage pad (if the ISFSI is located outside the collocated protected area, for a reactor licensed under part 50 of this chapter).

(2) Those non-emergency events specified in paragraphs (b), (c), and (d) of this section that occurred within 3 years of the date of discovery.

[59 FR 64285, Dec. 14, 1994, as amended at 64 FR 33183, June 22, 1999; 66 FR 51841, Oct. 11, 2001; 68 FR 36615, June 5, 2003]

2. The commercial telephone number of the NRC Headquarters Operations Center is (301) 816-5100. Those licensees with an available Emergency Notification System (ENS) shall use the ENS to notify the NRC Headquarters Operations Center.

§ 72.76 Material status reports.

[Top of File]

(a) Except as provided in paragraph (b) of this section, each licensee shall complete in computer-readable format and submit to the Commission a Material Balance Report and a Physical Inventory Listing Report as specified in the instructions in NUREG/BR–0007 and NMMSS Report D–24 ''Personal Computer Data Input for NRC Licensees.'' Copies of these instructions may be obtained either by writing to the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. These reports, as specified by § 74.13 or 40.64 of this chapter, provide information concerning the special nuclear material and/or source material possessed, received, transferred, disposed of, or lost by the licensee. Each report must be submitted within 60 days of the beginning of the physical inventory required by § 72.72(b). The Commission may, when good cause is shown, permit a licensee to submit Material Balance Reports and Physical Inventory Listing Reports at other times. Each licensee required to report material balance and inventory information as described in this part, shall resolve any discrepancies identified during the report review and

reconciliation process within 30 calendar days of notification of a discrepancy identified by NRC. The Commission's copy of this report must be submitted to the address specified in the instructions. These prescribed, computer-readable forms replace the DOE/NRC Forms 742 and 742C previously submitted in paper form.

(b) Any licensee who is required to submit routine material status reports pursuant to § 75.35 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit such reports only as provided in that section instead of as provided in paragraph (a) of this section.

[53 FR 31658, Aug. 19, 1988, as amended at 59 FR 35620, July 13, 1994; 66 FR 51841, Oct. 11, 2001; 67 FR 78143, Dec. 23, 2002; 68 FR 58819, Oct. 10, 2003; 73 FR 32462, Jun. 9, 2008]

§ 72.78 Nuclear material transaction reports.

[Top of File]

(a) Except as provided in paragraph (b) of this section, whenever the licensee transfers or receives or adjusts the inventory, in any manner, of special nuclear material as specified by § 74.15 and/or source material as specified by § 40.64 of this chapter, the licensee shall complete in computer-readable format a Nuclear Material Transaction Report as specified in the instructions in NUREG/BR–0006 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees.'' Copies of these instructions may be obtained either by writing to the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. Each licensee who transfers the material shall submit a Nuclear Material Transaction Report in computer-readable format as specified in the instructions no later than the close of business the next working day. Each licensee who receives the material shall submit a Nuclear Material Transaction Report in computer-readable format in accordance with instructions within ten (10) days after the material is received. Each ISFSI licensee who receives spent fuel from a foreign source shall complete both the supplier's and the receiver's portion of the Nuclear Material Transaction Report, verify the identity of the spent fuel, and indicate the results on the receiver's portion of the form. These prescribed computer-readable forms replace the DOE/NRC Form 741 which have been previously submitted in paper form.

(b) Any licensee who is required to submit Nuclear Material Transactions Reports pursuant to § 75.34 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit the reports only as provided in that section instead of as provided in paragraph (a) of this section.

[59 FR 35621, July 13, 1994 as amended at 66 FR 51841, Oct. 11, 2001; 68 FR 58819, Oct. 10, 2003; 73 FR 32463, Jun. 9, 2008]

§72.79 Facility information and verification.

[Top of File]

(a) In response to a written request by the Commission, each applicant for a certificate of compliance or license and each recipient of a certificate of compliance or specific or general license shall submit facility information, as described in § 75.10 of this chapter, on Form N–71 and associated forms and site information on DOC/NRC Form AP–A and associated forms;

(b) Shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms; and

(c) Shall permit verification thereof by the International Atomic Energy Agency (IAEA) and take other action as necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

[73 FR 78607, Dec. 23, 2008]

§ 72.80 Other records and reports.

[Top of File]

(a) Each licensee shall maintain any records and make any reports that may be required by the conditions of the license or by the rules, regulations, and orders of the Commission in effectuating the purposes of the Act.

(b) Each licensee shall furnish a copy of its annual financial report, including the certified financial statements, to the Commission. However, licensees who submit a Form 10-Q with the Securities and Exchange Commission or a Form 1 with the Federal Energy Regulatory Commission, need not submit the annual financial report or a certified financial statement under this paragraph.

(c) Records that are required by the regulations in this part or by the license conditions must be maintained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified, the above records must be maintained until the Commission terminates the license.

(d) Any record that must be maintained pursuant to this part may be either the original or a reproduced copy by any state of the art method provided that any reproduced copy is duly authenticated by authorized personnel and is capable of producing a clear and legible copy after storage for the period specified by Commission regulations.

(e) Prior to license termination, the licensee shall forward records required by §§ 20.2103(b)(4) and 72.30(d) to the appropriate NRC Regional Office.

(f) If licensed activities are transferred or assigned in accordance with § 72.44(b)(1), the licensee shall transfer the records required by §§ 20.2103(b)(4) and 72.30(d) to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated.

(g) Each specific licensee shall notify the Commission, in accordance with § 72.4, of its readiness to begin operation at least 90 days prior to the first storage of spent fuel, high-level waste, or reactor-related GTCC waste in an ISFSI or an MRS.

[53 FR 31658, Aug. 19, 1988, as amended at 61 FR 24675, May 16, 1996; 64 FR 53616, Oct. 4, 1999; 66 FR 51841, Oct. 11, 2001; 71 FR 29247, May 22, 2006]

§ 72.82 Inspections and tests.

[Top of File]

(a) Each licensee under this part shall permit duly authorized representatives of the Commission to inspect its records, premises, and activities and of spent fuel, high-level radioactive waste, or reactor-related GTCC waste in its possession related to the specific license as may be necessary to meet the objectives of the Act, including section 105 of the Act.

(b) Each licensee under this part shall make available to the Commission for inspection, upon reasonable notice, records kept by the licensee pertaining to its receipt, possession, packaging, or transfer of spent fuel, high-level radioactive waste, or reactor-related GTCC waste.

(c)(1) Each licensee under this part shall upon request by the Director, Office of Nuclear Material Safety and Safeguards or the appropriate NRC Regional Administrator provide rent-free office space for the exclusive use of the Commission inspection personnel. Heat, air conditioning, light, electrical outlets and janitorial services shall be furnished by each licensee. The office shall be convenient to and have full access to the installation and shall provide the inspector both visual and acoustic privacy.

(2) For a site with a single storage installation the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary, and transient NRC personnel and will be generally commensurate with other office facilities at the site. A space of 250 sq. ft., either within the site's office complex or in an office trailer, or other onsite space, is suggested as a guide. For sites containing multiple facilities, additional space may be requested to accommodate additional full-time inspectors. The office space that is provided shall be subject to the approval of the Director, Office of Nuclear Material Safety and Safeguards or the appropriate NRC Regional Administrator. All furniture, supplies and Commission equipment will be furnished by the Commission.

(3) Each licensee under this part shall afford any NRC resident inspector assigned to that site, or other NRC inspectors identified by the Regional Administrator as likely to inspect the installation, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection, and personal safety.

(d) Each licensee shall perform, or permit the Commission to perform, such tests as the Commission deems appropriate or necessary for the administrator of the regulations in this part.

[53 FR 31658, Aug. 19, 1988, as amended at 64 FR 17512, Apr. 12, 1999; 66 FR 51842, Oct. 11, 2001]

§ 72.84 Violations.

[Top of File]

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55078, Nov. 24, 1992]

§ 72.86 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 72 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in Part 72 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: Secs. 72.1, 72.2, 72.3, 72.4, 72.5, 72.7, 72.8, 72.9, 72.13, 72.16, 72.18, 72.20, 72.22, 72.24, 72.26, 72.28, 72.32, 72.34, 72.40, 72.46, 72.56, 72.58, 72.60, 72.62, 72.84, 72.86, 72.90, 72.96, 72.108, 72.120, 72.122, 72.124, 72.126, 72.128, 72.130, 72.182, 72.194, 72.200, 72.202, 72.204, 72.206, 72.210, 72.214, 72.220, 72.230, 72.238, and 72.240.

[57 FR 55078, Nov. 24, 1992, as amended at 59 FR 36040, July 13, 1994; 64 FR 53616, Oct. 4, 1999; 64 FR 56122, Oct. 15, 1999; 65 FR 50617, Aug. 21, 2000]

Subpart E--Siting Evaluation Factors

[Top of File]

§ 72.90 General considerations.

(a) Site characteristics that may directly affect the safety or environmental impact of the ISFSI or MRS must be investigated and assessed.

(b) Proposed sites for the ISFSI or MRS must be examined with respect to the frequency and the severity of external natural and man-induced events that could affect the safe operation of the ISFSI or MRS.

(c) Design basis external events must be determined for each combination of proposed site and proposed ISFSI or MRS design.

(d) Proposed sites with design basis external events for which adequate protection cannot be provided through ISFSI or MRS design shall be deemed unsuitable for the location of the ISFSI or MRS.

(e) Pursuant to subpart A of part 51 of this chapter for each proposed site for an ISFSI and pursuant to sections 141 or 148 of NWPA, as appropriate (96 Stat. 2241, 101 Stat. 1330-235, 42 U.S.C. 10161, 10168) for each proposed site for an MRS, the potential for radiological and other environmental impacts on the region must be evaluated with due consideration of the characteristics of the population, including its distribution, and of the regional environs, including its historical and esthetic values.

(f) The facility must be sited so as to avoid to the extent possible the long-term and short-term adverse impacts associated with the occupancy and modification of floodplains.

§ 72.92 Design basis external natural events.

[Top of File]

(a) Natural phenomena that may exist or that can occur in the region of a proposed site must be identified and assessed according to their potential effects on the safe operation of the ISFSI or MRS. The important natural phenomena that affect the ISFSI or MRS design must be identified.

(b) Records of the occurrence and severity of those important natural phenomena must be collected for the region and evaluated for reliability, accuracy, and completeness. The applicant shall retain these records until the license is issued.

(c) Appropriate methods must be adopted for evaluating the design basis external natural events based on the characteristics of the region and the current state of knowledge about such events.

§ 72.94 Design basis external man-induced events.

[Top of File]

(a) The region must be examined for both past and present man-made facilities and activities that might endanger the proposed ISFSI or MRS. The important potential man-induced events that affect the ISFSI or MRS design must be identified.

(b) Information concerning the potential occurrence and severity of such events must be collected and evaluated for reliability, accuracy, and completeness.

(c) Appropriate methods must be adopted for evaluating the design basis external man-induced events, based on the current state of knowledge about such events.

§ 72.96 Siting limitations.

[Top of File]

(a) An ISFSI which is owned and operated by DOE must not be located at any site within which there is a candidate site for a HLW repository. This limitation shall apply until such time as DOE decides that such candidate site is no longer a candidate site under consideration for development as a HLW repository.

(b) An MRS must not be sited in any State in which there is located any site approved for site characterization for a HLW repository. This limitation shall apply until such time as DOE decides that the candidate site is no longer a candidate site under consideration for development as a repository. This limitation shall continue to apply to any site selected for construction as a repository.

(c) If an MRS is located, or is planned to be located, within 50 miles of the first HLW repository, any Commission decision approving the first HLW repository application must limit the quantity of spent fuel or high-level radioactive waste that may be stored. This limitation shall prohibit the storage of a quantity of spent fuel containing in excess of 70,000 metric tons of heavy metal, or a quantity of solidified high-level radioactive waste resulting from the reprocessing of such a quantity of spent fuel, in both the repository and the MRS until such time as a second repository is in operation.

(d) An MRS authorized by section 142(b) of NWPA (101 Stat. 1330-232, 42 U.S.C. 10162(b)) may not be constructed in the State of Nevada. The quantity of spent nuclear fuel or high-level radioactive waste that may be stored at an MRS authorized by section 142(b) of NWPA shall be subject to the limitations in § 72.44(g) of this part instead of the limitations in paragraph (c) of this section.

§ 72.98 Identifying regions around an ISFSI or MRS site.

[Top of File]

(a) The regional extent of external phenomena, man-made or natural, that are used as a basis for the design of the ISFSI or MRS must be identified.

(b) The potential regional impact due to the construction, operation or decommissioning of the ISFSI or MRS must be identified. The extent of regional impacts must be determined on the basis of potential measurable effects on the population or the environment from ISFSI or MRS activities.

(c) Those regions identified pursuant to paragraphs (a) and (b) of this section must be investigated as appropriate with respect to:

(1) The present and future character and the distribution of population,

(2) Consideration of present and projected future uses of land and water within the region, and

(3) Any special characteristics that may influence the potential consequences of a release of radioactive material during the operational lifetime of the ISFSI or MRS.

§ 72.100 Defining potential effects of the ISFSI or MRS on the region.

[Top of File]

(a) The proposed site must be evaluated with respect to the effects on populations in the region resulting from the release of radioactive materials under normal and accident conditions during operation and decommissioning of the ISFSI or MRS; in this evaluation both usual and unusual regional and site characteristics shall be taken into account.

(b) Each site must be evaluated with respect to the effects on the regional environment resulting from construction, operation, and decommissioning for the ISFSI or MRS; in this evaluation both usual and unusual regional and site characteristics must be taken into account.

§ 72.102 Geological and seismological characteristics for applications before October 16, 2003 and applications for other than dry cask modes of storage.

[Top of File]

(a)(1) East of the Rocky Mountain Front (east of approximately 104° west longitude), except in areas of known seismic activity including but not limited to the regions around New Madrid, MO, Charleston, SC, and Attica, NY, sites will be acceptable if the results from onsite foundation and geological investigation, literature review, and regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g.

(2) For those sites that have been evaluated under paragraph (a)(1) of this section that are east of the Rocky Mountain Front, and that are not in areas of known seismic activity, a standardized design earthquake (DE) described by an appropriate response spectrum anchored at 0.25 g may be used. Alternatively, a site-specific DE may be determined by using the criteria and level of investigations required by appendix A of part 100 of this chapter.

(b) West of the Rocky Mountain Front (west of approximately 104° west longitude), and in other areas of known potential seismic activity, seismicity will be evaluated by the techniques of appendix A of part 100 of this chapter. Sites that lie within the range of strong near-field ground motion from historical earthquakes on large capable faults should be avoided.

(c) Sites other than bedrock sites must be evaluated for their liquefaction potential or other soil instability due to vibratory ground motion.

(d) Site-specific investigations and laboratory analyses must show that soil conditions are adequate for the proposed foundation loading.

(e) In an evaluation of alternative sites, those which require a minimum of engineered provisions to correct site deficiencies are preferred. Sites with unstable geologic characteristics should be avoided.

(f) The design earthquake (DE) for use in the design of structures must be determined as follows:

(1) For sites that have been evaluated under the criteria of appendix A of 10 CFR part 100, the DE must be equivalent to the safe shutdown earthquake (SSE) for a nuclear power plant.

(2) Regardless of the results of the investigations anywhere in the continental U.S., the DE must have a value for the horizontal ground motion of no less than 0.10 g with the appropriate response spectrum.

[68 FR 54159, Sep. 16, 2003]

§ 72.103 Geological and seismological characteristics for applications for dry cask modes of storage on or after October 16, 2003.

[Top of File]

(a)(1) East of the Rocky Mountain Front (east of approximately 104° west longitude), except in areas of known seismic activity including but not limited to the regions around New Madrid, MO; Charleston, SC; and Attica, NY; sites will be acceptable if the results from onsite foundation and geological investigation, literature review, and regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g.

(2) For those sites that have been evaluated under paragraph (a)(1) of this section that are east of the Rocky Mountain Front, and that are not in areas of known seismic activity, a standardized design earthquake ground motion (DE) described by an appropriate response spectrum anchored at 0.25 g may be used. Alternatively, a site-specific DE may be determined by using the criteria and level of investigations required by paragraph (f) of this section. For a site with a co-located nuclear power plant (NPP), the existing geological and seismological design criteria for the NPP may be used. If the existing design criteria for the NPP is used and the site has multiple NPPs, then the criteria for the most recent NPP must be used.

(b) West of the Rocky Mountain Front (west of approximately 104° west longitude), and in other areas of known potential seismic activity east of the Rocky Mountain Front, seismicity must be evaluated by the techniques presented in paragraph (f) of this section. If an ISFSI or MRS is located on an NPP site, the existing geological and seismological design criteria for the NPP may be used. If the existing design criteria for the NPP is used and the site has multiple NPPs, then the criteria for the most recent NPP must be used.

(c) Sites other than bedrock sites must be evaluated for their liquefaction potential or other soil instability due to vibratory ground motion.

(d) Site-specific investigations and laboratory analyses must show that soil conditions are adequate for the proposed foundation loading.

(e) In an evaluation of alternative sites, those which require a minimum of engineered provisions to correct site deficiencies are preferred. Sites with unstable geologic characteristics should be avoided.

(f) Except as provided in paragraphs (a)(2) and (b) of this section, the DE for use in the design of structures, systems, and components must be determined as follows:

(1) *Geological, seismological, and engineering characteristics.* The geological, seismological, and engineering characteristics of a site and its environs must be investigated in sufficient scope and detail to permit an adequate evaluation of the proposed site, to provide sufficient information to support evaluations performed to arrive at estimates of the DE, and to permit adequate engineering solutions to actual or

potential geologic and seismic effects at the proposed site. The size of the region to be investigated and the type of data pertinent to the investigations must be determined based on the nature of the region surrounding the proposed site. Data on the vibratory ground motion, tectonic surface deformation, nontectonic deformation, earthquake recurrence rates, fault geometry and slip rates, site foundation material, and seismically induced floods and water waves must be obtained by reviewing pertinent literature and carrying out field investigations. However, each applicant shall investigate all geologic and seismic factors (for example, volcanic activity) that may affect the design and operation of the proposed ISFSI or MRS facility irrespective of whether these factors are explicitly included in this section.

(2) *Geologic and seismic siting factors.* The geologic and seismic siting factors considered for design must include a determination of the DE for the site, the potential for surface tectonic and nontectonic deformations, the design bases for seismically induced floods and water waves, and other design conditions as stated in paragraph (f)(2)(iv) of this section.

(i) Determination of the Design Earthquake Ground Motion (DE). The DE for the site is characterized by both horizontal and vertical free-field ground motion response spectra at the free ground surface. In view of the limited data available on vibratory ground motions for strong earthquakes, it usually will be appropriate that the design response spectra be smoothed spectra. The DE for the site is determined considering the results of the investigations required by paragraph (f)(1) of this section. Uncertainties are inherent in these estimates and must be addressed through an appropriate analysis, such as a probabilistic seismic hazard analysis (PSHA) or suitable sensitivity analyses.

(ii) Determination of the potential for surface tectonic and nontectonic deformations. Sufficient geological, seismological, and geophysical data must be provided to clearly establish if there is a potential for surface deformation.

(iii) Determination of design bases for seismically induced floods and water waves. The size of seismically induced floods and water waves that could affect a site from either locally or distantly generated seismic activity must be determined.

(iv) Determination of siting factors for other design conditions. Siting factors for other design conditions that must be evaluated include soil and rock stability, liquefaction potential, and natural and artificial slope stability. Each applicant shall evaluate all siting factors and potential causes of failure, such as, the physical properties of the materials underlying the site, ground disruption, and the effects of vibratory ground motion that may affect the design and operation of the proposed ISFSI or MRS.

(3) Regardless of the results of the investigations anywhere in the continental U.S., the DE must have a value for the horizontal ground motion of no less than 0.10 g with the appropriate response spectrum.

[68 FR 54159, Sep. 16, 2003]

§ 72.104 Criteria for radioactive materials in effluents and direct radiation from an ISFSI or MRS.

[Top of File]

(a) During normal operations and anticipated occurrences, the annual dose equivalent to any real individual who is located beyond the controlled area must not exceed 0.25 mSv (25 mrem) to the whole body, 0.75 mSv (75 mrem) to the thyroid and 0.25 mSv (25 mrem) to any other critical organ as a result of exposure to:

(1) Planned discharges of radioactive materials, radon and its decay products excepted, to the general environment,

(2) Direct radiation from ISFSI or MRS operations, and

(3) Any other radiation from uranium fuel cycle operations within the region.

(b) Operational restrictions must be established to meet as low as is reasonably achievable objectives for radioactive materials in effluents and direct radiation levels associated with ISFSI or MRS operations.

(c) Operational limits must be established for radioactive materials in effluents and direct radiation levels associated with ISFSI or MRS operations to meet the limits given in paragraph (a) of this section.

[53 FR 31658, Aug. 19, 1988, as amended at 63 FR 54562, Oct. 13, 1998]

§ 72.106 Controlled area of an ISFSI or MRS.

[Top of File]

(a) For each ISFSI or MRS site, a controlled area must be established.

(b) Any individual located on or beyond the nearest boundary of the controlled area may not receive from any design basis accident the more limiting of a total effective dose equivalent of 0.05 Sv (5 rem), or the sum of the deep-dose equivalent and the committed dose equivalent to any individual organ or tissue (other than the lens of the eye) of 0.5 Sv (50 rem). The lens dose equivalent may not exceed 0.15 Sv (15 rem) and the shallow dose equivalent to skin or any extremity may not exceed 0.5 Sv (50 rem). The minimum distance from the spent fuel, high-level radioactive waste, or reactor-related GTCC waste handling and storage facilities to the nearest boundary of the controlled area must be at least 100 meters.

(c) The controlled area may be traversed by a highway, railroad or waterway, so long as appropriate and effective arrangements are made to control traffic and to protect public health and safety.

[53 FR 31658, Aug. 19, 1988, as amended at 63 FR 54562, Oct. 13, 1998; 66 FR 51842, Oct. 11, 2001]

§ 72.108 Spent fuel or high-level radioactive waste transportation.

[Top of File]

The proposed ISFSI or MRS must be evaluated with respect to the potential impact on the environment of the transportation of spent fuel, high-level radioactive waste, or reactor-related GTCC waste within the region.

[66 FR 51842, Oct. 11, 2001]

Subpart F--General Design Criteria

[Top of File]

§ 72.120 General considerations.

(a) As required by § 72.24, an application to store spent fuel or reactor-related GTCC waste in an ISFSI or to store spent fuel, high-level radioactive waste, or reactor-related GTCC waste in an MRS must include the design criteria for the proposed storage installation. These design criteria establish the design, fabrication, construction, testing, maintenance and performance requirements for structures, systems, and components important to safety as defined in § 72.3. The general design criteria identified in this subpart establish minimum requirements for the design criteria for an ISFSI or an MRS. Any omissions in these general design criteria do not relieve the applicant from the requirement of providing the necessary safety features in the design of the ISFSI or MRS.

(b) The ISFSI must be designed to store spent fuel and/or solid reactor-related GTCC waste.

(1) Reactor-related GTCC waste may not be stored in a cask that also contains spent fuel. This restriction does not include radioactive materials that are associated with fuel assemblies (e.g., control rod blades or assemblies, thimble plugs, burnable poison rod assemblies, or fuel channels);

(2) Liquid reactor-related GTCC wastes may not be received or stored in an ISFSI; and

(3) If the ISFSI is a water-pool type facility, the reactor-related GTCC waste must be in a durable solid form with demonstrable leach resistance.

(c) The MRS must be designed to store spent fuel, solid high-level radioactive waste, and/or solid reactor-related GTCC waste.

(1) Reactor-related GTCC waste may not be stored in a cask that also contains spent fuel. This restriction does not include radioactive materials associated with fuel assemblies (e.g., control rod blades or assemblies, thimble plugs, burnable poison rod assemblies, or fuel channels);

(2) Liquid high-level radioactive wastes or liquid reactor-related GTCC wastes may not be received or stored in an MRS; and

(3) If the MRS is a water-pool type facility, the high-level waste and reactor-related GTCC waste must be in a durable solid form with demonstrable leach resistance.

(d) The ISFSI or MRS must be designed, made of materials, and constructed to ensure that there will be no significant chemical, galvanic, or other reactions between or among the storage system components, spent fuel, reactor-related GTCC waste, and/or high level waste including possible reaction with water during wet loading and unloading operations or during storage in a water-pool type ISFSI or MRS. The behavior of materials under irradiation and thermal conditions must be taken into account.

(e) The NRC may authorize exceptions, on a case-by-case basis, to the restrictions in paragraphs (b) and (c) of this section regarding the commingling of spent fuel and reactor-related GTCC waste in the same cask.

[66 FR 51842, Oct. 11, 2001]

§ 72.122 Overall requirements.

[Top of File]

(a) *Quality Standards*. Structures, systems, and components important to safety must be designed, fabricated, erected, and tested to quality standards commensurate with the importance to safety of the function to be performed.

(b) *Protection against environmental conditions and natural phenomena*. (1) Structures, systems, and components important to safety must

be designed to accommodate the effects of, and to be compatible with, site characteristics and environmental conditions associated with normal operation, maintenance, and testing of the ISFSI or MRS and to withstand postulated accidents.

(2) Structures, systems, and components important to safety must be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, lighting, hurricanes, floods, tsunami, and seiches, without impairing their capability to perform safety functions. The design bases for these structures, systems, and components must reflect:

(i) Structures, systems, and components important to safety must be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, lightning, hurricanes, floods, tsunami, and seiches, without impairing their capability to perform their intended design functions. The design bases for these structures, systems, and components must reflect:

(A) Appropriate consideration of the most severe of the natural phenomena reported for the site and surrounding area, with appropriate margins to take into account the limitations of the data and the period of time in which the data have accumulated, and

(B) Appropriate combinations of the effects of normal and accident conditions and the effects of natural phenomena.

(ii) The ISFSI or MRS also should be designed to prevent massive collapse of building structures or the dropping of heavy objects as a result of building structural failure on the spent fuel, high-level radioactive waste, or reactor-related GTCC waste or on to structures, systems, and components important to safety.

(3) Capability must be provided for determining the intensity of natural phenomena that may occur for comparison with design bases of structures, systems, and components important to safety.

(4) If the ISFSI or MRS is located over an aquifer which is a major water resource, measures must be taken to preclude the transport of radioactive materials to the environment through this potential pathway.

(c) *Protection against fires and explosions*. Structures, systems, and components important to safety must be designed and located so that they can continue to perform their safety functions effectively under credible fire and explosion exposure conditions. Noncombustible and heat-resistant materials must be used wherever practical throughout the ISFSI or MRS, particularly in locations vital to the control of radioactive materials and to the maintenance of safety control functions. Explosion and fire detection, alarm, and suppression systems shall be designed and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on structures, systems, and components important to safety. The design of the ISFSI or MRS must include provisions to protect against adverse effects that might result from either the operation or the failure of the fire suppression system.

(d) *Sharing of structures, systems, and components*. Structures, systems, and components important to safety must not be shared between an ISFSI or MRS and other facilities unless it is shown that such sharing will not impair the capability of either facility to perform its safety functions, including the ability to return to a safe condition in the event of an accident.

(e) *Proximity of sites*. An ISFSI or MRS located near other nuclear facilities must be designed and operated to ensure that the cumulative effects of their combined operations will not constitute an unreasonable risk to the health and safety of the public.

(f) *Testing and maintenance of systems and components*. Systems and components that are important to safety must be designed to permit inspection, maintenance, and testing.

(g) *Emergency capability*. Structures, systems, and components important to safety must be designed for emergencies. The design must provide for accessibility to the equipment of onsite and available offsite emergency facilities and services such as hospitals, fire and police departments, ambulance service, and other emergency agencies.

(h) *Confinement barriers and systems*. (1) The spent fuel cladding must be protected during storage against degradation that leads to gross ruptures or the fuel must be otherwise confined such that degradation of the fuel during storage will not pose operational safety problems with respect to its removal from storage. This may be accomplished by canning of consolidated fuel rods or unconsolidated assemblies or other means as appropriate.

(2) For underwater storage of spent fuel, high-level radioactive waste, or reactor-related GTCC waste in which the pool water serves as a shield and a confinement medium for radioactive materials, systems for maintaining water purity and the pool water level must be designed so that any abnormal operations or failure in those systems from any cause will not cause the water level to fall below safe limits. The design must preclude installations of drains, permanently connected systems, and other features that could, by abnormal operations or failure, cause a significant loss of water. Pool water level equipment must be provided to alarm in a continuously manned location if the water level in the storage pools falls below a predetermined level.

(3) Ventilation systems and off-gas systems must be provided where necessary to ensure the confinement of airborne radioactive particulate materials during normal or off-normal conditions.

(4) Storage confinement systems must have the capability for continuous monitoring in a manner such that the licensee will be able to determine when corrective action needs to be taken to maintain safe storage conditions. For dry spent fuel storage, periodic monitoring is sufficient provided that periodic monitoring is consistent with the dry spent fuel storage cask design requirements. The monitoring period must be based upon the spent fuel storage cask design requirements.

(5) The high-level radioactive waste and reactor-related GTCC waste must be packaged in a manner that allows handling and retrievability without the release of radioactive materials to the environment or radiation exposures in excess of part 20 limits. The package must be designed to confine the high-level radioactive waste for the duration of the license.

(i) *Instrumentation and control systems*. Instrumentation and control systems for wet spent fuel and reactor-related GTCC waste storage must be provided to monitor systems that are important to safety over anticipated ranges for normal operation and off-normal operation. Those instruments and control systems that must remain operational under accident conditions must be identified in the Safety Analysis Report. Instrumentation systems for dry storage casks must be provided in accordance with cask design requirements to monitor conditions that are important to safety over anticipated ranges for normal conditions and off-normal conditions. Systems that are required under accident conditions must be identified in the Safety Analysis Report.

(j) *Control room or control area*. A control room or control area, if appropriate for the ISFSI or MRS design, must be designed to permit occupancy and actions to be taken to monitor the ISFSI or MRS safely under normal conditions, and to provide safe control of the ISFSI or MRS under off-normal or accident conditions.

(k) *Utility or other services*. (1) Each utility service system must be designed to meet emergency conditions. The design of utility services and distribution systems that are important to safety must include redundant systems to the extent necessary to maintain, with adequate capacity, the ability to perform safety functions assuming a single failure.

(2) Emergency utility services must be designed to permit testing of the functional operability and capacity, including the full operational sequence, of each system for transfer between normal and emergency supply sources; and to permit the operation of associated safety systems.

(3) Provisions must be made so that, in the event of a loss of the primary electric power source or circuit, reliable and timely emergency power will be provided to instruments, utility service systems, the central security alarm station, and operating systems, in amounts sufficient to allow safe storage conditions to be maintained and to permit continued functioning of all systems essential to safe storage.

(4) An ISFSI or MRS which is located on the site of another facility may share common utilities and services with such a facility and be physically connected with the other facility; however, the sharing of utilities and services or the physical connection must not significantly:

(i) Increase the probability or consequences of an accident or malfunction of components, structures, or systems that are important to safety; or

(ii) Reduce the margin of safety as defined in the basis for any technical specifications of either facility.

(l) *Retrievability*. Storage systems must be designed to allow ready retrieval of spent fuel, high-level radioactive waste, and reactor-related GTCC waste for further processing or disposal.

[53 FR 31658, Aug. 19, 1988, as amended at 64 FR 33184, June 22, 1999; 66 FR 51842, Oct. 11, 2001]

§ 72.124 Criteria for nuclear criticality safety.

[Top of File]

(a) *Design for criticality safety*. Spent fuel handling, packaging, transfer, and storage systems must be designed to be maintained subcritical and to ensure that, before a nuclear criticality accident is possible, at least two unlikely, independent, and concurrent or sequential changes have occurred in the conditions essential to nuclear criticality safety. The design of handling, packaging, transfer, and storage systems must include margins of safety for the nuclear criticality parameters that are commensurate with the uncertainties in the data and methods used in calculations and demonstrate safety for the handling, packaging, transfer and storage conditions and in the nature of the immediate environment under accident conditions.

(b) *Methods of criticality control*. When practicable, the design of an ISFSI or MRS must be based on favorable geometry, permanently fixed neutron absorbing materials (poisons), or both. Where solid neutron absorbing materials are used, the design must provide for positive means of verifying their continued efficacy. For dry spent fuel storage systems, the continued efficacy may be confirmed by a demonstration or analysis before use, showing that significant degradation of the neutron absorbing materials cannot occur over the life of the facility.

(c) *Criticality Monitoring*. A criticality monitoring system shall be maintained in each area where special nuclear material is handled, used, or stored which will energize clearly audible alarm signals if accidental criticality occurs. Underwater monitoring is not required when special nuclear material is handled or stored beneath water shielding. Monitoring of dry storage areas where special nuclear material is packaged in its stored configuration under a license issued under this subpart is not required.

[53 FR 31658, Aug. 19, 1988, as amended at 64 FR 33184, June 22, 1999]

§ 72.126 Criteria for radiological protection.

[Top of File]

(a) *Exposure control*. Radiation protection systems must be provided for all areas and operations where onsite personnel may be exposed to radiation or airborne radioactive materials. Structures, systems, and components for which operation, maintenance, and required inspections may involve occupational exposure must be designed, fabricated, located, shielded, controlled, and tested so as to control external and internal radiation exposures to personnel. The design must include means to:

(1) Prevent the accumulation of radioactive material in those systems requiring access;

(2) Decontaminate those systems to which access is required;

(3) Control access to areas of potential contamination or high radiation within the ISFSI or MRS;

(4) Measure and control contamination of areas requiring access;

(5) Minimize the time required to perform work in the vicinity of radioactive components; for example, by providing sufficient space for ease of operation and designing equipment for ease of repair and replacement; and

(6) Shield personnel from radiation exposure.

(b) *Radiological alarm systems*. Radiological alarm systems must be provided in accessible work areas as appropriate to warn operating personnel of radiation and airborne radioactive material concentrations above a given setpoint and of concentrations of radioactive material in effluents above control limits. Radiation alarm systems must be designed with provisions for calibration and testing their operability.

(c) *Effluent and direct radiation monitoring*. (1) As appropriate for the handling and storage system, effluent systems must be provided. Means for measuring the amount of radionuclides in effluents during normal operations and under accident conditions must be provided for these systems. A means of measuring the flow of the diluting medium, either air or water, must also be provided.

(2) Areas containing radioactive materials must be provided with systems for measuring the direct radiation levels in and around these areas.

(d) *Effluent control*. The ISFSI or MRS must be designed to provide means to limit to levels as low as is reasonably achievable the release of radioactive materials in effluents during normal operations; and control the release of radioactive materials under accident conditions. Analyses must be made to show that releases to the general environment during normal operations and anticipated occurrences will be within the exposure limit given in § 72.104. Analyses of design basis accidents must be made to show that releases to the general environment will be within the exposure limits given in § 72.106. Systems designed to monitor the release of radioactive materials must have means for calibration and testing their operability.

§ 72.128 Criteria for spent fuel, high-level radioactive waste, and other radioactive waste storage and handling.

[Top of File]

(a) *Spent fuel and high-level radioactive waste storage and handling systems*. Spent fuel storage, high-level radioactive waste storage, reactor-related GTCC waste storage and other systems that might contain or handle radioactive materials associated with spent fuel, high-level radioactive waste, or reactor-related GTCC waste, must be designed to ensure adequate safety under normal and accident conditions. These systems must be designed with--

(1) A capability to test and monitor components important to safety,

(2) Suitable shielding for radioactive protection under normal and accident conditions,

(3) Confinement structures and systems,

(4) A heat-removal capability having testability and reliability consistent with its importance to safety, and

(5) means to minimize the quantity of radioactive wastes generated.

(b) *Waste treatment*. Radioactive waste treatment facilities must be provided. Provisions must be made for the packing of site-generated low-level wastes in a form suitable for storage onsite awaiting transfer to disposal sites.

[53 FR 31658, Aug. 19, 1988, as amended at 66 FR 51843, Oct. 11, 2001]

§ 72.130 Criteria for decommissioning.

[Top of File]

The ISFSI or MRS must be designed for decommissioning. Provisions must be made to facilitate decontamination of structures and equipment, minimize the quantity of radioactive wastes and contaminated equipment, and facilitate the removal of radioactive wastes and contaminated materials at the time the ISFSI or MRS is permanently decommissioned.

Subpart G--Quality Assurance

[Top of File]

Source: 64 FR 56122, Oct. 15, 1999, unless otherwise noted.

§ 72.140 Quality assurance requirements.

(a) *Purpose.* This subpart describes quality assurance requirements that apply to design, purchase, fabrication, handling, shipping, storing, cleaning, assembly, inspection, testing, operation, maintenance, repair, modification of structures, systems, and components, and decommissioning that are important to safety. As used in this subpart, "quality assurance" comprises all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to control of the physical characteristics and quality of the material or component to predetermined requirements. The certificate holder and applicant for a CoC are responsible for the quality assurance requirements as they apply to the design, fabrication, and testing of a spent fuel storage cask until possession of the spent fuel storage cask is transferred to the licensee. The licensee and the certificate holder are also simultaneously responsible for these quality assurance requirements through the oversight of contractors and subcontractors.

(b) *Establishment of program.* Each licensee, applicant for a license, certificate holder, applicant for a CoC shall establish, maintain, and execute a quality assurance program satisfying each of the applicable criteria of this subpart, and satisfying any specific provisions which are applicable to the licensee's, applicant's for a license, certificate holder's, and applicant's for a CoC activities. The licensee, applicant for a license, certificate holder, and applicant for a CoC shall execute the applicable criteria in a graded approach to an extent that is commensurate with the quality assurance requirements' importance to safety. The quality assurance program must cover the activities identified in this subpart throughout the life of the activity. For licensees, this includes activities from the site selection through decommissioning prior to termination of the license. For certificate holders, this includes activities from development of the spent fuel storage cask design through termination of the CoC.

(c) *Approval of program*.

(1) Each licensee, applicant for a license, certificate holder, or applicant for a CoC shall file a description of its quality assurance program, including a discussion of which requirements of this subpart are applicable and how they will be satisfied, in accordance with Sec. 72.4.

(2) Each licensee shall obtain Commission approval of its quality assurance program prior to receipt of spent fuel and/or reactor-related GTCC waste at the ISFSI or spent fuel, high-level radioactive waste, and/or reactor-related GTCC waste at the MRS. Each licensee or applicant for a specific license shall obtain Commission approval of its quality assurance program before commencing fabrication or testing of a spent fuel storage cask.

(3) Each certificate holder or applicant for a CoC shall obtain Commission approval of its quality assurance program before commencing fabrication or testing of a spent fuel storage cask.

(d) *Previously-approved programs*. A quality assurance program previously approved by the Commission as satisfying the requirements of Appendix B to part 50 of this chapter, subpart H to part 71 of this chapter, or subpart G to this part will be accepted as satisfying the requirements of paragraph (b) of this section, except that a licensee, applicant for a license, certificate holder, and applicant for a CoC who is using an Appendix B or subpart H quality assurance program shall also meet the recordkeeping requirements of Sec. 72.174. In filing the description of the quality assurance program required by paragraph (c) of this section, each licensee, applicant for a license, certificate holder, and applicant for a CoC shall notify the NRC, in accordance with Sec. 72.4, of its intent to apply its previously-approved quality assurance program to ISFSI activities or spent fuel storage cask activities. The notification shall identify the previously-approved quality assurance program by date of submittal to the Commission, docket number, and date of Commission approval.

[53 FR 31658, Aug. 19, 1988, as amended at 65 FR 50617, Aug. 21, 2000; 66 FR 51843, Oct. 11, 2001]

§ 72.142 Quality assurance organization.

[Top of File]

(a) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall be responsible for the establishment and execution of the quality assurance program. The licensee and certificate holder may delegate to others, such as contractors, agents, or consultants, the work of establishing and executing the quality assurance program, but the licensee and the certificate holder shall retain responsibility for the program. The licensee, applicant for a license, certificate holder, and applicant for a CoC shall clearly establish and delineate in writing the authority and duties of persons and organizations performing activities affecting the functions of structures, systems, and components which are important to safety. These activities include performing the functions associated with attaining quality objectives and the quality assurance functions.

(b) The quality assurance functions are--

(1) Assuring that an appropriate quality assurance program is established and effectively executed; and

(2) Verifying, by procedures such as checking, auditing, and inspection, that activities affecting the functions that are important to safety have been correctly performed. The persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions.

(c) The persons and organizations performing quality assurance functions shall report to a management level that ensures that the required

authority and organizational freedom, including sufficient independence from cost and schedule considerations when these considerations are opposed to safety considerations, are provided. Because of the many variables involved, such as the number of personnel, the type of activity being performed, and the location or locations where activities are performed, the organizational structure for executing the quality assurance program may take various forms, provided that the persons and organizations assigned the quality assurance functions have the required authority and organizational freedom. Irrespective of the organizational structure, the individual(s) assigned the responsibility for assuring effective execution of any portion of the quality assurance program, at any location where activities subject to this section are being performed, must have direct access to the levels of management necessary to perform this function.

§ 72.144 Quality assurance program.

[Top of File]

(a) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish, at the earliest practicable time consistent with the schedule for accomplishing the activities, a quality assurance program which complies with the requirements of this subpart. The licensee, applicant for a license, certificate holder, and applicant for a CoC shall document the quality assurance program by written procedures or instructions and shall carry out the program in accordance with these procedures throughout the period during which the ISFSI or MRS is licensed or the spent fuel storage cask is certified. The licensee, applicant for a license, certificate holder, and applicant for a CoC shall identify the structures, systems, and components to be covered by the quality assurance program, the major organizations participating in the program, and the designated functions of these organizations.

(b) The licensee, applicant for a license, certificate holder, and applicant for a CoC, through their quality assurance program(s), shall provide control over activities affecting the quality of the identified structures, systems, and components to an extent commensurate with the importance to safety and, as necessary, to ensure conformance with the approved design of each ISFSI, MRS, or spent fuel storage cask. The licensee, applicant for a license, certificate holder, and applicant for a CoC shall ensure that activities affecting quality are accomplished under suitably controlled conditions. Controlled conditions include the use of appropriate equipment; suitable environmental conditions for accomplishing the activity, such as adequate cleanliness; and assurance that all prerequisites for the given activity have been satisfied. The licensee, applicant for a license, certificate holder, and applicant for a CoC shall take into account the need for special controls, processes, test equipment, tools and skills to attain the required quality and the need for verification of quality by inspection and test.

(c) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall base the requirements and procedures of their quality assurance program(s) on the following considerations concerning the complexity and proposed use of the structures, systems, or components:

(1) The impact of malfunction or failure of the item on safety;

(2) The design and fabrication complexity or uniqueness of the item;

(3) The need for special controls and surveillance over processes and equipment;

(4) The degree to which functional compliance can be demonstrated by inspection or test; and

(5) The quality history and degree of standardization of the item.

(d) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall provide for indoctrination and training of personnel performing activities affecting quality as necessary to ensure that suitable proficiency is achieved and maintained.

(e) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall review the status and adequacy of the quality assurance program at established intervals. Management of other organizations participating in the quality assurance program must regularly review the status and adequacy of that part of the quality assurance program which they are executing.

§ 72.146 Design control.

[Top of File]

(a) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to ensure that applicable regulatory requirements and the design basis, as specified in the license or CoC application for those structures, systems, and components to which this section applies, are correctly translated into specifications, drawings, procedures, and instructions. These measures must include provisions to ensure that appropriate quality standards are specified and included in design documents and that deviations from standards are controlled. Measures must be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the functions of the structures, systems, and components which are important to safety.

(b) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures for the identification and control of design interfaces and for coordination among participating design organizations. These measures must include the establishment of written procedures among participating design organizations for the review, approval, release, distribution, and revision of documents involving design interfaces. The design control measures must provide for verifying or checking the adequacy of design by methods such as design reviews, alternate or simplified calculational methods, or by a suitable testing program. For the verifying or checking process, the licensee and certificate holder shall designate individuals or groups other than those who were responsible for the original design, but who may be from the same organization. Where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, the licensee and certificate holder shall include suitable qualification testing of a prototype or sample unit

under the most adverse design conditions. The licensee, applicant for a license, certificate holder, and applicant for a CoC shall apply design control measures to items such as the following: criticality physics, radiation, shielding, stress, thermal, hydraulic, and accident analyses; compatibility of materials; accessibility for inservice inspection, maintenance, and repair; features to facilitate decontamination; and delineation of acceptance criteria for inspections and tests.

(c) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall subject design changes, including field changes, to design control measures commensurate with those applied to the original design. Changes in the conditions specified in the license or CoC require prior NRC approval.

§ 72.148 Procurement document control.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are included or referenced in the documents for procurement of material, equipment, and services, whether purchased by the licensee, certificate holder, or by their contractors and subcontractors. To the extent necessary, the licensee, applicant for a license, certificate holder, and applicant for a CoC, shall require contractors or subcontractors to provide a quality assurance program consistent with the applicable provisions of this subpart.

§ 72.150 Instructions, procedures, and drawings.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall prescribe activities affecting quality by documented instructions, procedures, or drawings of a type appropriate to the circumstances and shall require that these instructions, procedures, and drawings be followed. The instructions, procedures, and drawings must include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

§ 72.152 Document control.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to control the issuance of documents such as instructions, procedures, and drawings, including changes, which prescribe all activities affecting quality. These measures must assure that documents, including changes, are reviewed for adequacy, approved for release by authorized personnel, and distributed and used at the location where the prescribed activity is performed. These measures must ensure that changes to documents are reviewed and approved.

§ 72.154 Control of purchased material, equipment, and services.

[Top of File]

(a) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to ensure that purchased material, equipment, and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents. These measures must include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or subcontractor, inspection at the contractor or subcontractor source, and examination of products upon delivery.

(b) The licensee, applicant for a license, certificate holder, and applicant for a CoC shall have available documentary evidence that material and equipment conform to the procurement specifications prior to installation or use of the material and equipment. The licensee and certificate holder shall retain or have available this documentary evidence for the life of the ISFSI, MRS, or spent fuel storage cask. The licensee and certificate holder shall ensure that the evidence is sufficient to identify the specific requirements met by the purchased material and equipment.

(c) The licensee, applicant for a license, certificate holder, and applicant for a CoC, or a designee of either, shall assess the effectiveness of the control of quality by contractors and subcontractors at intervals consistent with the importance, complexity, and quantity of the product or services.

§ 72.156 Identification and control of materials, parts, and components.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures for the identification and control of materials, parts, and components. These measures must ensure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item as required, throughout fabrication, installation, and use of the item. These identification and control measures must be designed to prevent the use of incorrect or defective materials, parts, and components.

§ 72.158 Control of special processes.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to ensure that special processes, including welding, heat treating, and nondestructive testing, are controlled and accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements.

§ 72.160 Licensee inspection.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish and execute a program for inspection of activities affecting quality by or for the organization performing the activity to verify conformance with the documented instructions, procedures, and drawings for accomplishing the activity. The inspection must be performed by individuals other than those who performed the activity being inspected. Examinations, measurements, or tests of material or products processed must be performed for each work operation where necessary to assure quality. If direct inspection of processed material or products cannot be carried out, indirect control by monitoring processing methods, equipment, and personnel must be provided. Both inspection and process monitoring must be provided when quality control is inadequate without both. If mandatory inspection hold points that require witnessing or inspecting by the licensee's or certificate holder's designated representative, and beyond which work should not proceed without the consent of its designated representative, are required, the specific hold points must be indicated in appropriate documents.

§ 72.162 Test control.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish a test program to ensure that all testing, required to demonstrate that the structures, systems, and components will perform satisfactorily in service, is identified and performed in accordance with written test procedures that incorporate the requirements of this part and the requirements and acceptance limits contained in the ISFSI, MRS, or spent fuel storage cask license or CoC. The test procedures must include provisions to ensure that all prerequisites for the given test are met, that adequate test instrumentation is available and used, and that the test is performed under suitable environmental conditions. The licensee, applicant for a license, certificate holder, and applicant for a CoC shall document and evaluate the test results to ensure that test requirements have been satisfied.

§ 72.164 Control of measuring and test equipment.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to ensure that tools, gauges, instruments, and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated, and adjusted at specified periods to maintain accuracy within necessary limits.

§ 72.166 Handling, storage, and shipping control.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to control, in accordance with work and inspection instructions, the handling, storage, shipping, cleaning, and preservation of materials and equipment to prevent damage or deterioration. When necessary for particular products, special protective environments, such as inert gas atmosphere, and specific moisture content and temperature levels must be specified and provided.

§ 72.168 Inspection, test, and operating status.

[Top of File]

(a) The licensee shall establish measures to indicate, by the use of markings such as stamps, tags, labels, routing cards, or other suitable means, the status of inspections and tests performed upon individual items of the ISFSI or MRS. These measures must provide for the identification of items which have satisfactorily passed required inspections and tests where necessary to preclude inadvertent bypassing of the inspections and tests.

(b) The licensee shall establish measures to identify the operating status of structures, systems, and components of the ISFSI or MRS, such as tagging valves and switches, to prevent inadvertent operation.

§ 72.170 Nonconforming materials, parts, or components.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to control materials, parts, or components that do not conform to their requirements in order to prevent their inadvertent use or installation. These measures must include, as appropriate, procedures for identification, documentation, segregation, disposition, and notification to affected organizations. Nonconforming items must be reviewed and accepted, rejected, repaired, or reworked in accordance with documented procedures.

§ 72.172 Corrective action.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall establish measures to ensure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances, are promptly identified and corrected. In the case of a significant condition identified as adverse to quality, the measures must ensure that the cause of the condition is determined and corrective action is taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken must be documented and reported to appropriate levels of management.

§ 72.174 Quality assurance records.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall maintain sufficient records to furnish evidence of activities affecting quality. The records must include the following: design records, records of use, and the results of reviews, inspections, tests, audits, monitoring of work performance, and materials analyses. The records must include closely related data such as qualifications of personnel, procedures, and equipment. Inspection and test records must, at a minimum, identify the inspector or data recorder, the type of observation, the results, the acceptability, and the action taken in connection with any noted deficiencies. Records must be identifiable and retrievable. Records pertaining to the design, fabrication, erection, testing, maintenance, and use of structures, systems, and components important to safety must be maintained by or under the control of the licensee or certificate holder until the NRC terminates the license or CoC.

§ 72.176 Audits.

[Top of File]

The licensee, applicant for a license, certificate holder, and applicant for a CoC shall carry out a comprehensive system of planned and periodic audits to verify compliance with all aspects of the quality assurance program and to determine the effectiveness of the program. The audits must be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibilities in the areas being audited. Audited results must be documented and reviewed by management having responsibility in the area audited. Follow-up action, including reaudit of deficient areas, must be taken where indicated.

Subpart H--Physical Protection

[Top of File]

§ 72.180 Physical protection plan.

The licensee shall establish, maintain, and follow a detailed plan for physical protection as described in § 73.51 of this chapter. The licensee shall retain a copy of the current plan as a record until the Commission terminates the license for which the procedures were developed and, if any portion of the plan is superseded, retain the superseded material for 3 years after each change or until termination of the license. The plan must describe how the applicant will meet the requirements of § 73.51 of this chapter and provide physical protection during on-site transportation to and from the proposed ISFSI or MRS and include within the plan the design for physical protection, the lice safeguards contingency plan, and the security organization personnel training and qualification plan. The plan must list tests, inspections, audits, and other means to be used to demonstrate compliance with such requirements.

[63 FR 26961, may 15, 1998]

§ 72.182 Design for physical protection.

[Top of File]

The design for physical protection must show the site layout and the design features provided to protect the ISFSI or MRS from sabotage. It must include:

(a) The design criteria for the physical protection of the proposed ISFSI or MRS;

(b) The design bases and the relation of the design bases to the design criteria submitted pursuant to paragraph (a) of this section; and

(c) Information relative to materials of construction, equipment, general arrangement, and proposed quality assurance program sufficient to provide reasonable assurance that the final security system will conform to the design bases for the principal design criteria submitted

pursuant to paragraph (a) of this section.

§ 72.184 Safeguards contingency plan.

[Top of File]

(a) The requirements of the licensee's safeguards contingency plan for responding to threats and radiological sabotage must be as defined in appendix C to part 73 of this chapter. This plan must include Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix, the first four categories of information relating to nuclear facilities licensed under part 50 of this chapter. (The fifth and last category of information, Procedures, does not have to be submitted for approval.)

(b) The licensee shall prepare and maintain safeguards contingency plan procedures in accordance with appendix C to 10 CFR part 73 for effecting the actions and decisions contained in the Responsibility Matrix of the licensee's safeguards contingency plan. The licensee shall retain a copy of the current procedures as a record until the Commission terminates the license for which the procedures were developed and, if any portion of the procedures is superseded, retain the superseded material for three years after each change.

[53 FR 31658, Aug. 19, 1988, as amended at 57 FR 33429, July 29, 1992]

§ 72.186 Change to physical security and safeguards contingency plans.

[Top of File]

(a) The licensee shall make no change that would decrease the safeguards effectiveness of the physical security plan, guard training plan or the first four categories of information (Background, Generic Planning Base, Licensee Planning Base, and Responsibility Matrix) contained in the licensee safeguards contingency plan without prior approval of the Commission. A licensee desiring to make a change must submit an application for a license amendment pursuant to § 72.56.

(b) The licensee may, without prior Commission approval, make changes to the physical security plan, guard training plan, or the safeguards contingency plan, if the changes do not decrease the safeguards effectiveness of these plans. The licensee shall maintain records of changes to any such plan made without prior approval for a period of three years from the date of the change, and shall, within two months after the change is made, submit a report addressed to Director, Spent Fuel Project Office, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, in accordance with § 72.4, containing a description of each change. A copy of the report must be sent to the Regional Administrator of the appropriate NRC Regional Office specified in appendix A to part 73 of this chapter.

[53 FR 31658, Aug. 19, 1998, as amended at 67 FR 3586, Jan. 25, 2002; 68 FR 58819, Oct. 10, 2003]

Subpart I--Training and Certification of Personnel

[Top of File]

§ 72.190 Operator requirements.

Operation of equipment and controls that have been identified as important to safety in the Safety Analysis Report and in the license must be limited to trained and certified personnel or be under the direct visual supervision of an individual with training and certification in the operation. Supervisory personnel who personally direct the operation of equipment and controls that are important to safety must also be certified in such operations.

§ 72.192 Operator training and certification program.

[Top of File]

The applicant for a license under this part shall establish a program for training, proficiency testing, and certification of ISFSI or MRS personnel. This program must be submitted to the Commission for approval with the license application.

§ 72.194 Physical requirements.

[Top of File]

The physical condition and the general health of personnel certified for the operation of equipment and controls that are important to safety must not be such as might cause operational errors that could endanger other in-plant personnel or the public health and safety. Any condition that might cause impaired judgment or motor coordination must be considered in the selection of personnel for activities that are important to safety. These conditions need not categorically disqualify a person, if appropriate provisions are made to accommodate such defect.

Subpart J--Provision of MRS Information to State Governments and Indian Tribes

[Top of File]

§ 72.200 Provision of MRS information.

(a) The Director, Office of Nuclear Material Safety and Safeguards, or the Director's designee shall provide to the Governor and legislature of any State in which an MRS authorized under the Nuclear Waste Policy Act of 1982, as amended, is or may be located, to the Governors of any contiguous States, to each affected unit of local government and to the governing body of any affected Indian tribe, timely and complete information regarding determinations or plans made by the Commission with respect to siting, development, design, licensing, construction, operation, regulation or decommissioning of such monitored retrievable storage facility.

(b) Notwithstanding paragraph (a) of this section, the Director or the Director's designee is not required to distribute any document to any entity if, with respect to such document, that entity or its counsel is included on a service list prepared pursuant to part 2 of this chapter.

(c) Copies of all communications by the Director or the Director's designee under this section must be made available at the NRC Web site, http://www.nrc.gov, and/or at the NRC Public Document Room, and must be furnished to DOE.

[53 FR 31658, Aug. 19, 1988, as amended at 64 FR 48954, Sept. 9, 1999]

§ 72.202 Participation in license reviews.

[Top of File]

States, local governmental bodies and affected, Federally-recognized Indian Tribes may participate in license reviews as provided in Subpart C of Part 2 of this chapter.

[69 FR 2280, Jan. 14, 2004]

§ 72.204 Notice to States.

[Top of File]

If the Governor and legislature of a State have jointly designated on their behalf a single person or entity to receive notice and information from the Commission under this part, the Commission will provide such notice and information to the jointly designated person or entity instead of the Governor and the legislature separately.

§ 72.206 Representation.

[Top of File]

Any person who acts under this subpart as a representative for a State (or for the Governor or legislature thereof) or for an affected Indian tribe shall include in the request or other submission, or at the request of the Commission, a statement of the basis of his or her authority to act in such representative capacity.

Subpart K--General License for Storage of Spent Fuel at Power Reactor Sites

[Top of File]

Source: 55 FR 29191, July 18, 1990, unless otherwise noted.

§ 72.210 General license issued.

A general license is hereby issued for the storage of spent fuel in an independent spent fuel storage installation at power reactor sites to persons authorized to possess or operate nuclear power reactors under 10 CFR part 50 or 10 CFR part 52.

[72 FR 49561, Aug. 28, 2007]

§ 72.212 Conditions of general license issued under § 72.210.

[Top of File]

(a)(1) The general license is limited to that spent fuel which the general licensee is authorized to possess at the site under the specific license for the site.

(2)This general license is limited to storage of spent fuel in casks approved under the provisions of this part.

(3) The general license for the storage of spent fuel in each cask fabricated under a Certificate of Compliance terminates 20 years after the date that the particular cask is first used by the general licensee to store spent fuel, unless the cask's Certificate of Compliance is renewed, in which case the general license terminates 20 years after the cask's Certificate of Compliance renewal date. In the event that a cask vendor does not apply for a cask model reapproval under § 72.240, any cask user or user's representative may apply for a cask design reapproval. If a Certificate of Compliance expires, casks of that design must be removed from service after a storage period not to exceed 20 years.

(b) The general licensee shall:

(1)(i) Notify the Nuclear Regulatory Commission using instructions in § 72.4 at least 90 days prior to first storage of spent fuel under this general license. The notice may be in the form of a letter, but must contain the licensee's name, address, reactor license and docket numbers, and the name and means of contacting a person responsible for providing additional information concerning spent fuel under this general license. A copy of the submittal must be sent to the administrator of the appropriate Nuclear Regulatory Commission regional office listed in appendix D to part 20 of this chapter.

(ii) Register use of each cask with the Nuclear Regulatory Commission no later than 30 days after using that cask to store spent fuel. This registration may be accomplished by submitting a letter using instructions in § 72.4 containing the following information: the licensee's name and address, the licensee's reactor license and docket numbers, the name and title of a person responsible for providing additional information concerning spent fuel storage under this general license, the cask certificate and model numbers, and the cask identification number. A copy of each submittal must be sent to the administrator of the appropriate Nuclear Regulatory Commission regional office listed in appendix D to part 20 of this chapter.

(iii) Fee. Fees for inspections related to spent fuel storage under this general license are those shown in § 170.31 of this chapter.

(2)(i)Perform written evaluations, prior to use, that establish that:

(A) conditions set forth in the Certificate of Compliance have been met;

(B) Cask storage pads and areas have been designed to adequately support the static and dynamic loads of the stored casks, considering potential amplification of earthquakes through soil-structure interaction, and soil liquefaction potential or other soil instability due to vibratory ground motion; and

(C) the requirements of § 72.104 have been met. A copy of this record must be retained until spent fuel is no longer stored under the general license issued under § 72.210.

(ii) The licensee shall evaluate any changes to the written evaluations required by this paragraph using the requirements of § 72.48(c). A copy of this record shall be retained until spent fuel is no longer stored under the general license issued under § 72.210.

(3) Review the Safety Analysis Report (SAR) referenced in the Certificate of Compliance and the related NRC Safety Evaluation Report, prior to use of the general license, to determine whether or not the reactor site parameters, including analyses of earthquake intensity and tornado missiles, are enveloped by the cask design bases considered in these reports. The results of this review must be documented in the evaluation made in paragraph (b)(2) of this section.

(4) Prior to use of the general license, determine whether activities related to storage of spent fuel under this general license involve a change in the facility Technical Specifications or require a license amendment for the facility pursuant to § 50.59(c)(2) of this chapter. Results of this determination must be documented in the evaluation made in paragraph (b)(2) of this section.

(5) Protect the spent fuel against the design basis threat of radiological sabotage in accordance with the same provisions and requirements as are set forth in the licensee's physical security plan pursuant to § 73.55 of this chapter with the following additional conditions and exceptions.

(i) The physical security organization and program for the facility must be modified as necessary to assure that activities conducted under this general license do not decrease the effectiveness of the protection of vital equipment in accordance with § 73.55 of this chapter.

(ii) Storage of spent fuel must be within a protected area, in accordance with § 73.55(c) of this chapter, but need not be within a separate vital area. Existing protected areas may be expanded or new protected areas added for the purpose of storage of spent fuel in accordance with this general license.

(iii) For purposes of this general license, searches required by § 73.55(d)(1) of this chapter before admission to a new protected area may be performed by physical pat-down searches of persons in lieu of firearms and explosives detection equipment.

(iv) The observational capability required by § 73.55(h)(6) of this chapter as applied to a new protected area may be provided by a guard or watchman on patrol in lieu of closed circuit television.

(v) Each general licensee that receives and possesses power reactor spent fuel and other radioactive materials associated with spent fuel storage shall protect Safeguards Information against unauthorized disclosure in accordance with the requirements of § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

(vi) For the purpose of this general license, the licensee is exempt from §§ 73.55(h)(4)(iii)(A) and 73.55(h)(5) of this chapter.

(6) Review the reactor emergency plan, quality assurance program, training program, and radiation protection program to determine if their effectiveness is decreased and, if so, prepare the necessary changes and seek and obtain the necessary approvals.

(7) Maintain a copy of the Certificate of Compliance and documents referenced in the certificate for each cask model used for storage of spent fuel, until use of the cask model is discontinued. The licensee shall comply with the terms and conditions of the certificate.

(8)(i) Accurately maintain the record provided by the cask supplier for each cask that shows, in addition to the information provided by the cask vendor, the following:

(A) The name and address of the cask vendor or lessor;

(B) The listing of spent fuel stored in the cask; and

(C) Any maintenance performed on the cask.

(ii) This record must include sufficient information to furnish documentary evidence that any testing and maintenance of the cask has been conducted under an NRC-approved quality assurance program.

(iii) In the event that a cask is sold, leased, loaned, or otherwise transferred to another registered user, this record must also be transferred to and must be accurately maintained by the new registered user. This record must be maintained by the current cask user during the period that the cask is used for storage of spent fuel and retained by the last user until decommissioning of the cask is complete.

(9) Conduct activities related to storage of spent fuel under this general license only in accordance with written procedures.

(10) Make records and casks available to the Commission for inspection.

[55 FR 29191, July 18, 1990 as amended at 64 FR 53616, Oct. 4, 1999; 68 FR 54160, Sep. 16, 2003; 73 FR 63573, Oct. 24, 2008]

§ 72.214 List of approved spent fuel storage casks.

[Top of File]

The following casks are approved for storage of spent fuel under the conditions specified in their Certificates of Compliance.

Certificate Number: 1000.
SAR Submitted by: General Nuclear Systems, Inc.
SAR Title: Topical Safety Analysis Report for the Castor V/21 Cask Independent Spent Fuel Storage Installation (Dry Storage)
Docket Number: 72-1000
Certification Expiration Date: August 17, 2010
Model Number: CASTOR V/21

Certificate Number: 1002.
SAR Submitted by: Nuclear Assurance Corporation
SAR Title: Topical Safety Analysis Report for the NAC Storage/Transport Cask for Use at an Independent Spent Fuel Storage Installation
Docket Number: 72-1002
Certification Expiration Date: August 17, 2010
Model Number: NAC S/T

Certificate Number: 1003.
SAR Submitted by: Nuclear Assurance Corporation
SAR Title: Topical Safety Analysis Report for the NAC Storage/Transport Cask Containing Consolidated Fuel for Use at an Independent Spent Fuel Storage Installation
Docket Number: 72-1003
Certification Expiration Date: August 17, 2010
Model Number: NAC-C28 S/T

Certificate Number: 1004.
Initial Certificate Effective Date: January 23, 1995.
Amendment Number 1 Effective Date: April 27, 2000.
Amendment Number 2 Effective Date: September 5, 2000.
Amendment Number 3 Effective Date: September 12, 2001.
Amendment Number 4 Effective Date: February 12, 2002.
Amendment Number 5 Effective Date: January 7, 2004.
Amendment Number 6 Effective Date: December 22, 2003.
Amendment Number 7 Effective Date: March 2, 2004.
Amendment Number 8 Effective Date: December 5, 2005.
Amendment Number 9 Effective Date: April 17, 2007.
SAR Submitted by: Transnuclear, Inc.
SAR Title: Final Safety Analysis Report for the Standardized NUHOMS® Horizontal Modular Storage System for Irradiated Nuclear Fuel.
Docket Number: 72–1004.

Certificate Expiration Date: January 23, 2015.
Model Number: NUHOMS®–24P, –52B, –61BT, –32PT, –24PHB, and –24PTH.

Certificate Number: 1005
SAR Submitted by: Transnuclear, Inc.
SAR Title: TN-24 Dry Storage Cask Topical Report.
Docket Number: 72-1005.
Certification Expiration Date: November 4, 2013.
Model Number: TN-24.

Certificate Number: 1007.
Initial Certificate Effective Date: May 7, 1993.
Amendment Number 1 Effective Date: May 30, 2000.
Amendment Number 2 Effective Date: September 5, 2000.
Amendment Number 3 Effective Date: May 21, 2001.
Amendment Number 4 Effective Date: February 3, 2003.
Amendment Number 5 Effective Date: September 13, 2005.
Amendment Number 6 Effective Date: June 5, 2006.
SAR Submitted by: BNG Fuel Solutions Corporation.
SAR Title: Final Safety Analysis Report for the Ventilated Storage Cask System.
Docket Number: 72-1007.
Certificate Expiration Date: May 7, 2013.
Model Number: VSC-24.

Certificate Number: 1008.
Initial Certificate Effective Date: October 4, 1999.
Amendment Number 1 Effective Date: December 26, 2000.
Amendment Number 2 Effective Date: May 29, 2001.
SAR Submitted by: Holtec International.
SAR Title: Final Safety Analysis Report for the HI-STAR 100 Cask System.
Docket Number: 72-1008.
Certificate Expiration Date: October 4, 2019.
Model Number: HI-STAR 100.

Certificate Number: 1014.
Initial Certificate Effective Date: June 1, 2000.
Amendment Number 1 Effective Date: July 15, 2002.
Amendment Number 2 Effective Date: June 7, 2005.
Amendment Number 3 Effective Date: May 29, 2007.
Amendment Number 4 Effective Date: January 8, 2008.
Amendment Number 5 Effective Date: July 14, 2008.
SAR Submitted by: Holtec International.
SAR Title: Final Safety Analysis Report for the HI–STORM 100 Cask System.
Docket Number: 72–1014.
Certificate Expiration Date: June 1, 2020.
Model Number: HI–STORM 100.

Certificate Number: 1015.
Initial Certificate Effective Date: November 20, 2000.
Amendment Number 1 Effective Date: February 20, 2001.
Amendment Number 2 Effective Date: December 31, 2001.
Amendment Number 3 Effective Date: March 31, 2004.
Amendment Number 4 Effective Date: October 11, 2005.
Amendment Number 5 Effective Date: January 12, 2009.
SAR Submitted by: NAC International, Inc.
SAR Title: Final Safety Analysis Report for the NAC–UMS Universal Storage System.
Docket Number: 72–1015.
Certificate Expiration Date: November 20, 2020.
Model Number: NAC–UMS.

Certificate Number: 1021.
Initial Certificate Effective Date: April 19, 2000
Amendment Number 1 Effective Date: February 20, 2001
SAR Submitted by: Transnuclear, Inc.
SAR Title: Final Safety Analysis Report for the TN-32 Dry Storage Cask
Docket Number: 72-1021
Certificate Expiration Date: April 19, 2020
Model Number: TN-32, TN-32A, TN-32B

Certificate Number: 1025.
Initial Certificate Effective Date: April 10, 2000.
Amendment Number 1 Effective Date: November 13, 2001.
Amendment Number 2 Effective Date: May 29, 2002.
Amendment Number 3 Effective Date: October 1, 2003.
Amendment Number 4 Effective Date: October 27, 2004.

Amendment Number 5 Effective Date: July 24, 2007.
SAR Submitted by: NAC International, Inc.
SAR Title: Final Safety Analysis Report for the NAC-Multipurpose Canister System (NAC-MPC System).
Docket Number: 72-1025.
Certificate Expiration Date: April 10, 2020.
Model Number: NAC-MPC.

Certificate Number: 1026.
Initial Certificate Effective Date: February 15, 2001.
Amendment Number 1 Effective Date: May 14, 2001.
Amendment Number 2 Effective Date: January 28, 2002.
Amendment Number 3 Effective Date: May 7, 2003.
Amendment Number 4 Effective Date: July 3, 2006.
SAR Submitted by: BNG Fuel Solutions Corporation.
SAR Title: Final Safety Analysis Report for the FuelSolutions™ Spent Fuel Management System.
Docket Number: 72-1026.
Certificate Expiration Date: February 15, 2021.
Model Number: WSNF-220, WSNF-221, and WSNF-223 systems; W-150 storage cask; W-100 transfer cask; and the W-21 and W-74 canisters.

Certificate Number: 1027.
Initial Certificate Effective Date: May 30, 2000
Amendment Number 1 Effective Date: October 30, 2007
SAR Submitted by: Transnuclear, Inc.
SAR Title: Final Safety Analysis Report for the TN-68 Dry Storage Cask.
Docket Number: 72-1027.
Certificate Expiration Date: May 28, 2020.
Model Number: TN-68.

Certificate Number: 1029.
Initial Certificate Effective Date: February 5, 2003.
Amendment Number 1 Effective Date: May 16, 2005.
SAR Submitted by: Transnuclear, Inc.
SAR Title: Final Safety Analysis Report for the Standardized Advanced NUHOMS® Horizontal Modular Storage System for Irradiated Nuclear Fuel.
Docket Number: 72–1029.
Certificate Expiration Date: February 5, 2023.
Model Number: Standardized Advanced NUHOMS®–24PT1, NUHOMS®–24PT4.

Certificate Number: 1030.
Initial Certificate Effective Date: January 10, 2007.
SAR Submitted by: Transnuclear, Inc.
SAR Title: Final Safety Analysis
Report for the NUHOMS® HD Horizontal Modular Storage System Irradiated Nuclear Fuel.
Docket Number: 72–1030.
Certificate Expiration Date: January 11, 2027.
Model Number: NUHOMS® HD–32PTH

Certificate Number: 1031.
Initial Certificate Effective Date: February 4, 2009.
SAR Submitted by: NAC International, Inc.
SAR Title: Final Safety Analysis Report for the MAGNASTOR System.
Docket Number: 72–1031.
Certificate Expiration Date: February 4, 2029.
Model Number: MAGNASTOR.

[55 FR 29191, July 18, 1990, as amended at 58 FR 17967, Apr. 7, 1993; 58 FR 51770, Oct. 5, 1993; 59 FR 65920, Dec. 22, 1994; 64 FR 48274, Sept. 3, 1999; 64 FR 50872, Sept. 20, 1999; 65 FR 11459, Mar. 3, 2000; 65 FR 2460, Mar. 9, 2000; 65 FR 14810, Mar. 20, 2000; 65 FR 16302, Mar. 28, 2000; 65 FR 17552, Apr. 3, 2000; 65 FR 24630, Apr. 27, 2000; 65 FR 24870, Apr. 28, 2000; 65 FR 25265, May 1, 2000; 65 FR 38717, 38720, June 22, 2000; 65 FR 62599, Oct. 19, 2000; 65 FR 60342, Oct. 11, 2000; 65 FR 75855, Dec. 5, 2000; 65 FR 76898, Dec. 7, 2000; 66 FR 12437, Feb. 27, 2001; 66 FR 13409, Mar. 6, 2001; 66 FR 14486, Mar. 13, 2001; 66 FR 34525, June 29, 2001; 66 FR 43763, Aug. 21, 2001; 66 FR 45752, Aug. 30, 2001; 66 FR 52489, Oct. 16, 2001; 66 FR 56985, Nov. 14, 2001; 66 FR 59534, Nov. 29, 2001; 67 FR 11560; March 15, 2002; 67 FR 46372, July 15, 2002; 67 FR 69989, Nov. 20, 2002; 68 FR 470, Jan. 6, 2003; 68 FR 8447, Feb. 21, 2003; 68 FR 57785, Oct. 7, 2003; 68 FR 70121, Dec. 17, 2003; 68 FR 70426, Dec. 18, 2003; 69 FR 858, Jan. 7, 2004; 69 FR 2497, Jan. 16, 2004; 69 FR 4219, Jan. 29, 2004; 69 FR 50056, Aug. 13, 2004; 70 FR 9501, May 16, 2005; 70 FR 32982, June 7, 2005; 70 FR 37647, June 30, 2005; 70 FR 42488, July 25, 2005; 70 FR 50957, Aug. 29, 2005; 70 FR 55023, Sept. 20, 2005; 70 FR 55513, Sept. 22, 2005; 70 FR 71381, Nov. 29, 2005; 71 FR 14092, Mar. 21, 2006; 71 FR 19806, Apr. 18, 2006; 71 FR 30576, May 30, 2006; 71 FR 35147, June 19, 2006; 71 FR 71463, Dec. 11, 2006; 72 FR 4615, Feb. 1, 2007; 72 FR 20712, April 26, 2007; 72 FR 26535, May 10, 2007; 72 FR 45883, Aug. 16, 2007; 72 FR 73579, Dec. 28, 2007; 72 FR 60546, Oct. 25, 2007; 72 FR 73579, Dec. 28, 2007; 72 FR 74166, Dec. 31, 2007; 73 FR 13071, Mar. 12, 2008; 73 FR 33294, Jun. 12, 2008; 73 FR 63624, Oct. 27, 2008; 73 FR 70590, Nov. 21, 2008]

§ 72.216 [Reserved]

[Top of File]

[65 FR 63788, Oct. 25, 2000; 68 FR 33617, June 5, 2003]

§ 72.218 Termination of licenses.

[Top of File]

(a) The notification regarding the program for the management of spent fuel at the reactor required by § 50.54(bb) of this chapter must include a plan for removal of the spent fuel stored under this general license from the reactor site. The plan must show how the spent fuel will be managed before starting to decommission systems and components needed for moving, unloading, and shipping this spent fuel.

(b) An application for termination of a reactor operating license issued under 10 CFR part 50 and submitted under § 50.82 of this chapter, or a combined license issued under 10 CFR part 52 and submitted under § 52.110 of this chapter, must contain a description of how the spent fuel stored under this general license will be removed from the reactor site.

(c) The reactor licensee shall send a copy of submittals under § 72.218(a) and (b) to the administrator of the appropriate Nuclear Regulatory Commission regional office shown in appendix D to part 20 of this chapter.

[72 FR 49561, Aug. 28, 2007]

§ 72.220 Violations.

[Top of File]

This general license is subject to the provisions of § 72.84 for violation of the regulations under this part.

Subpart L--Approval of Spent Fuel Storage Casks

[Top of File]

Source: 55 FR 29193, July 18, 1990, unless otherwise noted.

§ 72.230 Procedures for spent fuel storage cask submittals.

(a) An application for approval of a spent fuel storage cask design must be submitted in accordance with the instructions contained in § 72.4. A safety analysis report describing the proposed cask design and how the cask should be used to store spent fuel safely must be included with the application.

(b) Casks that have been certified for transportation of spent fuel under part 71 of this chapter may be approved for storage of spent fuel under this subpart. An application must be submitted in accordance with the instructions contained in § 72.4. A copy of the Certificate of Compliance issued for the cask under part 71 of this chapter, and drawings and other documents referenced in the certificate, must be included with the application. A safety analysis report showing that the cask is suitable for storage of spent fuel for a period of at least 20 years must also be included.

(c) *Public inspection*. An application for the approval of a cask for storage of spent fuel may be made available for public inspection under § 72.20.

(d) *Fees*. Fees for reviews and evaluations related to issuance of a spent fuel storage cask Certificate of Compliance and inspections related to storage cask fabrication are those shown in § 170.31 of this chapter.

§ 72.232 Inspection and tests.

[Top of File]

(a) The certificate holder and applicant for a CoC shall permit, and make provisions for, the NRC to inspect the premises and facilities where a spent fuel storage cask is designed, fabricated, and tested.

(b) The certificate holder and applicant for a CoC shall make available to the NRC for inspection, upon reasonable notice, records kept by them pertaining to the design, fabrication, and testing of spent fuel storage casks.

(c) The certificate holder and applicant for a CoC shall perform, and make provisions that permit the NRC to perform, tests that the Commission deems necessary or appropriate for the administration of the regulations in this part.

(d) The certificate holder and applicant for a CoC shall submit a notification under § 72.4 at least 45 days prior to starting fabrication of the first spent fuel storage cask under a Certificate of Compliance.

[64 FR 56216, Oct. 15, 1999]

§ 72.234 Conditions of approval.

[Top of File]

(a) The certificate holder and applicant for a CoC shall ensure that the design, fabrication, testing, and maintenance of a spent fuel storage cask comply with the requirements in § 72.236.

(b) The certificate holder and applicant for a CoC shall ensure that the design, fabrication, testing, and maintenance of spent fuel storage casks are conducted under a quality assurance program that meets the requirements of subpart G of this part.

(c) An applicant for a CoC may begin fabrication of spent fuel storage casks before the Commission issues a CoC for the cask; however, applicants who begin fabrication of casks without a CoC do so at their own risk. A cask fabricated before the CoC is issued shall be made to conform to the issued CoC before being placed in service or before spent fuel is loaded.

(d)(1) The certificate holder shall ensure that a record is established and maintained for each spent fuel storage cask fabricated under the CoC.

(2) This record must include:

(i) The NRC CoC number;

(ii) The spent fuel storage cask model number;

(iii) The spent fuel storage cask identification number;

(iv) Date fabrication was started;

(v) Date fabrication was completed;

(vi) Certification that the spent fuel storage cask was designed, fabricated, tested, and repaired in accordance with a quality assurance program accepted by NRC;

(vii) Certification that inspections required by § 72.236(j) were performed and found satisfactory; and

(viii) The name and address of the licensee using the spent fuel storage cask.

(3) The certificate holder shall supply the original of this record to the licensees using the spent fuel storage cask. A current copy of a composite record of all spent fuel storage casks manufactured under a CoC, showing the information in paragraph (d)(2) of this section, must be initiated and maintained by the certificate holder for each model spent fuel storage cask. If the certificate holder permanently ceases production of spent fuel storage casks under a CoC, the certificate holder shall send this composite record to the Commission using instructions in § 72.4.

(e) The certificate holder and the licensees using the spent fuel storage cask shall ensure that the composite record required by paragraph (d) of this section is available to the Commission for inspection.

(f) The certificate holder shall ensure that written procedures and appropriate tests are established prior to use of the spent fuel storage casks. A copy of these procedures and tests must be provided to each licensee using the spent fuel storage cask.

[64 FR 56126, Oct. 15, 1999, as amended at 65 FR 50617, Aug. 21, 2000]

§ 72.236 Specific requirements for spent fuel storage cask approval and fabrication.

[Top of File]

The certificate holder and applicant for a CoC shall ensure that the requirements of this section are met.

(a) Specifications must be provided for the spent fuel to be stored in the spent fuel storage cask, such as, but not limited to, type of spent fuel (*i.e.,* BWR, PWR, both), maximum allowable enrichment of the fuel prior to any irradiation, burn-up (*i.e.,* megawatt-days/MTU), minimum acceptable cooling time of the spent fuel prior to storage in the spent fuel storage cask, maximum heat designed to be dissipated, maximum spent fuel loading limit, condition of the spent fuel (*i.e.,* intact assembly or consolidated fuel rods), the inerting atmosphere requirements.

(b) Design bases and design criteria must be provided for structures, systems, and components important to safety.

(c) The spent fuel storage cask must be designed and fabricated so that the spent fuel is maintained in a subcritical condition under credible conditions.

(d) Radiation shielding and confinement features must be provided sufficient to meet the requirements in §§ 72.104 and 72.106.

(e) The spent fuel storage cask must be designed to provide redundant sealing of confinement systems.

(f) The spent fuel storage cask must be designed to provide adequate heat removal capacity without active cooling systems.

(g) The spent fuel storage cask must be designed to store the spent fuel safely for a minimum of 20 years and permit maintenance as required.

(h) The spent fuel storage cask must be compatible with wet or dry spent fuel loading and unloading facilities.

(i) The spent fuel storage cask must be designed to facilitate decontamination to the extent practicable.

(j) The spent fuel storage cask must be inspected to ascertain that there are no cracks, pinholes, uncontrolled voids, or other defects that could significantly reduce its confinement effectiveness.

(k) The spent fuel storage cask must be conspicuously and durably marked with--

(1) A model number;

(2) A unique identification number; and

(3) An empty weight.

(l) The spent fuel storage cask and its systems important to safety must be evaluated, by appropriate tests or by other means acceptable to the NRC, to demonstrate that they will reasonably maintain confinement of radioactive material under normal, off-normal, and credible accident conditions.

(m) To the extent practicable in the design of spent fuel storage casks, consideration should be given to compatibility with removal of the stored spent fuel from a reactor site, transportation, and ultimate disposition by the Department of Energy.

(n) Safeguards Information shall be protected against unauthorized disclosure in accordance with the requirements of § 73.21 and the requirements of § 73.22 or § 73.23 of this chapter, as applicable.

[64 FR 56126, Oct. 15, 1999, as amended at 65 FR 50617, Aug. 21, 2000; 73 FR 63573, Oct. 24, 2008]

§ 72.238 Issuance of an NRC Certificate of Compliance.

[Top of File]

A Certificate of Compliance for a cask model will be issued by NRC on a finding that the requirements in § 72.236 (a) through (i) are met.

§ 72.240 Conditions for spent fuel storage cask reapproval.

[Top of File]

(a) The certificate holder, a licensee using a spent fuel storage cask, or the representative of a licensee using a spent fuel storage cask shall apply for reapproval of the design of a spent fuel storage cask.

(b) The application for reapproval of the design of a spent fuel storage cask must be submitted not less than 30 days prior to the expiration date of the CoC. When the applicant has submitted a timely application for reapproval, the existing CoC will not expire until the application for reapproval has been determined by the NRC. The application must be accompanied by a safety analysis report (SAR). The new SAR may reference the SAR originally submitted for the approved spent fuel storage cask design.

(c) The design of a spent fuel storage cask will be reapproved if the conditions in § 72.238 are met, and the application includes a demonstration that the storage of spent fuel has not significantly adversely affected structures, systems, and components important to safety.

[64 FR 56127, Oct. 15, 1999]

§ 72.242 Recordkeeping and reports.

[Top of File]

(a) Each certificate holder or applicant shall maintain any records and produce any reports that may be required by the conditions of the CoC or by the rules, regulations, and orders of the NRC in effectuating the purposes of the Act.

(b) Records that are required by the regulations in this part or by conditions of the CoC must be maintained for the period specified by the appropriate regulation or the CoC conditions. If a retention period is not specified, the records must be maintained until the NRC terminates the CoC.

(c) Any record maintained under this part may be either the original or a reproduced copy by any state-of-the-art method provided that any reproduced copy is duly authenticated by authorized personnel and is capable of producing a clear and legible copy after storage for the period specified by NRC regulations.

(d) Each certificate holder shall submit a written report to the NRC within 30 days of discovery of a design or fabrication deficiency, for any spent fuel storage cask which has been delivered to a licensee, when the design or fabrication deficiency affects the ability of structures, systems, and components important to safety to perform their intended safety function. The written report shall be sent to the NRC in accordance with the requirements of § 72.4. The report shall include the following:

(1) A brief abstract describing the deficiency, including all component or system failures that contributed to the deficiency and corrective action taken or planned to prevent recurrence;

(2) A clear, specific, narrative description of what occurred so that knowledgeable readers familiar with the design of the spent fuel storage cask, but not familiar with the details of a particular cask, can understand the deficiency. The narrative description shall include the following specific information as appropriate for the particular event:

(i) Dates and approximate times of discovery;

(ii) The cause of each component or system failure, if known;

(iii) The failure mode, mechanism, and effect of each failed component, if known;

(iv) A list of systems or secondary functions that were also affected for failures of components with multiple functions;

(v) The method of discovery of each component or system failure;

(vi) The manufacturer and model number (or other identification) of each component that failed during the event;

(vii) The model and serial numbers of the affected spent fuel storage casks;

(viii) The licensees that have affected spent fuel storage casks;

(3) An assessment of the safety consequences and implications of the deficiency. This assessment shall include the availability of other systems or components that could have performed the same function as the components and systems that were affected;

(4) A description of any corrective actions planned as a result of the deficiency, including those to reduce the probability of similar occurrences in the future;

(5) Reference to any previous similar deficiencies at the same facility that are known to the certificate holder; and

(6) The name and telephone number of a person within the certificate holder's organization who is knowledgeable about the deficiency and can provide additional information.

[64 FR 56127, Oct. 15, 1999]

§ 72.244 Application for amendment of a certificate of compliance.

[Top of File]

Whenever a certificate holder desires to amend the CoC (including a change to the terms, conditions or specifications of the CoC), an application for an amendment shall be filed with the Commission fully describing the changes desired and the reasons for such changes, and following as far as applicable the form prescribed for original applications.

[64 FR 53617, Oct. 4, 1999]

§ 72.246 Issuance of amendment to a certificate of compliance.

[Top of File]

In determining whether an amendment to a CoC will be issued to the applicant, the Commission will be guided by the considerations that govern the issuance of an initial CoC.

[64 FR 53617, Oct. 4, 1999]

§ 72.248 Safety analysis report updating.

[Top of File]

(a) Each certificate holder for a spent fuel storage cask design shall update periodically, as provided in paragraph (b) of this section, the final safety analysis report (FSAR) to assure that the information included in the report contains the latest information developed.

(1) Each certificate holder shall submit an original FSAR to the Commission, in accordance with § 72.4, within 90 days after the spent fuel storage cask design has been approved pursuant to § 72.238.

(2) The original FSAR shall be based on the safety analysis report submitted with the application and reflect any changes and applicant commitments developed during the cask design review process. The original FSAR shall be updated to reflect any changes to requirements contained in the issued Certificate of Compliance (CoC).

(b) Each update shall contain all the changes necessary to reflect information and analyses submitted to the Commission by the certificate holder or prepared by the certificate holder pursuant to Commission requirement since the submission of the original FSAR or, as appropriate, the last update to the FSAR under this section. The update shall include the effects[1] of:

(1) All changes made in the spent fuel storage cask design or procedures as described in the FSAR;

(2) All safety analyses and evaluations performed by the certificate holder either in support of approved CoC amendments, or in support of conclusions that changes did not require a CoC amendment in accordance with § 72.48; and

(3) All analyses of new safety issues performed by or on behalf of the certificate holder at Commission request. The information shall be appropriately located within the updated FSAR.

(c)(1) The update of the FSAR must be filed in accordance with § 72.4. If the update is filed on paper, then it should be filed on a page-replacement basis; if filed electronically, it should be filed on a full replacement basis. See Guidance for Electronic Submissions to the Commission at *http://www.nrc.gov/site-help/eie.html*.

(2) A paper update filed on a page-replacement basis must include a list that identifies the current pages of the FSAR following page replacement. If the update is filed electronically on a full replacement basis, it must include a list of changed pages.

(3) Each replacement page shall include both a change indicator for the area changed, *e.g.,* a bold line vertically drawn in the margin adjacent to the portion actually changed, and a page change identification (date of change or change number or both);

(4) The update shall include:

(i) A certification by a duly authorized officer of the certificate holder that either the information accurately presents changes made since the previous submittal, or that no such changes were made; and

(ii) An identification of changes made by the certificate holder under the provisions of § 72.48, but not previously submitted to the Commission;

(5) The update shall reflect all changes implemented up to a maximum of 6 months prior to the date of filing;

(6) Updates shall be filed every 24 months from the date of issuance of the CoC; and

(7) The certificate holder shall provide a copy of the updated FSAR to each general and specific licensee using its cask design.

(d) The updated FSAR shall be retained by the certificate holder until the Commission terminates the certificate.

(e) A certificate holder who permanently ceases operation, shall provide the updated FSAR to the new certificate holder or to the Commission, as appropriate, in accordance with § 72.234(d)(3).

[64 FR 53617, Oct. 4, 1999; 68 FR 58819, Oct. 10, 2003]

[1] Effects of changes includes appropriate revisions of descriptions in the FSAR such that the FSAR (as updated) is complete and accurate.

PART 73--PHYSICAL PROTECTION OF PLANTS AND MATERIALS

[Top of File]

General Provisions

[Top of File]

§ 73.1 Purpose and scope.

(a) Purpose. This part prescribes requirements for the establishment and maintenance of a physical protection system which will have capabilities for the protection of special nuclear material at fixed sites and in transit and of plants in which special nuclear material is used. The following design basis threats, where referenced in ensuing sections of this part, shall be used to design safeguards systems to protect against acts of radiological sabotage and to prevent the theft or diversion of special nuclear material. Licensees subject to the provisions of § 73.20 (except for fuel cycle licensees authorized under Part 70 of this chapter to receive, acquire, possess, transfer, use, or deliver for transportation formula quantities of strategic special nuclear material), §§ 73.50, and 73.60 are exempt from §§ 73.1(a)(1)(i)(E), 73.1(a)(1)(iii), 73.1(a)(1)(iv), 73.1(a)(2)(iii), and 73.1(a)(2)(iv). Licensees subject to the provisions of § 72.212 are exempt from § 73.1(a)(1)(iv).

(1) Radiological sabotage. (i) A determined violent external assault, attack by stealth, or deceptive actions, including diversionary actions, by an adversary force capable of operating in each of the following modes: A single group attacking through one entry point, multiple groups attacking through multiple entry points, a combination of one or more groups and one or more individuals attacking through multiple entry points, or individuals attacking through separate entry points, with the following attributes, assistance and equipment:

(A) Well-trained (including military training and skills) and dedicated individuals, willing to kill or be killed, with sufficient knowledge to identify specific equipment or locations necessary for a successful attack;

(B) Active (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack) or passive (e.g., provide information), or both, knowledgeable inside assistance;

(C) Suitable weapons, including handheld automatic weapons, equipped with silencers and having effective long range accuracy;

(D) Hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter, or container integrity or features of the safeguards system; and

(E) Land and water vehicles, which could be used for transporting personnel and their hand-carried equipment to the proximity of vital areas; and

(ii) An internal threat; and

(iii) A land vehicle bomb assault, which may be coordinated with an external assault; and

(iv) A waterborne vehicle bomb assault, which may be coordinated with an external assault; and

(v) A cyber attack.

(2) Theft or diversion of formula quantities of strategic special nuclear material. (i) A determined violent external assault, attack by stealth, or deceptive actions, including diversionary actions, by an adversary force capable of operating in each of the following modes: a single group attacking through one entry point, multiple groups attacking through one or more groups and one or individuals attacking through multiple entry points, or individuals attacking through separate entry points, with the following attributes, assistance and equipment:

(A) Well-trained (including military training and skills) and dedicated individuals, willing to kill or be killed, with sufficient knowledge to identify specific equipment or locations necessary for a successful attack;

(B) Active (e.g., facilitate entrance and exit, disable alarms and communications, participate in violent attack) or passive (e.g., provide information), or both, knowledgeable inside assistance;

(C) Suitable weapons, including handheld automatic weapons, equipped with silencers and having effective longrange accuracy;

(D) Hand-carried equipment, including incapacitating agents and explosives for use as tools of entry or for otherwise destroying reactor, facility, transporter, or container integrity or features of the safe-guards system;

(E) Land and water vehicles, which could be used for transporting personnel and their hand-carried equipment; and

(ii) An internal threat; and

(iii) A land vehicle bomb assault, which may be coordinated with an external assault; and

(iv) A waterborne vehicle bomb assault, which may be coordinated with an external assault; and

(v) A cyber attack.

(b) *Scope*. (1) This part prescribes requirements for:

(i) The physical protection of production and utilization facilities licensed under parts 50 or 52 of this chapter,

(ii) The physical protection of plants in which activities licensed pursuant to part 70 of this chapter are conducted, and

(iii) The physical protection of special nuclear material by any person who, pursuant to the regulations in part 61 or 70 of this chapter, possesses or uses at any site or contiguous sites subject to the control by the licensee, formula quantities of strategic special nuclear material or special nuclear material of moderate strategic significance or special nuclear material of low strategic significance.

(2) This part prescribes requirements for the physical protection of special nuclear material in transportation by any person who is licensed pursuant to the regulations in parts 70 and 110 of this chapter who imports, exports, transports, delivers to a carrier for transport in a single shipment, or takes delivery of a single shipment free on board (F.O.B.) where it is delivered to a carrier, formula quantities of strategic special nuclear material, special nuclear material of moderate strategic significance or special nuclear material of low strategic significance.

(3) This part also applies to shipments by air of special nuclear material in quantities exceeding: (i) 20 grams or 20 curies, whichever is less, of plutonium or uranium-233, or (ii) 350 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope).

(4) Special nuclear material subject to this part may also be protected pursuant to security procedures prescribed by the Commission or another Government agency for the protection of classified materials. The provisions and requirements of this part are in addition to, and not in substitution for, any such security procedures. Compliance with the requirements of this part does not relieve any licensee from any requirement or obligation to protect special nuclear material pursuant to security procedures prescribed by the Commission or other Government agency for the protection of classified materials.

(5) This part also applies to the shipment of irradiated reactor fuel in quantities that in a single shipment both exceed 100 grams in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, and have a total radiation dose in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding.

(6) This part prescribes requirements for the physical protection of spent nuclear fuel and high-level radioactive waste stored in either an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage (MRS) installation licensed under part 72 of this chapter, or stored at the geologic repository operations area licensed under part 60 or part 63 of this chapter.

(7) This part prescribes requirements for the protection of Safeguards Information (including Safeguards Information with the designation or marking: Safeguards Information—Modified Handling) in the hands of any person, whether or not a licensee of the Commission, who produces, receives, or acquires that information.

(8) This part prescribes requirements for advance notice of export and import shipments of special nuclear material, including irradiated reactor fuel.

(9) As provided in part 76 of this chapter, the regulations of this part establish procedures and criteria for physical security for the issuance of a certificate of compliance or the approval of a compliance plan.

[44 FR 68186, Nov. 28, 1979, as amended at 45 FR 67645, Oct. 14, 1980; 45 FR 80271, Dec. 4, 1980; 46 FR 51724, Oct. 22, 1981; 47 FR 57482, Dec. 27, 1982; 52 FR 9653, Mar. 26, 1987; 53 FR 31683, Aug. 19, 1988; 53 FR 45451, Nov. 10, 1988; 59 FR 38899, Aug. 1, 1994; 59 FR 48960, Sept. 23, 1994; 63 FR 26962, May 15, 1998; 66 FR 55816, Nov. 2, 2001; 72 FR 12705, March 19, 2007; 72 FR 49561, Aug. 28, 2007; 73 FR 63573, Oct. 24, 2008]

§ 73.2 Definitions.

[Top of File]

As used in this part;

(a) Terms defined in parts 50, 52, and 70 of this chapter have the same meaning when used in this part.

Appropriate Nuclear Regulatory Commission Regional Office listed in appendix A means:

(1) For domestic shipments--the Regional Office within whose region the licensee who is responsible for the physical protection

arrangements of the shipment is located.

(2) For export shipments--the Regional Office within whose region the licensee who is responsible for the physical protection arrangements of the shipment is located, and the Regional Office for the region in which the last point of exit of the shipment from the U.S. is located.

(3) For import shipments--the Regional Office within whose region the licensee who is responsible for the physical protection arrangements of the shipment is located, and the Regional Office for the region in which the first point of entry of the shipment into the U.S. is located.

Armed escort means an armed person, not necessarily uniformed, whose primary duty is to accompany shipments of special nuclear material for the protection of such shipments against theft or radiological sabotage.

Armed response personnel means persons, not necessarily uniformed, whose primary duty in the event of attempted theft of special nuclear material or radiological sabotage shall be to respond, armed and equipped, to prevent or delay such actions.

Authorized individual means any individual, including an employee, a student, a consultant, or an agent of a licensee who has been designated in writing by a licensee to have responsibility for surveillance of or control over special nuclear material or to have unescorted access to areas where special nuclear material is used or stored.

Background check includes, at a minimum, a Federal Bureau of Investigation (FBI) criminal history records check (including verification of identity based on fingerprinting), employment history, education, and personal references. Individuals engaged in activities subject to regulation by the Commission, applicants for licenses to engage in Commission-regulated activities, and individuals who have notified the Commission in writing of an intent to file an application for licensing, certification, permitting, or approval of a product or activity subject to regulation by the Commission are required under § 73.57 to conduct fingerprinting and criminal history records checks before granting access to Safeguards Information. A background check must be sufficient to support the trustworthiness and reliability determination so that the person performing the check and the Commission have assurance that granting individuals access to Safeguards Information does not constitute an unreasonable risk to the public health and safety or the common defense and security.

Bullet/resisting means protection against complete penetration, passage of fragments of projectiles, and spalling (fragmentation) of the protective material that could cause injury to a person standing directly behind the bullet-resisting barrier.

Contiguous sites means licensee controlled locations, deemed by the Commission to be in close enough proximity to each other, that the special nuclear material must be considered in the aggregate for the purpose of physical protection.

Continuous visual surveillance means unobstructed view at all times of a shipment of special nuclear material, and of all access to a temporary storage area or cargo compartment containing the shipment.

Controlled access area means any temporarily or permanently established area which is clearly demarcated, access to which is controlled and which affords isolation of the material or persons within it.

Deceit means methods used to attempt to gain unauthorized access, introduce unauthorized materials, or remove strategic special nuclear materials, where the attempt involves falsification to present the appearance of authorized access.

DOE and *Department of Energy* means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 et seq.), to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transfered to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

Force means violent methods used by an adversary to attempt to steal strategic special nuclear material or to sabotage a nuclear facility or violent methods used by response personnel to protect against such adversary actions.

Formula quantity means strategic special nuclear material in any combination in a quantity of 5,000 grams or more computed by the formula, grams = (grams contained U-235) + 2.5 (grams U-233 + grams plutonium). This class of material is sometimes referred to as a Category I quantity of material.

Guard means a uniformed individual armed with a firearm whose primary duty is the protection of special nuclear material against theft, the protection of a plant against radiological sabotage, or both.

Incendiary device means any self-contained device intended to create an intense fire that can damage normally flame-resistant or retardant materials.

Individual Authorized Access to Safeguards Information is an individual authorized to have access to and handle such information pursuant to the requirements of §§ 73.21 and 73.22 of this part.

Individual Authorized Access to Safeguards Information—Modified Handling is an individual authorized to have access to and handle Safeguards Information designated as Safeguards Information—Modified Handling information pursuant to the requirements of §§ 73.21 and 73.23 of this part.

Intrusion alarm means a tamper indicating electrical, electromechanical, electrooptical, electronic or similar device which will detect

intrusion by an individual into a building, protected area, vital area, or material access area, and alert guards or watchmen by means of actuated visible and audible signals.

Isolation zone means any area adjacent to a physical barrier, clear of all objects which could conceal or shield an individual.

Lock in the case of vaults or *vault type* rooms means a three-position, manipulation resistant, dial type, built-in combination lock or combination padlock and in the case of fences, walls, and buildings means an integral door lock or padlock which provides protection equivalent to a six-tumbler cylinder lock. Lock in the case of a vault or vault type room also means any manipulation resistant, electromechanical device which provides the same function as a built-in combination lock or combination padlock, which can be operated remotely or by the reading or insertion of information, which can be uniquely characterized, and which allows operation of the device. Locked means protected by an operable lock.

Material access area means any location which contains special nuclear material, within a vault or a building, the roof, walls, and floor of which each constitute a physical barrier.

Movement control center means an operations center which is remote from transport activity and which maintains periodic position information on the movement of strategic special nuclear material, receives reports of attempted attacks or thefts, provides a means for reporting these and other problems to appropriate agencies and can request and coordinate appropriate aid.

''Need to know'' means a determination by a person having responsibility for protecting Safeguards Information (including Safeguards Information designated as Safeguards Information—Modified Handling) that a proposed recipient's access to Safeguards Information is necessary in the performance of official, contractual, licensee, applicant, or certificate holder employment. In an adjudication, ''need to know'' means a determination by the originator of the information that the information is necessary to enable the proposed recipient to proffer and/or adjudicate a specific contention in that proceeding, and the proposed recipient of the specific Safeguards Information possesses demonstrable knowledge, skill, training, or education to effectively utilize the specific Safeguards Information in the proceeding. Where the information is in the possession of the originator and the NRC staff (dual possession), whether in its original form or incorporated into another document or other matter by the recipient, the NRC staff makes the determination. In the event of a dispute regarding the ''need to know'' determination, the presiding officer of the proceeding shall make the ''need to know'' determination.

Person means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the Department of Energy (DOE), (except that the DOE shall be considered a person to the extent that its facilities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 and sections 104, 105, and 202 of the Uranium Mill Tailings Radiation Control Act of 1978), any state or political subdivision of a state, or any political subdivision of any government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

Physical barrier means:

(1) Fences constructed of No. 11 American wire gauge, or heavier wire fabric, topped by three strands or more of barbed wire or similar material on brackets angled inward or outward between 30 and 45 from the vertical, with an overall height of not less than eight feet, including the barbed topping;

(2) Building walls, ceilings and floors constructed of stone, brick, cinder block, concrete, steel or comparable materials (openings in which are secured by grates, doors, or covers of construction and fastening of sufficient strength such that the integrity of the wall is not lessened by any opening), or walls of similar construction, not part of a building, provided with a barbed topping described in paragraph (1) of this definition of a height of not less than 8 feet; or

(3) Any other physical obstruction constructed in a manner and of materials suitable for the purpose for which the obstruction is intended.

Protected area means an area encompassed by physical barriers and to which access is controlled.

Quantities of Concern means the quantities of the radionuclides meeting or exceeding the threshold limits set forth in Table I–1 of Appendix I of this part.

Radiological sabotage means any deliberate act directed against a plant or transport in which an activity licensed pursuant to the regulations in this chapter is conducted, or against a component of such a plant or transport which could directly or indirectly endanger the public health and safety by exposure to radiation.

Safeguards Information means information not classified as National Security Information or Restricted Data which specifically identifies a licensee's or applicant's detailed control and accounting procedures for the physical protection of special nuclear material in quantities determined by the Commission through order or regulation to be significant to the public health and safety or the common defense and security; detailed security measures (including security plans, procedures, and equipment) for the physical protection of source, byproduct, or special nuclear material in quantities determined by the Commission through order or regulation to be significant to the public health and safety or the common defense and security; security measures for the physical protection of and location of certain plant equipment vital to the safety of production or utilization facilities; and any other information within the scope of Section 147 of the Atomic Energy Act of 1954, as amended, the unauthorized disclosure of which, as determined by the Commission through order or regulation, could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of sabotage or theft or diversion of source, byproduct, or special nuclear material.

Safeguards Information—Modified Handling is the designation or marking applied to Safeguards Information which the Commission has determined requires handling requirements modified from the specific Safeguards Information handling requirements that are applicable to Safeguards Information needing a higher level of protection.

Security management means persons responsible for security at the policy and general management level.

Security Storage Container includes any of the following repositories: (1) For storage in a building located within a protected or controlled access area, a steel filing cabinet equipped with a steel locking bar and a three position, changeable combination, GSA approved padlock; (2) A security filing cabinet that bears a Test Certification Label on the side of the locking drawer, or interior plate, and is marked, General Services Administration Approved Security Container on the exterior of the top drawer or door; (3) A bank safe-deposit box; and (4) Other repositories which in the judgement of the NRC, would provide comparable physical protection.

Security supervision means persons, not necessarily uniformed or armed, whose primary duties are supervision and direction of security at the day-to-day operating level.

Special nuclear material of low strategic significance means:

(1) Less than an amount of special nuclear material of moderate strategic significance as defined in paragraph (1) of the definition of strategic nuclear material of moderate strategic significance in this section, but more than 15 grams of uranium-235 (contained in uranium enriched to 20 percent or more in U-235 isotope) or 15 grams of uranium-233 or 15 grams of plutonium or the combination of 15 grams when computed by the equation, grams = (grams contained U-235) + (grams plutonium) + (grams U-233); or

(2) Less than 10,000 grams but more than 1,000 grams of uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U-235 isotope); or

(3) 10,000 grams or more of uranium-235 (contained in uranium enriched above natural but less than 10 percent in the U-235 isotope).

This class of material is sometimes referred to as a Category III quantity of material.

Special nuclear material of moderate strategic significance means:

(1) Less than a formula quantity of strategic special nuclear material but more than 1,000 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope) or more than 500 grams of uranium-233 or plutonium, or in a combined quantity of more than 1,000 grams when computed by the equation, grams = (grams contained U-235) + 2 (grams U-233 + grams plutonium); or

(2) 10,000 grams or more of uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U-235 isotope).

This class of material is sometimes referred to as a Category II quantity of material.

Stealth means methods used to attempt to gain unauthorized access, introduce unauthorized materials, or remove strategic special nuclear material, where the fact of such attempt is concealed or an attempt is made to conceal it.

Strategic special nuclear material means uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium.

Tactical Response Team means the primary response force for each shift which can be identified by a distinctive item of uniform, armed with specified weapons, and whose other duties permit immediate response.

Transport means any land, sea, or air conveyance or modules for these conveyances such as rail cars or standardized cargo containers.

Trustworthiness and reliability are characteristics of an individual considered dependable in judgment, character, and performance, such that disclosure of Safeguards Information (including Safeguards Information designated as Safeguards Information—Modified Handling) to that individual does not constitute an unreasonable risk to the public health and safety or common defense and security. A determination of trustworthiness and reliability for this purpose is based upon a background check.

Undergoing processing means performing active operations on material such as chemical transformation, physical transformation, or transit between such operations, to be differentiated from storage or packaging for shipment.

Vault means a windowless enclosure with walls, floor, roof and door(s) designed and constructed to delay penetration from forced entry.

Vault-type room means a room with one or more doors, all capable of being locked, protected by an intrusion alarm which creates an alarm upon the entry of a person anywhere into the room and upon exit from the room or upon movement of an individual within the room.

Vital area means any area which contains vital equipment.

Vital equipment means any equipment, system, device, or material, the failure, destruction, or release of which could directly or indirectly endanger the public health and safety by exposure to radiation. Equipment or systems which would be required to function to protect public health and safety following such failure, destruction, or release are also considered to be vital.

Watchman means an individual, not necessarily uniformed or armed with a firearm, who provides protection for a plant and the special

nuclear material therein in the course of performing other duties.

[38 FR 35430, Dec. 28, 1973, as amended at 39 FR 2352, Jan. 21, 1974; 40 FR 52841, Nov. 13, 1975; 42 FR 10838, Feb. 24, 1977; 43 FR 37425, Aug. 23, 1978; 44 FR 43282, July 24, 1979; 44 FR 68187, Nov. 28, 1979; 45 FR 14201, Mar. 5, 1980; 46 FR 51724, Oct. 22, 1981; 53 FR 45451, Nov. 10, 1988; 55 FR 51401, Dec. 14, 1990; 57 FR 33429, July 29, 1992; 72 FR 49561, Aug. 28, 2007; 73 FR 63573, Oct. 24, 2008]

§ 73.3 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretations of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized as binding upon the Commission.

§ 73.4 Communications.

[Top of File]

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent as follows:

(a) By mail addressed to: ATTN: Document Control Desk, Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Nuclear Material Safety and Safeguards, or Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001;

(b) By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland;

(c) Where practicable, by electronic submission, for example, Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(d) Classified communications shall be transmitted to the NRC Headquarters' classified mailing address as specified in appendix A to part 73 of this chapter or delivered by hand in accordance with this paragraph.

[53 FR 6139, Mar. 1, 1988, as amended at 53 FR 43422, Oct. 27, 1988; 68 FR 58819, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 73 FR 5725, Jan. 31, 2008]

§ 73.5 Specific exemptions.

[Top of File]

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

73.6 Exemptions for certain quantities and kinds of special nuclear material.

[Top of File]

A licensee is exempt from the requirements of 10 CFR part 26 and 73.20, 73.25, 73.26, 73.27, 73.45, 73.46, 73.70 and 73.72 with respect to the following special nuclear material:

(a) Uranium-235 contained in uranium enriched to less than 20 percent in the U-235 isotope:

(b) Special nuclear material which is not readily separable from other radioactive material and which has a total external radiation dose rate in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding; and

(c) Special nuclear material in a quantity not exceeding 350 grams of uranium-235, uranium-233, plutonium, or a combination thereof, possessed in any analytical, research, quality control, metallurgical or electronic laboratory.

(d) Special nuclear material that is being transported by the United States Department of Energy transport system.

(e) Special nuclear material at non-power reactors.

Licensees subject to 73.60 are not exempted from 73.70 and 73.72, and licensees subject to 73.67(e) are not exempted from 73.72 of this part.

[40 FR 52841, Nov. 13, 1975, as amended at 44 FR 68187, Nov. 28, 1979; 58 FR 31471, June 3, 1993]

§ 73.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0002.

(b) The approved information collection requirements contained in this part appear in §§ 73.5, 73.20, 73.21, 73.22, 73.23, 73.24, 73.25, 73.26, 73.27, 73.37, 73.40, 73.45, 73.46, 73.50, 73.55, 73.56, 73.57, 73.60, 73.67, 73.70, 73.71, 73.72, 73.73, 73.74, and appendices B, C, and G.

[62 FR 52189, Oct. 6, 1997 as amended at 67 FR 67101, Nov. 4, 2002; 73 FR 63574, Oct. 24, 2008]

§ 73.20 General performance objective and requirements.

[Top of File]

(a) In addition to any other requirements of this part, each licensee who is authorized to operate a fuel reprocessing plant pursuant to part 50 of this chapter; possesses or uses formula quantities of strategic special nuclear material at any site or contiguous sites subject to control by the licensee; is authorized to transport or deliver to a carrier for transportation pursuant to part 70 of this chapter formula quantities of strategic special nuclear material; takes delivery of formula quantities of strategic special nuclear material free on board (f.o. b.) the point at which it is delivered to a carrier for transportation; or imports or exports formula quantities of strategic special nuclear material, shall establish and maintain or make arrangements for a physical protection system which will have as its objective to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security, and do not constitute an unreasonable risk to the public health and safety. The physical protection system shall be designed to protect against the design basis threats of theft or diversion of strategic special nuclear material and radiological sabotage as stated in § 73.1(a).

(b) To achieve the general performance objective of paragraph (a) of this section a licensee shall establish and maintain, or arrange for, a physical protection system that:

(1) Provides the performance capabilities described in § 73.25 for in-transit protection or in § 73.45 for fixed site protection unless otherwise authorized by the Commission;

(2) Is designed with sufficient redundancy and diversity to ensure maintenance of the capabilities described in §§ 73.25 and 73.45;

(3) Includes a safeguards contingency capability that can meet the criteria in appendix C to this part "Licensee Safeguards Contingency Plans;" and

(4) Includes a testing and maintenance program to assure control over all activities and devices affecting the effectiveness, reliability, and availability of the physical protection system, including a demonstration that any defects of such activities and devices will be promptly detected and corrected for the total period of time they are required as a part of the physical protection system.

(c) Each licensee subject to the requirements of paragraphs (a) and (b) of this section shall establish, maintain, and follow NRC-approved safeguards physical protection and safeguards contingency plans that describe how the licensee will comply with the requirements of paragraphs (a) and (b) of this section.

[44 FR 68188, Nov. 28, 1979, as amended at 57 FR 33430, July 29, 1992]

§ 73.21 Protection of Safeguards Information: Performance Requirements.

[Top of File]

(a) *General performance requirement*. (1) Each licensee, certificate holder, applicant, or other person who produces, receives, or acquires Safeguards Information (including Safeguards Information with the designation or marking: Safeguards Information—Modified Handling) shall ensure that it is protected against unauthorized disclosure. To meet this general performance requirement, such licensees, certificate holders, applicants, or other persons subject to this section shall:

(i) Establish, implement, and maintain an information protection system that includes the applicable measures for Safeguards Information specified in § 73.22 related to: Power reactors; a formula quantity of strategic special nuclear material; transportation of or delivery to a carrier for transportation of a formula quantity of strategic special nuclear material or more than 100 grams of irradiated reactor fuel;

uranium hexafluoride production or conversion facilities; fuel fabrication facilities; uranium enrichment facilities; independent spent fuel storage installations; and geologic repository operations areas.

(ii) Establish, implement, and maintain an information protection system that includes the applicable measures for Safeguards Information specified in § 73.23 related to: Panoramic and underwater irradiators that possess greater than 370 TBq (10,000 Ci) of byproduct material in the form of sealed sources; manufacturers and distributors of items containing source material, or byproduct or special nuclear material in greater than or equal to Category 2 quantities of concern; research and test reactors that possess special nuclear material of moderate strategic significance or special nuclear material of low strategic significance; and transportation of source, byproduct, or special nuclear material in greater than or equal to Category 1 quantities of concern.

(iii) Protect the information in accordance with the requirements of § 73.22 if the Safeguards Information is not described in paragraphs (a)(1)(i) and (a)(1)(ii) of this section.

(2) Information protection procedures employed by Federal, State, and local law enforcement agencies are presumed to meet the general performance requirement in § 73.21(a)(1).

(b) *Commission Authority*. (1) Pursuant to Section 147 of the Atomic Energy Act of 1954, as amended, the Commission may impose, by order or regulation, Safeguards Information protection requirements different from or in addition to those specified in this Part on any person who produces, receives, or acquires Safeguards Information.

(2) The Commission may require, by regulation or order, that information within the scope of Section 147 of the Atomic Energy Act of 1954, as amended, related to facilities or materials not specifically described in §§ 73.21, 73.22 or 73.23 be protected under this Part.

[46 FR 51724, Oct. 22, 1981, as amended at 54 FR 17704, Apr. 25, 1989; 59 FR 38899, Aug. 1, 1994; 69 FR 2281, Jan. 14, 2004; 73 FR 63574, Oct. 24, 2008]

§ 73.22 Protection of Safeguards Information: Specific Requirements.

[Top of File]

This section contains specific requirements for the protection of Safeguards Information in the hands of any person subject to the requirements of § 73.21(a)(1)(i) and related to power reactors; a formula quantity of strategic special nuclear material; transportation of or delivery to a carrier for transportation of a formula quantity of strategic special nuclear material or more than 100 grams of irradiated reactor fuel; uranium hexafluoride production or conversion facilities, fuel fabrication facilities, and uranium enrichment facilities; independent spent fuel storage installations; geologic repository operations areas and Safeguards Information in the hands of any person subject to the requirements of § 73.21(a)(1)(iii).

(a) *Information to be protected*. The types of information and documents that must be protected as Safeguards Information include non-public security-related requirements such as:

(1) Physical Protection. Information not classified as Restricted Data or National Security Information related to physical protection, including:

(i) The composite physical security plan for the facility or site;

(ii) Site-specific drawings, diagrams, sketches, or maps that substantially represent the final design features of the physical security system not easily discernible by members of the public;

(iii) Alarm system layouts showing the location of intrusion detection devices, alarm assessment equipment, alarm system wiring, emergency power sources for security equipment, and duress alarms not easily discernible by members of the public;

(iv) Physical security orders and procedures issued by the licensee for members of the security organization detailing duress codes, patrol routes and schedules, or responses to security contingency events;

(v) Site-specific design features of plant security communications systems;

(vi) Lock combinations, mechanical key design, or passwords integral to the physical security system;

(vii) Documents and other matter that contain lists or locations of certain safety-related equipment explicitly identified in the documents or other matter as vital for purposes of physical protection, as contained in security plans, contingency measures, or plant specific safeguards analyses;

(viii) The composite safeguards contingency plan/measures for the facility or site;

(ix) The composite facility guard qualification and training plan/measures disclosing features of the physical security system or response procedures;

(x) Information relating to on-site or off-site response forces, including size, armament of response forces, and arrival times of such forces committed to respond to security contingency events;

(xi) The adversary characteristics document and related information, including implementing guidance associated with the Design Basis Threat in § 73.1(a)(1) or (a)(2); and

(xii) Engineering and safety analyses, security-related procedures or scenarios, and other information revealing site-specific details of the facility or materials if the unauthorized disclosure of such analyses, procedures, scenarios, or other information could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of source, byproduct, or special nuclear material.

(2) *Physical protection in transit*. Information not classified as Restricted Data or National Security Information related to the transportation of, or delivery to a carrier for transportation of a formula quantity of strategic special nuclear material or more than 100 grams of irradiated reactor fuel, including:

(i) The composite physical security plan for transportation;

(ii) Schedules and itineraries for specific shipments of source material, byproduct material, high-level nuclear waste, or irradiated reactor fuel. Schedules for shipments of source material, byproduct material, high-level nuclear waste, or irradiated reactor fuel are no longer controlled as Safeguards Information 10 days after the last shipment of a current series;

(iii) Vehicle immobilization features, intrusion alarm devices, and communications systems;

(iv) Arrangements with and capabilities of local police response forces, and locations of safe havens identified along the transportation route;

(v) Limitations of communications during transport;

(vi) Procedures for response to security contingency events;

(vii) Information concerning the tactics and capabilities required to defend against attempted sabotage, or theft and diversion of formula quantities of special nuclear material, irradiated reactor fuel, or related information; and

(viii) Engineering or safety analyses, security-related procedures or scenarios and other information related to the protection of the transported material if the unauthorized disclosure of such analyses, procedures, scenarios, or other information could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of source, byproduct, or special nuclear material.

(3) *Inspections, audits and evaluations*. Information not classified as National Security Information or Restricted Data pertaining to safeguards and security inspections and reports, including:

(i) Portions of inspection reports, evaluations, audits, or investigations that contain details of a licensee's or applicant's physical security system or that disclose uncorrected defects, weaknesses, or vulnerabilities in the system. Disclosure of corrected defects, weaknesses, or vulnerabilities is subject to an assessment taking into account such factors as trending analyses and the impacts of disclosure on licensees having similar physical security systems; and

(ii) Reports of investigations containing general information may be released after corrective actions have been completed, unless withheld pursuant to other authorities, *e.g.*, the Freedom of Information Act (5 U.S.C. 552).

(4) *Correspondence*. Portions of correspondence insofar as they contain Safeguards Information as set forth in paragraphs (a)(1) through (a)(3) of this section.

(5) Other information within the scope of Section 147 of the Atomic Energy Act of 1954, as amended, that the Commission determines by order or regulation could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of source, byproduct, or special nuclear material or a facility.

(b) *Conditions for access*.

(1) Except as the Commission may otherwise authorize, no person may have access to Safeguards Information unless the person has an established ''need to know'' for the information and has undergone a Federal Bureau of Investigation (FBI) criminal history records check using the procedures set forth in § 73.57.

(2) In addition, a person to be granted access to Safeguards Information must be trustworthy and reliable, based on a background check or other means approved by the Commission.

(3) The categories of individuals specified in 10 CFR 73.59 are exempt from the criminal history records check and background check requirements in paragraphs (b)(1) and (b)(2) of this section by virtue of their occupational status.

(4) For persons participating in an NRC adjudicatory proceeding, the ''need to know'' determination shall be made by the originator of the Safeguards Information upon receipt of a request for access to the Safeguards Information. Where the information is in the possession of the originator and the NRC staff, whether in its original form or incorporated into another document or other matter by the recipient, the

NRC staff shall make the determination. In the event of a dispute regarding the ''need to know'' determination, the presiding officer of the proceeding shall determine whether the ''need to know'' findings in § 73.2 can be made.

(5) Except as the Commission may otherwise authorize, no person may disclose Safeguards Information to any other person except as set forth in this section.

(c) *Protection while in use or storage*.

(1) While in use, matter containing Safeguards Information must be under the control of an individual authorized access to Safeguards Information. This requirement is satisfied if the Safeguards Information is attended by such an individual even though the information is in fact not constantly being used. Safeguards Information within alarm stations, or rooms continuously occupied by authorized individuals need not be stored in a locked security storage container.

(2) While unattended, Safeguards Information must be stored in a locked security storage container. The container shall not identify the contents of the matter contained and must preclude access by individuals not authorized access in accordance with the provisions of this section. Knowledge of lock combinations protecting Safeguards Information must be limited to a minimum number of personnel for operating purposes who have a ''need to know'' and are otherwise authorized access to Safeguards Information in accordance with the provisions of this Part. Access to lock combinations must be strictly controlled so as to prevent disclosure to an individual not authorized access to Safeguards Information.

(d) *Preparation and marking of documents or other matter*.

(1) Each document or other matter that contains Safeguards Information as described in § 73.21(a)(1)(i) and this section must be marked to indicate the presence of such information in a conspicuous manner on the top and bottom of each page. The first page of the document or other matter must also contain:

(i) The name, title, and organization of the individual authorized to make a Safeguards Information determination, and who has determined that the document or other matter contains Safeguards Information;

(ii) The date the determination was made; and

(iii) An indication that unauthorized disclosure will be subject to civil and criminal sanctions.

(2) In addition to the markings at the top and bottom of each page, any transmittal letters or memoranda to or from the NRC which do not in themselves contain Safeguards Information shall be marked to indicate that attachments or enclosures contain Safeguards Information but that the transmittal document or other matter does not (i.e., ''When separated from Safeguards Information enclosure(s), this document is decontrolled provided the transmittal document does not otherwise warrant protection from unauthorized disclosure'').

(3) Any transmittal document or other matter forwarding Safeguards Information must alert the recipient that protected information is enclosed. Certification that a document or other matter contains Safeguards Information must include the name and title of the certifying official and date designated. Portion marking is required only for correspondence to and from the NRC (*i.e.*, cover letters, but not attachments) that contains Safeguards Information. The portion marking must be sufficient to allow the recipient to identify and distinguish those sections of the transmittal document or other information containing the Safeguards Information from non-Safeguards Information.

(4) Marking of documents or other matter containing or transmitting Safeguards Information shall, at a minimum include the words ''Safeguards Information'' to ensure identification of protected information for the protection of facilities and material covered by § 73.22.

(e) *Reproduction of matter containing Safeguards Information*. Safeguards Information may be reproduced to the minimum extent necessary consistent with need without permission of the originator. Equipment used to reproduce Safeguards Information must be evaluated to ensure that unauthorized individuals cannot access Safeguards Information (e.g., unauthorized individuals cannot access Safeguards Information by gaining access to retained memory or network connectivity).

(f) *External transmission of documents and material*.

(1) Documents or other matter containing Safeguards Information, when transmitted outside an authorized place of use or storage, must be packaged in two sealed envelopes or wrappers to preclude disclosure of the presence of protected information. The inner envelope or wrapper must contain the name and address of the intended recipient and be marked on both sides, top and bottom, with the words ''Safeguards Information.'' The outer envelope or wrapper must be opaque, addressed to the intended recipient, must contain the address of the sender, and may not bear any markings or indication that the document or other matter contains Safeguards Information.

(2) Safeguards Information may be transported by any commercial delivery company that provides service with computer tracking features, U.S. first class, registered, express, or certified mail, or by any individual authorized access pursuant to these requirements.

(3) Except under emergency or extraordinary conditions, Safeguards Information shall be transmitted outside an authorized place of use or storage only by NRC approved secure electronic devices, such as facsimiles or telephone devices, provided that transmitters and receivers implement processes that will provide high assurance that Safeguards Information is protected before and after the transmission or electronic mail through the internet, provided that the information is encrypted by a method (Federal Information Processing Standard [FIPS] 140–2 or later) approved by the appropriate NRC Office; the information is produced by a self contained secure automatic data process system; and transmitters and receivers implement the information handling processes that will provide high assurance that Safeguards Information is protected before and after transmission. Physical security events required to be reported pursuant to § 73.71 are considered to be extraordinary conditions.

(g) *Processing of Safeguards Information on electronic systems*.

(1) Safeguards Information may be stored, processed or produced on a stand-alone computer (or computer system) for processing of Safeguards Information. ''Stand-alone'' means a computer or computer system to which access is limited to individuals authorized access to Safeguards Information. A stand-alone computer or computer system shall not be physically or in any other way connected to a network accessible by users who are not authorized access to Safeguards Information.

(2) Each computer not located within an approved and lockable security storage container that is used to process Safeguards Information must have a removable storage medium with a bootable operating system. The bootable operating system must be used to load and initialize the computer. The removable storage medium must also contain the software application programs. Data may be saved on either the removable storage medium that is used to boot the operating system, or on a different removable storage medium. The removable storage medium must be secured in a locked security storage container when not in use.

(3) A mobile device (such as a laptop computer) may also be used for the processing of Safeguards Information provided the device is secured in a locked security storage container when not in use. Other systems may be used if approved for security by the appropriate NRC office.

(4) Any electronic system that has been used for storage, processing or production of Safeguards Information must be free of recoverable Safeguards Information prior to being returned to nonexclusive use.

(h) *Removal from Safeguards Information category*. Documents or other matter originally containing Safeguards Information must be removed from the Safeguards Information category at such time as the information no longer meets the criteria contained in this part. Care must be exercised to ensure that any document or other matter decontrolled not disclose Safeguards Information in some other form or be combined with other unprotected information to disclose Safeguards Information. The authority to determine that a document or other matter may be decontrolled will only be exercised by the NRC, with NRC approval, or in consultation with the individual or organization that made the original determination.

(i) *Destruction of matter containing Safeguards Information*. Documents or other matter containing Safeguards Information shall be destroyed when no longer needed. The information can be destroyed by burning, shredding or any other method that precludes reconstruction by means available to the public at large. Piece sizes no wider than one quarter inch composed of several pages or documents and thoroughly mixed are considered completely destroyed.

[73 FR 63574, Oct. 24, 2008]

§ 73.23 Protection of Safeguards Information—Modified Handling: Specific Requirements.

[Top of File]

This section contains specific requirements for the protection of Safeguards Information in the hands of any person subject to the requirements of § 73.21(a)(1)(ii) and related to panoramic and underwater irradiators that possess greater than 370 TBq (10,000 Ci) of byproduct material in the form of sealed sources; manufacturers and distributors of items containing source material, or byproduct or special nuclear material in greater than or equal to Category 2 quantities of concern; transportation of more than 1000 Tbq (27,000 Ci) but less than or equal to 100 grams of spent nuclear fuel; research and test reactors that possess special nuclear material of moderate strategic significance or special nuclear material of low strategic significance; and transportation of source, byproduct, or special nuclear material in greater than or equal to Category 1 quantities of concern. The requirements of this section distinguish Safeguards Information requiring modified handling requirements (SGI–M) from the specific Safeguards Information handling requirements applicable to facilities and materials needing a higher level of protection, as set forth in § 73.22.

(a) *Information to be protected*. The types of information and documents that must be protected as Safeguards Information—Modified Handling include non-public security-related requirements such as protective measures, interim compensatory measures, additional security measures, and the following, as applicable:

(1) *Physical Protection*. Information not classified as Restricted Data or National Security Information related to physical protection, including:

(i) The composite physical security plan for the facility or site;

(ii) Site specific drawings, diagrams, sketches, or maps that substantially represent the final design features of the physical security system not easily discernible by members of the public;

(iii) Alarm system layouts showing the location of intrusion detection devices, alarm assessment equipment, alarm system wiring, emergency power sources for security equipment, and duress alarms not easily discernible by members of the public;

(iv) Physical security orders and procedures issued by the licensee for members of the security organization detailing duress codes, patrol routes and schedules, or responses to security contingency events;

(v) Site specific design features of plant security communications systems;

(vi) Lock combinations, mechanical key design, or passwords integral to the physical security system;

(vii) The composite facility guard qualification and training plan/measures disclosing features of the physical security system or response procedures;

(viii) Descriptions of security activities which disclose features of the physical security system or response measures;

(ix) Information relating to onsite or offsite response forces, including size, armament of the response forces, and arrival times of such forces committed to respond to security contingency events; and

(x) Engineering and safety analyses, security-related procedures or scenarios, and other information revealing site-specific details of the facility or materials if the unauthorized disclosure of such analyses, procedures, scenarios, or other information could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of source, byproduct, or special nuclear material.

(2) *Physical protection in transit*. Information not classified as Restricted Data or National Security Information related to the physical protection of shipments of more than 1000 Tbq (27,000 Ci) but less than or equal to 100 grams of spent nuclear fuel, source material and byproduct material in Category 1 quantities of concern, and special nuclear material in less than a formula quantity (except for those materials covered under § 73.22), including:

(i) Information regarding transportation security measures, including physical security plans and procedures, immobilization devices, and escort requirements, more detailed than NRC regulations;

(ii) Scheduling and itinerary information for shipments (scheduling and itinerary information for shipments that are inherently self-disclosing, such as a shipment that created extensive news coverage or an announcement by a public official confirming receipt, may be decontrolled after shipment departure). Scheduling and itinerary information for shipments that are not inherently self-disclosing may be decontrolled 2 days after the shipment is completed. Scheduling and itinerary information used for the purpose of preplanning, coordination, and advance notification may be shared with others on a ''need to know'' basis and need not be designated as Safeguards Information-Modified Handling);

(iii) Arrangements with and capabilities of local police response forces, and locations of safe havens identified along the transportation route;

(iv) Details of alarm and communication systems, communication procedures, and duress codes;

(v) Procedures for response to security contingency events; and

(vi) Engineering or safety analyses, security-related procedures or scenarios and other information related to the protection of the transported material if the unauthorized disclosure of such analyses, procedures, scenarios, or other information could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of source, byproduct, or special nuclear material.

(3) *Inspections, audits and evaluations*. Information not classified as National Security Information or Restricted Data pertaining to safeguards and security inspections and reports, including:

(i) Portions of inspection reports, evaluations, audits, or investigations that contain details of a licensee's or applicant's physical security system or that disclose uncorrected defects, weaknesses, or vulnerabilities in the system. Disclosure of corrected defects, weaknesses, or vulnerabilities is subject to an assessment taking into account such factors as trending analyses and the impacts of disclosure on licensees having similar physical security systems; and

(ii) Reports of investigations containing general information may be released after the corrective actions have been completed, unless withheld pursuant to other authorities, e.g., the Freedom of Information Act (5 U.S.C. 552).

(4) *Correspondence*. Portions of correspondence insofar as they contain Safeguards Information designated as Safeguards Information-Modified Handling, as set forth in paragraphs (a)(1) through (a)(3) of this section.

(5) Other information within the scope of Section 147 of the Atomic Energy Act of 1954, as amended, that the Commission determines by order or regulation could reasonably be expected to have a significant adverse effect on the health and safety of the public or the common defense and security by significantly increasing the likelihood of theft, diversion, or sabotage of source, byproduct, or special nuclear material or a facility.

(b) *Conditions for access*.

(1) Except as the Commission may otherwise authorize, no person may have access to Safeguards Information designated as Safeguards Information-Modified Handling unless the person has an established ''need to know'' for the information and has undergone a Federal Bureau of Investigation criminal history records check using the procedures set forth in § 73.57.

(2) In addition, a person to be granted access to Safeguards Information must be trustworthy and reliable, based on a background check or other means approved by the Commission.

(3) The categories of individuals specified in 10 CFR 73.59 are exempt from the criminal history records check and background check

requirements in paragraphs (b)(1) and (b)(2) of this section by virtue of their occupational status:

(4) For persons participating in an NRC adjudicatory proceeding, the ''need to know'' determination shall be made by the originator of the Safeguards Information designated as Safeguards Information-Modified Handling upon receipt of a request for access to the Safeguards Information designated as Safeguards Information-Modified Handling. Where the information is in the possession of the originator and the NRC staff, whether in its original form or incorporated into another document or other matter by the recipient, the NRC staff shall make the determination. In the event of a dispute regarding the ''need to know'' determination, the presiding officer of the proceeding shall determine whether the ''need to know'' findings in § 73.2 can be made.

(5) Except as the Commission may otherwise authorize, no person may disclose Safeguards Information designated as Safeguards Information-Modified Handling to any other person except as set forth in this section.

(c) *Protection while in use or storage*.

(1) While in use, matter containing Safeguards Information designated as Safeguards Information-Modified Handling must be under the control of an individual authorized access to such information. This requirement is satisfied if the Safeguards Information designated as Safeguards Information-Modified Handling is attended by such an individual even though the information is in fact not constantly being used. Safeguards Information designated as Safeguards Information-Modified Handling within alarm stations, or rooms continuously occupied by authorized individuals, need not be locked in a file drawer or cabinet.

(2) While unattended, Safeguards Information designated as Safeguards Information-Modified Handling must be stored in a locked file drawer or cabinet. The container shall not identify the contents of the matter contained and must preclude access by individuals not authorized access in accordance with the provisions of this section. Knowledge of lock combinations or access to keys protecting Safeguards Information designated as Safeguards Information-Modified Handling must be limited to a minimum number of personnel for operating purposes who have a ''need to know'' and are otherwise authorized access to Safeguards Information in accordance with the provisions of this Part. Access to lock combinations must be strictly controlled so as to prevent disclosure to an individual not authorized access to Safeguards Information designated as Safeguards Information-Modified Handling.

(d) *Preparation and marking of documents or other matter*.

(1) Each document or other matter that contains Safeguards Information designated as Safeguards Information-Modified Handling as described in § 73.23(a) and in this section must be marked to indicate the presence of Safeguards Information with modified handling requirements in a conspicuous manner on the top and bottom of each page. The first page of the document or other matter must also contain:

(i) The name, title, and organization of the individual authorized to make a ''Safeguards Information designated as Safeguards Information-Modified Handling'' determination, and who has determined that the document or other matter contains Safeguards Information designated as Safeguards Information-Modified Handling;

(ii) The date the determination was made; and

(iii) An indication that unauthorized disclosure will be subject to civil and criminal sanctions.

(2) In addition to the markings at the top and bottom of each page, any transmittal letters or memoranda to or from the NRC which do not in themselves contain Safeguards Information designated as Safeguards Information-Modified Handling shall be marked to indicate that attachments or enclosures contain Safeguards Information designated as Safeguards Information-Modified Handling but that the transmittal document does not (i.e., ''When separated from Safeguards Information designated as Safeguards Information-Modified Handling enclosure (s), this document is decontrolled provided the transmittal document does not otherwise warrant protection from unauthorized disclosure'').

(3) Any transmittal document or other matter forwarding Safeguards Information designated as Safeguards Information-Modified Handling must alert the recipient that protected information is enclosed. Certification that a document or other matter contains Safeguards Information designated as Safeguards Information-Modified Handling must include the name and title of the certifying official and date designated. Portion marking is required only for correspondence to and from the NRC (i.e., cover letters, but not attachments) that contains Safeguards Information designated as Safeguards Information-Modified Handling. The portion marking must be sufficient to allow the recipient to identify and distinguish those sections of the transmittal document or other information containing the Safeguards Information from non-Safeguards Information.

(4) Marking of documents or other matter containing or transmitting Safeguards Information with modified handling requirements shall, at a minimum include the words ''Safeguards Information-Modified Handling'' to ensure identification of protected information for the protection of facilities and material covered by § 73.23.

(e) *Reproduction of matter containing Safeguards Information designated as Safeguards Information-Modified Handling*. Safeguards Information designated as Safeguards Information-Modified Handling may be reproduced to the minimum extent necessary, consistent with need, without permission of the originator. Equipment used to reproduce Safeguards Information designated as Safeguards Information-Modified Handling must be evaluated to ensure that unauthorized individuals cannot access the information (e.g. , unauthorized individuals cannot access Safeguards Information by gaining access to retained memory or network connectivity).

(f) *External transmission of documents and material*.

(1) Documents or other matter containing Safeguards Information designated as Safeguards Information-Modified Handling, when transmitted outside an authorized place of use or storage, must be packaged in two sealed envelopes or wrappers to preclude disclosure of

the presence of protected information. The inner envelope or wrapper must contain the name and address of the intended recipient and be marked on both sides, top and bottom, with the words ''Safeguards Information-Modified Handling.'' The outer envelope or wrapper must be opaque, addressed to the intended recipient, must contain the address of the sender, and may not bear any markings or indication that the document contains Safeguards Information designated as Safeguards Information-Modified Handling.

(2) Safeguards Information designated Safeguards Information-Modified Handling may be transported by any commercial delivery company that provides service with computer tracking features, U.S. first class, registered, express, or certified mail, or by any individual authorized access pursuant to these requirements.

(3) Except under emergency or extraordinary conditions, Safeguards Information designated as Safeguards Information-Modified Handling must be transmitted electronically only by protected telecommunications circuits (including facsimile) or encryption by a method (Federal Information Processing Standard [FIPS] 140–2 or later) approved by the appropriate NRC office. For the purpose of this section, emergency or extraordinary conditions are defined as any circumstances that require immediate communications in order to report, summon assistance for, or respond to a security contingency event or an event that has potential security significance. Physical security events required to be reported pursuant to § 73.71 are considered to be extraordinary conditions.

(g) *Processing of Safeguards Information-Modified Handling on electronic systems*.

(1) Safeguards Information designated for modified handling may be stored, processed or produced on a computer or computer system, provided that the system is assigned to the licensee's or contractor's facility. Safeguards Information designated as Safeguards Information-Modified Handling files must be protected, either by a password or encryption, to prevent unauthorized individuals from gaining access. Word processors such as typewriters are not subject to these requirements as long as they do not transmit information offsite. **Note:** if Safeguards Information designated as Safeguards Information-Modified Handling is produced on a typewriter, the ribbon must be properly marked and be removed and stored in the same manner as other Safeguards Information designated as Safeguards Information-Modified Handling.

(2) Safeguards Information designated as Safeguards Information-Modified Handling files may be transmitted over a network if the file is encrypted. In such cases, the licensee will select a commercially available encryption system that the National Institute of Standards and Technology (NIST) has validated as conforming to Federal Information Processing Standards (FIPS) 140–2 or later. Safeguards Information designated as Safeguards Information-Modified Handling files shall be properly labeled to indicate the presence of Safeguards Information with modified handling requirements and saved to removable matter and stored in a locked file drawer or cabinet.

(3) A mobile device (such as a laptop computer) may also be used for the processing of Safeguards Information designated as Safeguards Information-Modified Handling provided the device is secured in an appropriate locked storage container when not in use. Other systems may be used if approved for security by the appropriate NRC office.

(4) Any electronic system that has been used for storage, processing or production of Safeguards Information must be free of recoverable Safeguards Information designated as Safeguards Information-Modified Handling prior to being returned to nonexclusive use.

(h) *Removal from Safeguards Information-Modified Handling category*. Documents or other matter originally containing Safeguards Information designated as Safeguards Information-Modified Handling must be removed from the Safeguards Information category at such time as the information no longer meets the criteria contained in this Part. Care must be exercised to ensure that any document or other matter decontrolled shall not disclose Safeguards Information in some other form or be combined with other unprotected information to disclose Safeguards Information. The authority to determine that a document or other matter may be decontrolled will only be exercised by the NRC, with NRC approval, or in consultation with the individual or organization that made the original determination.

(i) *Destruction of matter containing Safeguards Information designated as Safeguards Information-Modified Handling*. Documents or other matter containing Safeguards Information shall be destroyed when no longer needed. The information can be destroyed by burning, shredding, or any other method that precludes reconstruction by means available to the public at large. Piece sizes no wider than one quarter inch composed of several pages or documents and thoroughly mixed are considered completely destroyed.

[73 FR 63577, Oct. 24, 2008]

§ 73.24 Prohibitions.

[Top of File]

(a) Except as specifically approved by the Nuclear Regulatory Commission, no shipment of special nuclear material shall be made in passenger aircraft in excess of (1) 20 grams or 20 curies, whichever is less, of plutonium or uranium-233, or (2) 350 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope).

(b) Unless otherwise approved by the Nuclear Regulatory Commission, no licensee may make shipments of special nuclear material in which individual shipments are less than a formula quantity, but the total quantity in shipments in transit at the same time could equal or exceed a formula quantity, unless either of the following conditions are met:

(1) The licensee shall confirm and log the arrival at the final destination of each individual shipment and retain the log for three years from the date of the last entry in the log. The licensee shall also schedule shipments to ensure that the total quantity for two or more shipments in transit at the same time does not equal or exceed the formula quantity, or

(2) Physical protection in accordance with the requirements of §§ 73.20, 73.25, and 73.26 is provided by the licensee for such shipments as appropriate so that the total quantity of special nuclear material in the remaining shipments not so protected, and in transit at the same

time, does not equal or exceed a formula quantity.

[44 FR 68188, Nov. 28, 1979, as amended at 53 FR 19257, May 27, 1988]

Physical Protection of Special Nuclear Material in Transit

[Top of File]

§ 73.25 Performance capabilities for physical protection of strategic special nuclear material in transit.

(a) To meet the general performance objective and requirements of § 73.20 an in-transit physical protection system shall include the performance capabilities described in paragraphs (b) through (d) of this section unless otherwise authorized by the Commission.

(b) Restrict access to and activity in the vicinity of transports and strategic special nuclear material. To achieve this capability the physical protection system shall:

(1) Minimize the vulnerability of the strategic special nuclear material by using the following subfunctions and procedures;

(i) Preplanning itineraries for the movement of strategic special nuclear material;

(ii) Periodically updating knowledge of route conditions for the movement of strategic special nuclear material;

(iii) Maintaining knowledge of the status and position of the strategic special nuclear material en route; and

(iv) Determining and communicating alternative itineraries en route as conditions warrant.

(2) Detect and delay any unauthorized attempt to gain access or introduce unauthorized materials by stealth or force into the vicinity of transports and strategic special nuclear material using the following subsystems and subfunctions:

(i) Controlled access areas to isolate strategic special nuclear material and transports to assure that unauthorized persons shall not have direct access to, and unauthorized materials shall not be introduced into the vicinity of, the transports and strategic special nuclear material, and

(ii) Access detection subsystems and procedures to detect, assess and communicate any unauthorized penetration (or such attempts) of a controlled access area by persons, vehicles or materials so that the response will satisfy the general performance objective and requirements of § 73.20(a).

(3) Detect attempts to gain unauthorized access or introduce unauthorized materials into the vicinity of transports by deceit using the following subsystems and subfunctions:

(i) Access authorization controls and procedures to provide current authorization schedules and access criteria for persons, materials and vehicles; and

(ii) Access controls and procedures to verify the identity of persons, materials and vehicles, to assess such identity against current authorization schedules and access criteria before permitting access, and to initiate response measures to deny unauthorized entries.

(c) Prevent or delay unauthorized entry or introduction of unauthorized materials into, and unauthorized removal of, strategic special nuclear material from transports. To achieve this capability the physical protection system shall:

(1) Detect attempts to gain unauthorized entry or introduce unauthorized materials into transports by deceit using the following subsystems and subfunctions:

(i) Access authorization controls and procedures to provide current authorization schedules and entry criteria for access into transports for both persons and materials; and

(ii) Entry controls and procedures to verify the identity of persons and materials and to permit transport entry only to those persons and materials specified by the current authorization schedules and entry criteria.

(2) Detect attempts to gain unauthorized entry or introduce unauthorized material into transports by stealth or force using the following subsystems and subfunctions:

(i) Transport features to delay access to strategic special nuclear material sufficient to permit the detection and response systems to function so as to satisfy the general performance objective and requirements of § 73.20(a);

(ii) Inspection and detection subsystems and procedures to detect unauthorized tampering with transports and cargo containers; and

(iii) Surveillance subsystems and procedures to detect, assess and communicate any unauthorized presence of persons or materials and

any unauthorized attempt to penetrate the transport so that the response will satisfy the general performance objective and requirements of § 73.20(a).

(3) Prevent unauthorized removal of strategic special nuclear material from transports by deceit using the following subsystems and subfunctions:

(i) Authorization controls and procedures to provide current schedules for authorized removal of strategic special nuclear material which specify the persons authorized to remove and receive the material, the authorized times for such removal and receipt and authorized places for such removal and receipt.

(ii) Removal controls and procedures to establish activities for transferring cargo in emergency situations; and

(iii) Removal controls and procedures to permit removal of strategic special nuclear material only after verification of the identity of persons removing or receiving the strategic special nuclear material, and after verification of the identity and integrity of the strategic special nuclear material being removed from transports.

(4) Detect attempts to remove strategic special nuclear material from transports by stealth or force using the following subsystems and subfunctions:

(i) Transport features to delay unauthorized strategic special nuclear material removal attempts sufficient to assist detection and permit a response to satisfy the general performance objective and requirements of § 73.20(a); and

(ii) Detection subsystems and procedures to detect, assess and communicate any attempts at unauthorized removal of strategic special nuclear material so that response to the attempt can be such as to satisfy the general performance objective and requirements of § 73.20 (a).

(d) Respond to safeguards contingencies and emergencies to assure that the two capabilities in paragraphs (b) and (c) of this section are achieved, and to engage and impede adversary forces until local law enforcement forces arrive. To achieve this capability, the physical protection system shall:

(1) Respond rapidly and effectively to safeguards contingencies and emergencies using the following subsystems and subfunctions:

(i) A security organization composed of trained and qualifed personnel, including armed escorts, one of whom is designated as escort commander, with procedures for command and control, to execute response functions.

(ii) Assessment procedures to assess the nature and extent of security related incidents.

(iii) A predetermined plan to respond to safeguards contingency events.

(iv) Equipment and procedures to enable responses to security related incidents sufficiently rapid and effective to achieve the predetermined objective of each action.

(v) Equipment, vehicle design features, and procedures to protect security organization personnel, including those at the movement control center, in their performance of assessment and response related functions.

(2) Transmit detection, assessment and other response related information using the following subsystems and subfunctions:

(i) Communications equipment and procedures to rapidly and accurately transmit security information among armed escorts.

(ii) Equipment and procedures for two-way communications between the escort commander and the movement control center to rapidly and accurately transmit assessment information and requests for assistance by local law enforcement forces, and to coordinate such assistance.

(iii) Communications equipment and procedures for the armed escorts and the movement control center personnel to notify local law enforcement forces of the need for assistance.

(3) Establish liaisons with local law enforcement authorities to arrange for assistance en route.

(4) Assure that a single adversary action cannot destroy the capability of armed escorts to notify the local law enforcement forces of the need for assistance.

[44 FR 68188, Nov. 28, 1979]

§ 73.26 Transportation physical protection systems, subsystems, components, and procedures.

[Top of File]

(a) A transportation physical protection system established pursuant to the general performance objectives and requirements of § 73.20 and performance capability requirements of § 73.25 shall include, but are not necessarily limited to, the measures specified in paragraphs (b) through (l) of this section. The Commission may require, depending on the individual transportation conditions or circumstances, alternate or additional measures deemed necessary to meet the general performance objectives and requirements of § 73.20. The Commission also may authorize protection measures other than those required by this section if, in its opinion, the overall level of performance meets the general performance objectives and requirements of § 73.20 and the performance capability requirements of § 73.25.

(b) *Planning and scheduling*. (1) Shipments shall be scheduled to avoid regular patterns and preplanned to avoid areas of natural disaster or civil disorders, such as strikes or riots. Such shipments shall be planned in order to avoid storage times in excess of 24 hours and to assure that deliveries occur at a time when the receiver at the final delivery point is present to accept the shipment.

(2) Arrangements shall be made with law enforcement authorities along the route of shipments for their response to an emergency or a call for assistance.

(3) Security arrangements for each shipment shall be approved by the Nuclear Regulatory Commission prior to the time for the seven-day notice required by § 73.72. Information to be supplied to the Commission in addition to the general security plan information is as follows:

(i) Shipper, consignee, carriers, transfer points, modes of shipment,

(ii) Point where escorts will relinquish responsibility or will accept responsibility for the shipment,

(iii) Arrangements made for transfer of shipment security, and

(iv) Security arrangements at point where escorts accept responsibility for an import shipment.

(4) Hand-to-hand receipts shall be completed at origin and destination and at all points enroute where there is a transfer of custody.

(c) *Export/import shipments*. (1) A licensee who imports a formula quantity of strategic special nuclear material shall make arrangements to assure that the material will be protected in transit as follows:

(i) An individual designated by the licensee or his agent, or as specified by a contract of carriage, shall confirm the container count and examine locks and/or seals for evidence of tampering, at the first place in the United States at which the shipment is discharged from the arriving carrier.

(ii) The shipment must be protected at all times within the geographical limits of the United States as provided in this section and §§ 73.25 and 73.27. The licensee shall retain each record required by these sections for three years after the close of period for which the licensee possesses the special nuclear material under each license authorizing the licensee to ship this material, and superseded material for three years after each change.

(2) A licensee who exports a formula quantity of strategic special nuclear material shall comply with the requirements of this section and §§ 73.25 and 73.27, as applicable, up to the first point where the shipment is taken off the transport outside the United States. The licensee shall retain each record required by these sections for three years after the close of period for which the licensee possesses the special nuclear material under each license authorizing the licensee to export this material, and superseded material for three years after each change.

(d) *Security organization*. (1) The licensee or his agent shall establish a transportation security organization, including armed escorts, armed response personnel or guards, and a movement control center manned and equipped to monitor and control shipments, to communicate with local law enforcement authorities, and to respond to safeguards contingencies.

(2) At least one full time member of the security organization who has the authority to direct the physical protection activities of the security organization shall be on duty at the movement control center during the course of any shipment.

(3) The licensee or the licensee's agent shall establish, maintain, and follow a written management system to provide for the development, revision, implementation, and enforcement of transportation physical protection procedures. The licensee or the agent shall retain as a record the current management system for three years after the close of period for which the licensee possesses the special nuclear material under the license for which the system was developed and, if any portion of the system is superseded, retain the superseded material for three years after each change. The system shall include:

(i) Written security procedures which document the structure of the transportation security organization and which detail the duties of drivers and escorts and other individuals responsible for security; and

(ii) Provision for written approval of such procedures and any revisions thereto by the individual with overall responsibility for the security function.

(4) Neither the licensee nor the licensee's agent shall permit an individual to act as an escort or other security organization member unless the individual has been trained, equipped, and qualified to perform each assigned security job duty in accordance with appendix B, of this part, "General Criteria for Security Personnel." Upon the request of an authorized representative of the Commission, the licensee or the agent shall demonstrate the ability of the physical security personnel to carry out their assigned duties and responsibilities. Armed escorts shall requalify in accordance with appendix B to this part at least every 12 months. Each requalification must be documented. The licensee

or the agent shall retain documentation of the initial qualification for the term of employment and of each requalification as a record for three years from the date of the requalification.

(5) Armed escort and armed response force personnel armament shall include handguns, shotguns, and semiautomatic rifles, as described in appendix B to this part.

(e) *Contingency and Response Plans and Procedures*. (1) The licensee or the licensee's agent shall establish, maintain, and follow a written safeguards contingency plan for dealing with threats, thefts, and radiological sabotage related to strategic special nuclear material in transit subject to the provisions of this section. This safeguards contingency plan must be in accordance with the criteria in appendix C of this part, "Licensee Safeguards Contingency Plan." The licensee or the agent shall retain the contingency plan as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the plan is used and superseded material for three years after each change.

(2) Upon detection of abnormal presence or activity of persons or vehicles attempting to penetrate a moving convoy or persons attempting to gain access to a parked cargo vehicle or upon evidence or indication of penetration of the cargo vehicle the armed escorts or other armed response personnel shall:

(i) Determine whether or not a threat exists;

(ii) Assess the extent of the threat, if any;

(iii) Take immediate concurrent measures to neutralize the threat by;

(A) Making the necessary tactical moves to prevent or impede acts of radiological sabotage or theft of strategic special nuclear material, and

(B) Informing local law enforcement agencies of the threat and requesting assistance.

(3) The licensee or his agent shall instruct every armed escort and all armed response personnel to prevent or impede acts of radiological sabotage or theft of strategic special material by using sufficient force to counter the force directed at him including the use of deadly force when armed escorts or armed response personnel have a reasonable belief that it is necessary in self-defense or in the defense of others.

(f) *Transfer and storage of strategic special nuclear material for domestic shipments*. (1) Strategic special nuclear material shall be placed in a protected area at transfer points if transfer is not immediate from one transport to another. Where a protected area is not available a controlled access area shall be established for the shipment. The transport may serve as a controlled access area.

(2) All transfers shall be protected by at least seven armed escorts or other armed personnel--one of whom shall serve as commander. At least five of the armed personnel (including the commander) shall be available to protect the shipment and at least three of the five shall keep the strategic special nuclear material under continuous surveillance while it is at the transfer point. The two remaining armed personnel shall take up positions at a remote monitoring location. The remote location may be a radio-equipped vehicle or a nearby place, apart from the shipment area, so that a single act cannot remove the capability of the personnel protecting the shipment for calling for assistance. Each of the seven armed escorts or other armed personnel shall be capable of maintaining communication with each other. The commander shall have the capability to communicate with the personnel at the remote location and with local law enforcement agencies for emergency assistance. In addition, the armed escort personnel at the remote location shall have the capability to communicate with the law enforcement agencies and with the shipment movement control center. The commander shall call the remote location at least every 30 minutes to report the status of the shipment. If the calls are not received within the prescribed time, the personnel in the remote location shall request assistance from the law enforcement authorities, notify the shipment movement control center and initiate the appropriate contingency plans. Armed escorts or other armed personnel shall observe the opening of the cargo compartment of the incoming transport and ensure that the shipment is complete by checking locks and seals. A shipment loaded onto or transferred to another transport shall be checked to assure complete loading or transfer. Continuous visual surveillance of the cargo compartment shall be maintained up to the time the transport departs from the terminal. The escorts shall observe the transport until it has departed and shall notify the licensee or his agent of the latest status immediately thereafter.

(g) *Access control subsystems and procedures*. (1) A numbered picture badge identification procedure shall be used to identify all individuals who will have custody of a shipment. The identification procedure shall require that the individual who has possession of the strategic special nuclear material shall have, in advance, identification picture badges of all individuals who are to assume custody for the shipment. The shipment shall be released only when the individual who has possession of strategic special nuclear material has assured positive identification of all of the persons assuming custody for the shipment by comparing the copies of the identification badges that have been received in advance to the identification badges carried by the individuals who will assume custody of the shipment.

(2) Access to protected areas, controlled access areas, transports, escort vehicles, aircraft, rail cars, and containers where strategic special nuclear material is located shall be limited to individuals who have been properly identified and have been authorized access to these areas.

(3) Strategic special nuclear material shall be shipped in containers that are protected by tamper-indicating seals. The containers also shall be locked if they are not in another locked container or transport. The outermost container or transport also shall be protected by tamper-indicating seals.

(h) *Test and maintenance programs*. The licensee or his agent shall establish, maintain and follow a test and maintenance program for communications equipment and other physical protection related devices and equipment used pursuant to this section which shall include the following:

(1) Tests and inspections shall be conducted during the installation, and construction of physical protection related subsystems and

components to assure that they comply with their respective design criteria and performance specifications.

(2) Preoperational tests and inspections shall be conducted for physical protection related subsystems and components to demonstrate their effectiveness, availability, and reliability with respect to their respective design criteria and performance specifications.

(3) Operational tests and inspections shall be conducted for physical protection related subsystems and components to assure their maintenance in an operable and effective condition.

(4) Preventive maintenance programs shall be established for physical protection related subsystems and components to assure their continued maintenance in an operable and effective condition.

(5) All physical protection related subsystems and components shall be maintained in operable condition. Corrective action procedures and compensatory measures shall be developed and employed to assure that the effectiveness of the physical protection system is not reduced by any single failure or other contingencies affecting the operation of the physical protection related equipment or structures.

(6) The transportation security program must be reviewed at least every 12 months by individuals independent of both security program management and personnel who have direct responsibility for implementation of the security program. The review must include an audit of transportation security procedures and practices, an evaluation of the effectiveness of the transportation physical protection system, an audit of the transportation physical protection system testing and maintenance program, and an audit of commitments established for response by local law enforcement authorities. The results and recommendations of the review, management's findings on whether the transportation security program is currently effective, and any actions taken as a result of recommendations from prior reviews, must be documented in a report to the responsible organization management and to corporate management at least one level higher than that having responsibility for the day-to-day plant operation. These reports must be maintained in an auditable form, available for inspection for a period of 3 years.

(i) *Shipment by road*. (1) A detailed route plan shall be prepared which shows the routes to be taken, the refueling and rest stops, and the call-in times to the movement control center. All shipments shall be made on primary highways with minimum use of secondary roads. All shipments shall be made without intermediate stops except for refueling, rest or emergency stops.

(2) Cargo compartments of the trucks or trailers shall be locked and protected by tamper-indicating seals.

(3) The shipment shall be protected by one of the following methods;

(i) A specially designed cargo vehicle truck or trailer that reduces the vulnerability to theft. Design features of the truck or trailer shall permit immobilization of the truck or of the cargo-carrying portion of the vehicle and shall provide a deterrent to physical penetration of the cargo compartment. Two separate escort vehicles shall accompany the cargo vehicle. There shall be a total of seven armed escorts with at least two in the cargo vehicle. Escorts may also operate the cargo and escort vehicles.

(ii) An armored car cargo vehicle. Three separate escort vehicles shall accompany such a cargo vehicle. There shall be a total of seven armed escorts, with at least two in the cargo vehicle. Escorts may also operate the cargo and escort vehicles.

(4) All escort vehicles shall be bullet-resisting.

(5) Procedures shall be established to assure that no unauthorized persons or materials are on the cargo vehicle before strategic special nuclear material is loaded, or on the escort vehicles, immediately before the trip begins.

(6) Cargo and escort vehicles shall maintain continuous intraconvoy two-way communication. In addition at least two of the vehicles shall be equipped with radio telephones having the capability of communicating with the movement control center. A redundant means of communication shall also be available. Calls to the movement control center shall be made at least every half hour to convey the status and position of the shipment. In the event no call is received in accordance with these requirements, the licensee or his agent shall immediately notify the law enforcement authorities and the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response and initiate the appropriate contingency plan.

(7) At refueling, rest, or emergency stops at least seven armed escorts or other armed personnel shall be available to protect the shipment and at least three armed escorts or other armed personnel shall maintain continuous visual surveillance of the cargo compartment.

(8) Transfers to and from other modes of transportation shall be in accordance with paragraph (f) of this section.

(j) *Shipment by air*. (1) All shipments on commercial cargo aircraft shall be accompanied by two armed escorts who shall be able to converse in a common language with the captain of the aircraft.

(2) Transfers of these shipments shall be minimized and shall be conducted in accordance with paragraph (f) of this section. Such shipments shall be scheduled so that the strategic special nuclear material is loaded last and unloaded first.

(3) At scheduled stops, at least seven armed escorts or other armed personnel shall be available to protect the shipment and at least three armed escorts or other armed personnel shall maintain continuous visual surveillance of the cargo compartment.

(4) Export shipments shall be accompanied by two armed escorts from the last terminal in the United States until the shipment is unloaded at a foreign terminal and primary responsibility for physical protection is assumed by agents of the consignee. While on foreign soil, the escorts may surrender their weapons to legally constituted local authorities. After leaving the last terminal in the United States the

shipment shall be scheduled with no intermediate stops.

(5) Import shipments shall be accompanied by two armed escorts at all times within the geographical limits of the United States. These escorts shall provide physical protection for the shipment until relieved by verified agents of the U.S. consignee.

(6) Procedures shall be established to assure that no unauthorized persons or material are on the aircraft before strategic special nuclear material is loaded on board.

(7) Arrangements shall be made at all domestic airports to assure that the seven required armed escorts or other armed personnel are available and that the required security measures will be taken upon landing.

(8) Arrangements shall be made at the foreign terminal at which the shipment is to be unloaded to assure that security measures will be taken on arrival.

(k) *Shipment by rail*. (1) A shipment by rail shall be escorted by seven armed escorts in the shipment car or an escort car next to the shipment car of the train. At least three escorts shall keep the shipment car under continuous visual surveillance. Escorts shall detrain at stops when practicable and time permits to maintain the shipment cars under continuous visual surveillance and to check car or container locks and seals.

(2) Procedures shall be established to assure that no unauthorized persons or materials are on the shipment or escort car before strategic special nuclear material is loaded on board.

(3) Only containers weighing 5,000 lbs or more shall be shipped on open rail cars.

(4) A voice communication capability between the escorts and the movement control center shall be maintained. A redundant means of continuous communication also shall be available. Calls to the movement control center shall be made at least every half hour to convey the status and position of the shipment. In the event no call is received in accordance with these requirements, the licensee or his agent shall immediately notify the law enforcement authorities and the appropriate Nuclear Regulatory Commission Regional Office listed in appendix A of this part and initiate their contingency plan.

(5) Transfer to and from other modes of transportation shall be in accordance with paragraph (f) of this section.

(l) *Shipment by sea*. (1) Shipments shall be made only on container-ships. The strategic special nuclear material container(s) shall be loaded into exclusive use cargo containers conforming to American National Standards Institute (ANSI) Standard MH5.1--"Basic Requirements for Cargo Containers" (1971) or International Standards Organization (ISO) 1496, "General Cargo Containers" (1978). Locks and seals shall be inspected by the escorts whenever access is possible. The ANSI Standard MH5.1 (1971) and the (ISO) 1496 (1978), have been approved for incorporation by reference by the Director of the Federal Register. A copy of each of these standards is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738.

(2) All shipments shall be accompanied by two armed escorts who shall be able to converse in a common language with the captain of the ship.

(3) Minimum domestic ports of call shall be scheduled and there shall be no scheduled transfer to other vessels after the shipment leaves the last port in the United States. Transfer to and from other modes of transportation shall be in accordance with paragraph (f) of this section.

(4) At all ports of call the escorts shall ensure that the shipment is not removed. At least two armed escorts or other armed personnel shall maintain continuous visual surveillance of the cargo area where the container is stored up to the time the ship departs.

(5) Export shipments shall be accompanied by two armed escorts from the last port in the United States until the shipment is unloaded at a foreign terminal and prime responsibility for physical protection is assumed by agents of the consignee. While on foreign soil, the escorts may surrender their weapons to legally constituted local authorities.

(6) Import shipments shall be accompanied by two armed escorts at all times within the geographical limits of the United States. These escorts shall provide physical protection for the shipment until relieved by verified agents of the U.S. consignee.

(7) Ship-to-shore communications shall be available, and a ship-to-shore contact shall be made every six hours to relay position information, and the status of the shipment.

(8) Arrangements shall be made at the foreign terminals at which the shipment is to be unloaded to assure that security measures will be taken upon arrival.

[44 FR 68190, Nov. 28, 1979, as amended at 46 FR 2025, Jan. 8, 1981; 53 FR 19257, May 27, 1988; 57 FR 33430, July 29, 1992; 57 FR 61787, Dec. 29, 1992; 59 FR 50689, Oct. 5, 1994; 67 FR 3586, Jan. 25, 2002]

§ 73.27 Notification requirements.

[Top of File]

(a)(1) A licensee who delivers formula quantities of strategic special nuclear material to a carrier for transport shall immediately notify the consignee by telephone, telegraph, or teletype, of the time of departure of the shipment, and shall notify or confirm with the consignee the method of transportation, including the names of carriers, and the estimated time of arrival of the shipment at its destination.

(2) In the case of a shipment (f.o.b.) the point where it is delivered to a carrier for transport, a licensee shall, before the shipment is delivered to the carrier, obtain written certification from the licensee who is to take delivery of the shipment at the f.o.b. point that the physical protection arrangements required by §§ 73.25 and 73.26 for licensed shipments have been made. When a contractor exempt from the requirements for a Commission license is the consignee of a shipment, the licensee shall, before the shipment is delivered to the carrier, obtain written certification from the contractor who is to take delivery of the shipment at the f.o.b. point that the physical protection arrangements required by the United States Department of Energy Order Nos. 5632.1 or 5632.2, as appropriate, have been made.

(3) A licensee who delivers formula quantities of strategic special nuclear material to a carrier for transport or releases such special nuclear material f.o.b. at the point where it is delivered to a carrier for transport shall also make arrangements with the consignee to be notified immediately by telephone and telegraph, teletype, or cable, of the arrival of the shipment at its destination or of any such shipment that is lost or unaccounted for after the estimated time of arrival at its destination.

(b) Each licensee who receives a shipment of formula quantities of strategic special nuclear material shall immediately notify by telephone and telegraph or teletype, the person who delivered the material to a carrier for transport and the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response of the arrival of the shipment at its destination. When a United States Department of Energy license-exempt contractor is the consignee, the licensee who is the consignor shall notify by telephone and telegraph, or teletype, the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response of the arrival of the shipment at its destination immediately upon being notified of the receipt of the shipment by the license-exempt contractor as arranged pursuant to paragraph (a)(3) of this section. In the event such a shipment fails to arrive at its destination at the estimated time, or in the case of an export shipment, the licensee who exported the shipment, shall immediately notify by telephone and telegraph or teletype, the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, and the licensee or other person who delivered the material to a carrier for transport. The licensee who made the physical protection arrangements shall also immediately notify by telephone and telegraph, or teletype, the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response of the action being taken to trace the shipment.

(c) Each licensee who makes arrangements for physical protection of a shipment of formula quantities of strategic special nuclear material as required by §§ 73.25 and 73.26 shall immediately conduct a trace investigation of any shipment that is lost or unaccounted for after the estimated arrival time and file a report with the Commission as specified in § 73.71.

[44 FR 68192, Nov. 28, 1979 as amended at 67 FR 3586, Jan. 25, 2002]

§ 73.28 Security background checks for secure transfer of nuclear materials.

[Top of File]

Licensees are excepted from the security background check provisions in Section 170I of the AEA if they have not received Orders from the Nuclear Regulatory Commission containing requirements for background checks for trustworthiness and reliability that include fingerprinting and criminal history record checks as a prerequisite for unescorted access to radioactive materials.

§ 73.37 Requirements for physical protection of irradiated reactor fuel in transit.

[Top of File]

(a) *Performance objectives*. (1) Each licensee who transports, or delivers to a carrier for transport, in a single shipment, a quantity of irradiated reactor fuel in excess of 100 grams in net weight of irradiated fuel, exclusive of cladding or other structural or packaging material, which has a total external radiation dose rate in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding, shall establish and maintain, or make arrangements for, and assure the proper implementation of, a physical protection system for shipments of such material that will achieve the following objectives"

(i) Minimize the possibilities for radiological sabotage of spent fuel shipments, especially within heavily populated areas; and

(ii) Facilitate the location and recovery of spent fuel shipments that may have come under the control of unauthorized persons.

(2) To achieve these objectives, the physical protection shall:

(i) Provide for early detection and assessment of attempts to gain unauthorized access to, or control over, spent fuel shipments;

(ii) Provide for notification to the appropriate response forces of any spent fuel shipment sabotage attempts; and

(iii) Impede attempts at radiological sabotage or spent fuel shipments within heavily populated areas, or attempts to illicitly move such shipments into heavily populated areas, until response forces arrive.

(b) *General requirements*. To achieve the performance objectives of paragraph (a) of this section, a physical protection system established and maintained, or arranged for, by the licensee shall:

(1) Provide for notification of the Nuclear Regulatory Commission in advance of each shipment, in accordance with § 73.72 of this part.

(2) Include and retain a copy of current procedures for coping with circumstances that threaten deliberate damage to a spent fuel shipment and with other safeguards emergencies as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the procedures were developed and, if any portion of the procedures is superseded, retain the superseded material for three years after each change.

(3) Include instructions for each escort and retain a copy of the current instructions as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license that authorizes the activity that requires the instruction and retain any superseded material for three years after each change. The instructions must direct that, upon detection of the abnormal presence of unauthorized persons, vehicles, or vessels in the vicinity of a spent fuel shipment or upon detection of a deliberately induced situation that has the potential for damaging a spent fuel shipment, the escort will:

(i) Determine whether or not a threat exists;

(ii) Assess the extent of the threat, if any;

(iii) Inform local law enforcement agencies of the threat and request assistance; and

(iv) Implement the procedures developed in accordance with paragraph (b)(2) of this section.

(4) Include a communications center at a designated location, which will be staffed continuously by at least one individual who will monitor the progress of the spent fuel shipment and will notify the appropriate agencies in the event a safeguards emergency should arise.

(5) Provide for maintenance of a written log by the escorts and communications center personnel for each spent fuel shipment, which will include information describing the shipment and significant events that occur during the shipment, and will be available for review by authorized NRC personnel for a period of at least three years following completion of the shipment.

(6) Provide that arrangements have been made with local law enforcement agencies along the routes of road and rail shipments, and at U. S. ports where vessels carrying spent fuel shipments are docked, for their response to an emergency or a call for assistance.

(7) Provide for advance approval by the NRC of the routes used for road and rail shipments of spent fuel, and of any U.S. ports where vessels carrying spent fuel shipments are scheduled to stop.

(8) Provide that shipments are planned so that scheduled intermediate stops are avoided to the extent practicable.

(9) Provide that at least one escort maintains visual surveillance of the shipment during periods when the shipment vehicle is stopped, or the shipment vessel is docked.

(10) Provide that escorts (other than members of local law enforcement agencies, or ship's officers serving as unarmed escorts) have successfully completed the training required by appendix D of this part.

(11) Provide that shipment escorts make calls to the communications center at least every 2 hours to advise of the status of the shipment for road and rail shipments, and for sea shipments while shipment vessels are docked at U.S. ports.

(c) *Shipments by road*. In addition to the provisions of paragraph (b), the physical protection system for any portion of a spent fuel shipment that is by road shall provide that:

(1) A transport vehicle within a heavily populated area is:

(i) Occupied by at least two individuals, one of whom serves as escort, and escorted by an armed member of the local law enforcement agency in a mobile unit of such agency; or

(ii) Led by a separate vehicle occupied by at least one armed escort, and trailed by a third vehicle occupied by at least one armed escort.

(2) A transport vehicle not within any heavily populated area is:

(i) Occupied by at least one driver and one other individual who serves as escort; or

(ii) Occupied by a driver and escorted by a separate vehicle occupied by at least two escorts; or

(iii) Escorted as set forth in paragraph (c)(1) of this section.

(3) Escorts have the capability of communicating with the communications center, local law enforcement agencies, and one another, through the use of:

(i) A citizens band (CB) radio available in the transport vehicle and in each escort vehicle;

(ii) A radiotelephone or other NRC-approved equivalent means of two-way voice communications available in the transport vehicle or in an escort vehicle committed to travel the entire route; and

(iii) Citizens band (CB) radio and normal local law enforcement agency radio communications in any local law enforcement agency mobile units used for escort purposes.

(4) The transport is equipped with NRC-approved features that permit immobilization of the cab or cargo-carrying portion of the vehicle.

(5) The transport vehicle driver has been familiarized with, and is capable of implementing, transport vehicle immobilization, communications, and other security procedures.

(d) *Shipments by rail*. In addition to the provisions of paragraph (b), the physical protection system for any portion of a spent fuel shipment that is by rail shall provide that;

(1) A shipment car within a heavily populated area is accompanied by two armed escorts (who may be members of a local law enforcement agency), at least one of whom is stationed at a location on the train that will permit observation of the shipment car while in motion.

(2) A shipment car not within any heavily populated area is accompanied by at least one escort stationed at a location on the train that will permit observation of the shipment car while in motion.

(3) Escorts have the capability of communicating with the communications center and local law enforcement agencies through the use of a radiotelephone, or other NRC-approved equivalent means of two-way voice communications, which shall be available on the train.

(e) *Shipments by sea*. In addition to the provisions of paragraph (b), the physical protection system for any portion of a spent fuel shipment that is by sea shall provide that:

(1) A shipment vessel, while docked at a U.S. port within a heavily populated area, is protected by:

(i) Two armed escorts stationed on board the shipment vessel, or stationed on the dock at a location that will permit observation of the shipment vessel; or

(ii) A member of a local law enforcement agency, equipped with normal LLEA radio communications, who is stationed on board the shipment vessel, or on the dock at a location that will permit observation of the shipment vessel.

(2) A shipment vessel, while within U.S. territorial waters, or while docked at a U.S. port not within a heavily populated area, is accompanied by an escort, who may be an officer of the shipment vessel's crew, who will assure that the shipment is unloaded only as authorized by the licensee.

(3) Escorts have the capability of communicating with the communications center and local law enforcement agencies through the use of a radiotelephone, or other NRC-approved equivalent means of two-way voice communications.

(f) Prior to the transport of spent fuel within or through a state a licensee subject to this section shall notify the governor or the governor's designee. The licensee shall comply with the following criteria in regard to a notification:

(1) The notification must be in writing and sent to the office of each appropriate governor or the governor's designee. A notification delivered by mail must be postmarked at least 7 days before transport of a shipment within or through the state. A notification delivered by messenger must reach the office of the governor or the governor's designee at least 4 days before transport of a shipment within or through the state. A list of the mailing addresses of governors and governors' designees is available upon request from the Director, Office of Public Affairs, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(2) The notification must include the following information:

(i) The name, address, and telephone number of the shipper, carrier and receiver.

(ii) A description of the shipment as specified by the Department of Transportation in 49 CFR § 172.202 and § 172.203(d).

(iii) A listing of the routes to be used within the state.

(iv) A statement that the information described below in § 73.37(f)(3) is required by NRC regulations to be protected in accordance with the requirements of §§ 73.21 and 73.22.

(3) The licensee shall provide the following information on a separate enclosure to the written notification:

(i) The estimated date and time of departure from the point of origin of the shipment.

(ii) The estimated date and time of entry into the governor's state.

(iii) For the case of a single shipment whose schedule is not related to the schedule of any subsequent shipment, a statement that schedule

information must be protected in accordance with the provisions of §§ 73.21 and 73.22 until at least 10 days after the shipment has entered or originated within the state.

(iv) For the case of a shipment in a series of shipments whose schedules are related, a statement that schedule information must be protected in accordance with the provisions of §§ 73.21 and 73.22 until 10 days after the last shipment in the series has entered or originated within the state and an estimate of the date on which the last shipment in the series will enter or originate within the state.

(4) A licensee shall notify by telephone or other means a responsible individual in the office of the governor or in the office of the governor's designee of any schedule change that differs by more than 6 hours from the schedule information previously furnished in accordance with § 73.37(f)(3), and shall inform that individual of the number of hours of advance or delay relative to the written schedule information previously furnished.

(g) State officials, state employees, and other individuals, whether or not licensees of the Commission, who receive schedule information of the kind specified in § 73.37(f)(3) shall protect that information against unauthorized disclosure as specified in §§ 73.21 and 73.22.

[45 FR 37408, June 3, 1980, as amended at 47 FR 603, Jan. 6, 1982; 52 FR 31613, Aug. 21, 1987; 53 FR 19257, May 27, 1988; 60 FR 24552, May 9, 1995; 73 FR 63579, Oct. 24, 2008]

Physical Protection Requirements at Fixed Sites

[Top of File]

§ 73.40 Physical protection: General requirements at fixed sites.

Each licensee shall provide physical protection at a fixed site, or contiguous sites where licensed activities are conducted, against radiological sabotage, or against theft of special nuclear material, or against both, in accordance with the applicable sections of this Part for each specific class of facility or material license. If applicable, the licensee shall establish and maintain physical security in accordance with security plans approved by the Nuclear Regulatory Commission.

[58 FR 13700, Mar. 15, 1993]

§ 73.45 Performance capabilities for fixed site physical protection systems.

[Top of File]

(a) To meet the general performance requirements of § 73.20 a fixed site physical protection system shall include the performance capabilities described in paragraphs (b) through (g) of this section unless otherwise authorized by the Commission.

(b) Prevent unauthorized access of persons, vehicles and materials into material access areas and vital areas. To achieve this capability the physical protection system shall:

(1) Detect attempts to gain unauthorized access or introduce unauthorized material across material access or vital area boundaries by stealth or force using the following subsystems and subfunctions:

(i) Barriers to channel persons and material to material access and vital area entry control points and to delay any unauthorized penetration attempts by persons or materials sufficient to assist detection and permit a response that will prevent the penetration; and

(ii) Access detection subsystems and procedures to detect, assess and communicate any unauthorized penetration attempts by persons or materials at the time of the attempt so that the response can prevent the unauthorized access or penetration.

(2) Detect attempts to gain unauthorized access or introduce unauthorized materials into material access areas or vital areas by deceit using the following subsystems and subfunctions:

(i) Access authorization controls and procedures to provide current authorization schedules and entry criteria for both persons and materials; and

(ii) Entry controls and procedures to verify the identity of persons and materials and assess such identity against current authorization schedules and entry criteria before permitting entry and to initiate response measures to deny unauthorized entries.

(c) Permit only authorized activities and conditions within protected areas, material access areas, and vital areas. To achieve this capability the physical protection system shall:

(1) Detect unauthorized activities or conditions within protected areas, material access areas and vital areas using the following subsystems and subfunctions:

(i) Controls and procedures that establish current schedules of authorized activities and conditions in defined areas;

(ii) Boundaries to define areas within which the authorized activities and conditions are permitted; and

(iii) Detection and surveillance subsystems and procedures to discover and assess unauthorized activities and conditions and communicate them so that response can be such as to stop the activity or correct the conditions to satisfy the general performance objective and requirements of § 73.20(a).

(d) Permit only authorized placement and movement of strategic special nuclear material within material access areas. To achieve this capability the physical protection system shall:

(1) Detect unauthorized placement and movement of strategic special nuclear material within the material access area using the following subsystems and subfunctions:

(i) Controls and procedures to delineate authorized placement and control for strategic special nuclear material;

(ii) Controls and procedures to establish current authorized placement and movement of all strategic special nuclear material within material access areas;

(iii) Controls and procedures to maintain knowledge of the identity, quantity, placement, and movement of all strategic special nuclear material within material access areas; and

(iv) Detection and monitoring subsystems and procedures to discover and assess unauthorized placement and movement of strategic special nuclear material and communicate them so that response can be such as to return the strategic special nuclear material to authorized placement or control.

(e) Permit removal of only authorized and confirmed forms and amounts of strategic special nuclear material from material access areas. To achieve this capability the physical protection system shall:

(1) Detect attempts at unauthorized removal of strategic special nuclear material from material access areas by stealth or force using the following subsystems and subfunctions:

(i) Barriers to channel persons and materials exiting a material access area to exit control points and to delay any unauthorized strategic special nuclear material removal attempts sufficient to assist detection and assessment and permit a response that will prevent the removal; and satisfy the general performance objective and requirements of § 73.20(a); and

(ii) Detection subsystems and procedures to detect, assess and communicate any attempts at unauthorized removal of strategic special nuclear material so that response to the attempt can be such as to prevent the removal and satisfy the general performance objective and requirements of § 73.20(a).

(2) Confirm the identity and quantity of strategic special nuclear material presented for removal from a material access area and detect attempts at unauthorized removal of strategic special nuclear material from material access areas by deceit using the following subsystems and subfunctions:

(i) Authorization controls and procedures to provide current schedules for authorized removal of strategic special nuclear material which specify the authorized properties and quantities of material to be removed, the persons authorized to remove the material, and the authorized time schedule;

(ii) Removal controls and procedures to identify and confirm the properties and quantities of material being removed and verify the identity of the persons making the removal and time of removal and assess these against the current authorized removal schedule before permitting removal; and

(iii) Communications subsystems and procedures to provide for notification of an attempted unauthorized or unconfirmed removal so that response can be such as to prevent the removal and satisfy the general performance objective and requirements of § 73.20(a).

(f) Provide for authorized access and assure detection of and response to unauthorized penetrations of the protected area to satisfy the general performance objective and requirements of § 73.20(a). To achieve this capability the physical protection system shall:

(1) Detect attempts to gain unauthorized access or introduce unauthorized persons, vehicles, or materials into the protected area by stealth or force using the following subsystems and subfunctions:

(i) Barriers to channel persons, vehicles, and materials to protected area entry control points; and to delay any unauthorized penetration attempts or the introduction of unauthorized vehicles or materials sufficient to assist detection and assessment and permit a response that will prevent the penetration or prevent such penetration and satisfy the general performance objective and requirements of § 73.20(a); and

(ii) Access detection subsystems and procedures to detect, assess and communicate any unauthorized access or penetrations or such attempts by persons, vehicles, or materials at the time of the act or the attempt so that the response can be such as to prevent the unauthorized access or penetration, and satisfy the general performance objective and requirements of § 73.20(a).

(2) Detect attempts to gain unauthorized access or introduce unauthorized persons, vehicles, or materials into the protected area by deceit using the following subsystems and subfunctions:

(i) Access authorization controls and procedures to provide current authorization schedules and entry criteria for persons, vehicles, and materials; and

(ii) Entry controls and procedures to verify the identity of persons, materials and vehicles and assess such identity against current authorization schedules before permitting entry and to initiate response measures to deny unauthorized access.

(g) Response. Each physical protection program shall provide a response capability to assure that the five capabilities described in paragraphs (b) through (f) of this section are achieved and that adversary forces will be engaged and impeded until offsite assistance forces arrive. To achieve this capability a licensee shall:

(1) Establish a security organization to:

(i) Provide trained and qualified personnel to carry out assigned duties and responsibilities; and

(ii) Provide for routine security operations and planned and predetermined response to emergencies and safeguards contingencies.

(2) Establish a predetermined plan to respond to safeguards contingency events.

(3) Provide equipment for the security organization and facility design features to:

(i) Provide for rapid assessment of safeguards contingencies;

(ii) Provide for response by assigned security organization personnel which is sufficiently rapid and effective to achieve the predetermined objective of the response; and

(iii) Provide protection for the assessment and response personnel so that they can complete their assigned duties.

(4) Provide communications networks to:

(i) Transmit rapid and accurate security information among onsite forces for routine security operation, assessment of a contingency, and response to a contingency; and

(ii) Transmit rapid and accurate detection and assessment information to offsite assistance forces.

(5) Assure that a single adversary action cannot destroy the capability of the security organization to notify offsite response forces of the need for assistance.

[44 FR 68193, Nov. 28, 1979]

§ 73.46 Fixed site physical protection systems, subsystems, components, and procedures.

[Top of File]

(a) A licensee physical protection system established pursuant to the general performance objective and requirements of § 73.20(a) and the performance capability requirements of § 73.45 shall include, but are not necessarily limited to, the measures specified in paragraphs (b) through (h) of this section. The Commission may require, depending on individual facility and site conditions, alternate or additional measures deemed necessary to meet the general performance objective and requirements of § 73.20. The Commission also may authorize protection measures other than those required by this section if, in its opinion, the overall level of performance meets the general performance objective and requirements of § 73.20 and the performance capability requirements of § 73.45.

(b) *Security organization*. (1) The licensee shall establish a security organization, including guards. If a contract guard force is utilized for site security, the licensee's written agreement with the contractor will clearly show that (i) the licensee is responsible to the Commission for maintaining safeguards in accordance with Commission regulations and the licensee's security plan, (ii) the NRC may inspect, copy, and take away copies of all reports and documents required to be kept by Commission regulations, orders, or applicable license conditions whether such reports and documents are kept by the licensee or the contractor, (iii) the requirement, in § 73.46(b)(4) of this section that the licensee demonstrate the ability of physical security personnel to perform their assigned duties and responsibilities, include demonstration of the ability of the contractor's physical security personnel to perform their assigned duties and responsibilities in carrying out the provisions of the Security Plan and these regulations, and (iv) the contractor will not assign any personnel to the site who have not first been made aware of these responsibilities.

(2) The licensee shall have onsite at all times at least one full time member of the security organization with authority to direct the physical protection activities of the security organization.

(3) The licensee shall have a management system to provide for the development, revision, implementation, and enforcement of security procedures. The system shall include:

(i) Written security procedures which document the structure of the security organization and which detail the duties of the Tactical Response Team, guards, watchmen, and other individuals responsible for security. The licensee shall retain a copy of the current

procedures as a record until the Commission terminates the license for which these procedures were developed and, if any portion of these procedures is superseded, retain the superseded material for three years after each change; and

(ii) Provision for written approval of such procedures and any revisions thereto by the individual with overall responsibility for the security function.

(4) The licensee may not permit an individual to act as a Tactical Response Team member, armed response person, guard, or other member of the security organization unless the individual has been trained, equipped, and qualified to perform each assigned security duty in accordance with Appendix B of this part, "General Criteria for Security Personnel." In addition, Tactical Response Team members, armed response personnel, and guards shall be trained, equipped, and qualified for use of their assigned weapons in accordance with paragraphs (b)(6) and (b)(7) of this section. Tactical Response Team members, armed response personnel, and guards shall also be trained and qualified in accordance with either paragraphs (b)(10) and (b)(11) or paragraph (b)(12) of this section. Upon the request of an authorized representative of the Commission, the licensee shall demonstrate the ability of the physical security personnel, whether licensee or contractor employees, to carry out their assigned duties and responsibilities. Each Tactical Response Team member, armed response person, and guard, whether a licensee or contractor employee, shall requalify in accordance with Appendix B of this part. Tactical Response Team members, armed response personnel, and guards shall also requalify in accordance with paragraph (b)(7) of this section at least once every 12 months. The licensee shall document the results of the qualification and requalification. The licensee shall retain the documentation of each qualification and requalification as a record for 3 years after each qualification and requalification.

(5) Within any given period of time, a member of the security organization may not be assigned to, or have direct operational control over, more than one of the redundant elements of a physical protection subsystem if such assignment or control could result in the loss of effectiveness of the subsystem.

(6) Each guard shall be armed with a handgun, as described in appendix B of this part. Each Tactical Response Team member shall be armed with a 9mm semiautomatic pistol. All but one member of the Tactical Response Team shall be armed additionally with either a shotgun or semiautomatic rifle, as described in appendix B of this part. The remaining member of the Tactical Response Team shall carry, as an individually assigned weapon, a rifle of no less caliber than .30 inches or 7.62mm.

(7) In addition to the weapons qualification and requalification criteria of appendix B of this part, Tactical Response Team members, armed response personnel, and guards shall qualify and requalify, at least every 12 months, for day and night firing with assigned weapons in accordance with Appendix H of this part. Tactical Response Team members, armed response personnel, and guards shall be permitted to practice fire prior to qualification and requalification but shall be given only one opportunity to fire for record on the same calendar day. If a Tactical Response Team member, armed response person, or guard fails to qualify or requalify, the licensee shall remove the individual from security duties which require the use of firearms and retrain the individual prior to any subsequent attempt to qualify or requalify. If an individual fails to qualify or requalify on two successive attempts, he or she shall be required to receive additional training and successfully fire two consecutive qualifying scores prior to being reassigned to armed security duties.

(i) In addition, Tactical Response Team members, armed response personnel, and guards shall be prepared to demonstrate day and night firing qualification with their assigned weapons at any time upon request by an authorized representative of the NRC.

(ii) The licensee or the licensee's agent shall document the results of weapons qualification and requalification for day and night firing. The licensee shall retain the documentation of each qualification and requalification as a record for 3 years after each qualification and requalification.

(8) In addition to the training requirements contained in appendix B of this part, Tactical Response Team members shall successfully complete training in response tactics. The licensee shall document the completion of training. The licensee shall retain the documentation of training as a record for three years after training is completed.

(9) The licensee shall conduct Tactical Response Team and guard exercises to demonstrate the overall security system effectiveness and the ability of the security force to perform response and contingency plan responsibilities and to demonstrate individual skills in assigned team duties. During the first 12-month period following the date specified in paragraph (i)(2)(ii) of this section, an exercise must be carried out at least every three months for each shift, half of which are to be force-on-force. Subsequently, during each 12-month period commencing on the anniversary of the date specified in paragraph (i)(2)(ii) of this section, an exercise must be carried out at least every four months for each shift, one third of which are to be force-on-force. The licensee shall use these exercises to demonstrate its capability to respond to attempts to steal strategic special nuclear material. During each of the 12-month periods, the NRC shall observe one of the force-on-force exercises which demonstrates overall security system performance. The licensee shall notify the NRC of the scheduled exercise 60 days prior to that exercise. The licensee shall document the results of all exercises. The licensee shall retain the documentation of each exercise as a record for three years after each exercise is completed.

(10) In addition to the medical examinations and physical fitness requirements of paragraph I.C of Appendix B of this part, each Tactical Response Team member, armed response person, and guard, except as provided in paragraph (b)(10)(v) of this section, shall participate in a physical fitness training program on a continuing basis.

(i) The elements of the physical fitness training program must include, but not necessarily be limited to, the following:

(A) Training sessions of sufficient frequency, duration, and intensity to be of aerobic benefit, e.g., normally a frequency of three times per week, maintaining an intensity of approximately 75 percent of maximum heart rate for 20 minutes;

(B) Activities that use large muscle groups, that can be maintained continuously, and that are rhythmical and aerobic in nature, e.g., running, bicycling, rowing, swimming, or cross-country skiing; and

(C) Musculoskeletal training exercises that develop strength, flexibility, and endurance in the major muscle groups, e.g., legs, arms, and

shoulders.

(ii) The licensee shall assess Tactical Response Team members, armed response personnel, and guards for general fitness once every 4 months to determine the effectiveness of the continuing physical fitness training program. Assessments must include a recent health history, measures of cardiovascular fitness, percent of body fat, flexibility, muscular strength, and endurance. Individual exercise programs must be modified to be consistent with the needs of each participating Tactical Response Team member, armed response person, and guard and consistent with the environments in which they must be prepared to perform their duties. Individuals who exceed 4 months without being assessed for general fitness due to excused time off from work must be assessed within 15 calendar days of returning to duty as a Tactical Response Team member, armed response person, or guard.

(iii) Within 30 days prior to participation in the physical fitness training program, the licensee shall give Tactical Response Team members, armed response personnel, and guards a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical fitness training program.

(iv) Licensees may temporarily waive an individual's participation in the physical fitness training program on the advice of the licensee's examining physician, during which time the individual may not be assigned duties as a Tactical Response Team member.

(v) Guards whose duties are to staff the central or secondary alarm station and those who control exit or entry portals are exempt from the physical fitness training program specified in paragraph (b)(10) of this section, provided that they are not assigned temporary response guard duties.

(11) In addition to the physical fitness demonstration contained in paragraph I.C of Appendix B of this part, Tactical Response Team members, armed response personnel, and guards shall meet or exceed the requirements in paragraphs (b)(11)(i) through (b)(11)(v) of this section, except as provided in paragraph (b)(11)(vi) of this section, initially and at least once every 12 months thereafter.

(i) For Tactical Response Team members the criteria are a 1-mile run in 8 minutes and 30 seconds or less and a 40-yard dash starting from a prone position in 8 seconds or less. For armed response personnel and guards that are not members of the Tactical Response Team the criteria are a one-half mile run in 4 minutes and 40 seconds or less and a 40-yard dash starting from a prone position in 8.5 seconds or less. The test may be taken in ordinary athletic attire under the supervision of licensee designated personnel. The licensee shall retain a record of each individual's performance for 3 years.

(ii) Incumbent Tactical Response Team members, armed response personnel, and guards shall meet or exceed the qualification criteria within 12 months of NRC approval of the licensee's revised Fixed Site Physical Protection Plan. New employees hired after the approval date shall meet or exceed the qualification criteria prior to assignment as a Tactical Response Team member, armed response person, or guard.

(iii) Tactical Response Team members, armed response personnel, and guards shall be given a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical fitness performance testing. The medical examination must be given within 30 days prior to the first administration of the physical fitness performance test, and on an annual basis thereafter.

(iv) The licensee shall place Tactical Response Team members, armed response persons, and guards, who do not meet or exceed the qualification criteria, in a monitored remedial physical fitness training program and relieve them of security duties until they satisfactorily meet or exceed the qualification criteria.

(v) Licensees may temporarily waive the annual performance testing for an individual on the advice of the licensee's examining physician, during which time the individual may not be assigned duties as a Tactical Response Team member.

(vi) Guards whose duties are to staff the central or secondary alarm station and those who control exit or entry portals are exempt from the annual performance testing specified in paragraph (b)(11) of this section, provided that they are not assigned temporary response guard duties.

(12) The licensee may elect to comply with the requirements of this paragraph instead of the requirements of paragraphs (b)(10) and (b)(11) of this section. In addition to the physical fitness qualifications of paragraph I.C of Appendix B of this part, each licensee subject to the requirements of this section shall develop and submit to the NRC for approval site specific, content-based, physical fitness performance tests which will--when administered to each Tactical Response Team member, armed response person, or guard--duplicate the response duties these individuals may need to perform during a strenuous tactical engagement.

(i) The test must be administered to each Tactical Response Team member, armed response person, and guard once every 3 months. The test must specifically address the physical capabilities needed by armed response personnel during a strenuous tactical engagement at the licensed facility. Individuals who exceed 3 months without having been administered the test due to excused time off from work must be tested within 15 calendar days of returning to duty as a Tactical Response Team member, armed response person, or guard.

(ii) Within 30 days before the first administration of the physical fitness performance test, and on an annual basis thereafter, Tactical Response Team members, armed response personnel, and guards shall be given a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications, as disclosed by the medical examination, to participation in the physical fitness performance test.

(iii) Guards whose duties are to staff the central or secondary alarm station and those who control exit or entry portals are exempt from the performance test specified in paragraph (b)(12) of this section, provided that they are not assigned temporary response guard duties.

(c) Physical barrier subsystems. (1) vital equipment must be located only within a vital area, and strategic special nuclear material must be stored or processed only in a material access area. Both vital areas and material access areas must be located within a protected area so that access to vital equipment and to strategic special nuclear material requires passage through at least three physical barriers. The perimeter of the protected area must be provided with two separated physical barriers with an intrusion detection system placed between the two. The inner barrier must be positioned and constructed to enhance assessment of penetration attempts and to delay attempts at unauthorized exit from the protected area. The perimeter of the protected area must also incorporate features and structures that prevent forcible vehicle entry. More than one vital area or material access area may be located within a single protected area.

(2) The physical barriers at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier for a vital area or material access area within the protected area.

(3) Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and shall be large enough to permit observation of the activities of people on either side of that barrier in the event of its penetration. If parking facilities are provided for employees or visitors, they shall be located outside the isolation zone and exterior to the protected area.

(4) Isolation zones and all exterior areas within the protected area shall be provided with illumination sufficient for the monitoring and observation requirements of paragraphs (c)(3), (e)(8), (h)(4) and (h)(6) of this section, but not less than 0.2 footcandle measured horizontally at ground level.

(5) Strategic special nuclear material, other than alloys, fuel elements or fuel assemblies, shall:

(i) Be stored in a vault when not undergoing processing if the material can be used directly in the manufacture of a nuclear explosive device. Vaults used to protect such material shall be capable of preventing entry to stored SSNM by a single action in a forced entry attempt, except as such single action would both destroy the barrier and render contained SSNM incapable of being removed, and shall provide sufficient delay to prevent removal of stored SSNM prior to arrival of response personnel capable of neutralizing the design basis threat stated in § 73.1.

(ii) Be stored in tamper-indicating containers;

(iii) Be processed only in material access areas constructed with barriers that provide significant delay to penetration; and

(iv) Be kept in locked compartments or locked process equipment while undergoing processing except when personally attended.

(6) Enriched uranium scrap (enriched to 20% or greater) in the form of small pieces, cuttings, chips, solutions or in other forms which result from a manufacturing process, contained in 30 gallon or larger containers with a uranium-235 content of less than 0.25 grams per liter, may be stored within a locked and separately fenced area within a larger protected area provided that the storage area fence is no closer than 25 feet to the perimeter of the protected area. The storage area when unoccupied shall be protected by a guard or watchman who shall patrol at intervals not exceeding 4 hours, or by intrusion alarms.

(d) Access control subsystems and procedures. (1) A numbered picture badge identification subsystem shall be used for all individuals who are authorized access to protected areas without escort. An individual not employed by the licensee but who requires frequent and extended access to protected, material access, or vital areas may be authorized access to such areas without escort provided that he receives a picture badge upon entrance into the protected area and returns the badge upon exit from the protected area, and that the badge indicates, (i) Non-employee--no escort required; (ii) areas to which access is authorized and (iii) the period for which access has been authorized. Badges shall be displayed by all individuals while inside the protected areas.

(2) Unescorted access to vital areas, material access areas and controlled access areas shall be limited to individuals who are authorized access to the material and equipment in such areas, and who require such access to perform their duties. Access to material access areas shall include at least two individuals. Authorization for such individuals shall be indicated by the issuance of specially coded numbered badges indicating vital areas, material access areas, and controlled access areas to which access is authorized. No activities other than those which require access to strategic special nuclear material or to equipment used in the processing, use, or storage of strategic special nuclear material, or necessary maintenance, shall be permitted within a material access area.

(3) The licensee shall establish and follow written procedures that will permit access control personnel to identify those vehicles that are authorized and those materials that are not authorized entry to protected, material access, and vital areas. The licensee shall retain a copy of the current procedures as a record until the Commission terminates each license for which the procedures were developed and, if any portion of the procedures is superseded, retain the superseded material for three years after each change.

(4)(i) The licensee shall control all points of personnel and vehicle access into a protected area. Identification and search of all individuals for firearms, explosives, and incendiary devices must be made and authorization must be checked at these points except for Federal, State, and local law enforcement personnel on official duty and United States Department of Energy couriers engaged in the transport of special nuclear material. The search function for detection of firearms, explosives, and incendiary devices must be accomplished through the use of detection equipment capable of detecting both firearms and explosives. The individual responsible for the last access control function (controlling admission to the protected area) shall be isolated within a structure with bullet resisting walls, doors, ceiling, floor, and windows.

(ii) When the licensee has cause to suspect that an individual is attempting to introduce firearms, explosives, or incendiary devices into a protected area, the licensee shall conduct a physical pat-down search of that individual. Whenever firearms or explosives detection equipment at a portal is out of service or not operating satisfactorily, the licensee shall conduct a physical pat-down search of all persons who would otherwise have been subject to search using the equipment.

(5) At the point of personnel and vehicle access into a protected area, all hand-carried packages except those carried by individuals exempted from personal search under the provisions of paragraph (d)(4)(i) of this part must be searched for firearms, explosives, and

incendiary devices.

(6) All packages and material for delivery into a protected area must be checked for proper identification and authorization and searched for firearms, explosives, and incendiary devices prior to admittance into the protected area, except those Commission-approved delivery and inspection activities specifically designated by the licensee to be carried out within material access, vital, or protected areas for reasons of safety, security, or operational necessity.

(7) All vehicles, except United States Department of Energy vehicles engaged in transporting special nuclear material and emergency vehicles under emergency conditions, shall be searched for firearms, explosives, and incendiary devices prior to entry into the protected area. Vehicle areas to be searched shall include the cab, engine compartment, undercarriage, and cargo area.

(8) All vehicles, except designated licensee vehicles, requiring entry into the protected area shall be escorted by a member of the security organization while within the protected area, and to the extent practicable shall be off-loaded in an area that is not adjacent to a vital area. Designated licensee vehicles shall be limited in their use to onsite plant functions and shall remain in the protected area except for operational, maintenance, security and emergency purposes. The licensee shall exercise positive control over all such designated vehicles to assure that they are used only by authorized persons and for authorized purposes.

(9) The licensee shall control all points of personnel and vehicle access to material access areas, vital areas, and controlled access areas. At least two armed guards trained in accordance with the provisions contained in paragraph (b)(7) of this section and appendix B of this part shall be posted at each material access area control point whenever in use. Identification and authorization of personnel and vehicles must be verified at the material access area control point. Prior to entry into a material access area, packages must be searched for firearms, explosives, and incendiary devices. All vehicles, materials and packages, including trash, wastes, tools, and equipment exiting from a material access area must be searched for concealed strategic special nuclear material by a team of at least two individuals who are not authorized access to that material access area. Each individual exiting a material access area shall undergo at least two separate searches for concealed strategic special nuclear material. For individuals exiting an area that contains only alloyed or encapsulated strategic special nuclear material, the second search may be conducted in a random manner.

(10) Before exiting from a material access area, containers of contaminated wastes must be drum scanned and tamper sealed by at least two individuals, working and recording their findings as a team, who do not have access to material processing and storage areas. The licensee shall retain the records of these findings for three years after the record is made.

(11) Strategic special nuclear material being prepared for shipment offsite, including product, samples and scrap, shall be packed and placed in sealed containers in the presence of at least two individuals working as a team who shall verify and certify the content of each shipping container through the witnessing of gross weight measurements and nondestructive assay, and through the inspection of tamper seal integrity and associated seal records.

(12) Areas used for preparing strategic special nuclear material for shipment and areas used for packaging and screening trash and wastes shall be controlled access areas and shall be separated from processing and storage areas.

(13) Individuals not permitted by the licensee to enter protected areas without escort must be escorted by a watchman or other individual designated by the licensee while in a protected area and must be badged to indicate that an escort is required. In addition, the individual shall be required to register his or her name, date, time, purpose of visit and employment affiliation, citizenship, and name of the individual to be visited in a log. The licensee shall retain each log as a record for three years after the last entry is made in the log.

(14) All keys, locks, combinations and related equipment used to control access to protected, material access, vital, and controlled access areas shall be controlled to reduce the probability of compromise. Whenever there is evidence that a key, lock, combination, or related equipment may have been compromised it shall be changed. Upon termination of employment of any employee, keys, locks, combinations, and related equipment to which that employee had access, shall be changed.

(15) The licensee may not announce or otherwise communicate to its employees or site contractors the arrival or presence of an NRC safeguards inspector unless specifically requested to do so by the NRC safeguards inspector.

(e) *Detection, surveillance and alarm subsystems and procedures*. (1) The licensee shall provide an intrusion alarm subsystem with a capability to detect penetration through the isolation zone and to permit response action.

(2) All emergency exits in each protected, material access, and vital area shall be locked to prevent entry from the outside and alarmed to provide local visible and audible alarm annunciation.

(3) All unoccupied vital areas and material access areas shall be locked and protected by an intrusion alarm subsystem which will alarm upon the entry of a person anywhere into the area, upon exit from the area, and upon movement of an individual within the area, except that for process material access areas only the location of the strategic special nuclear material within the area is required to be so alarmed. Vaults and process areas that contain strategic special nuclear material that has not been alloyed or encapsulated shall also be under the surveillance of closed circuit television that is monitored in both alarm stations. Additionally, means shall be employed which require that an individual other than an alarm station operator be present at or have knowledge of access to such unoccupied vaults or process areas.

(4) All manned access control points in the protected area barrier, all security patrols and guard stations within the protected area, and both alarm stations shall be provided with duress alarms.

(5) All alarms required pursuant to this section shall annunciate in a continuously manned central alarm station located within the protected area and in at least one other independent continuously manned onsite station not necessarily within the protected area, so that a single act cannot remove the capability of calling for assistance or responding to an alarm. The alarm stations shall be controlled access areas and

their walls, doors, ceiling, floor, and windows shall be bullet-resisting. The central alarm station shall be located within a building so that the interior of the central alarm station is not visible from the perimeter of the protected area. This station may not contain any operational activities that would interfere with the execution of the alarm response function.

(6) All alarms required by this section shall remain operable from independent power sources in the event of the loss of normal power. Switchover to standby power shall be automatic and shall not cause false alarms on annunciator modules.

(7) All alarm devices including transmission lines to annunciators shall be tamper indicating and self-checking e.g., an automatic indication shall be provided when a failure of the alarm system or a component occurs, when there is an attempt to compromise the system, or when the system is on standby power. The annunciation of an alarm at the alarm stations shall indicate the type of alarm (e.g., intrusion alarm, emergency exit alarm, etc.) and location. The status of all alarms and alarm zones shall be indicated in the alarm stations.

(8) All exterior areas within the protected area shall be monitored or periodically checked to detect the presence of unauthorized persons, vehicles, materials, or unauthorized activities.

(9) Methods to observe individuals within material access areas to assure that strategic special nuclear material is not moved to unauthorized locations or in an unauthorized manner shall be provided and used on a continuing basis.

(f) *Communication subsystems*. (1) Each guard, watchman, or armed response individual on duty shall be capable of maintaining continuous communication with an individual in each continuously manned alarm station required by paragraph (e)(5) of this section, who shall be capable of calling for assistance from other guards, watchmen, and armed response personnel and from law enforcement authorities.

(2) Each alarm station required by paragraph (e)(5) of this section shall have both conventional telephone service and radio or microwave transmitted two-way voice communication, either directly or through an intermediary, for the capability of communication with the law enforcement authorities.

(3) Non-portable communications equipment controlled by the licensee and required by this section shall remain operable from independent power sources in the event of the loss of normal power.

(g) *Test and maintenance programs*. The licensee shall have a test and maintenance program for intrusion alarms, emergency exit alarms, communications equipment, physical barriers, and other physical protection related devices and equipment used pursuant to this section that shall provide for the following;

(1) Tests and inspections during the installation and construction of physical protection related subsystems and components to assure that they comply with their respective design criteria and performance specifications.

(2) Preoperational tests and inspections of physical protection related subsystems and components to demonstrate their effectiveness and availability with respect to their respective design criteria and performance specifications.

(3) Operational tests and inspections of physical protection related subsystems and components to assure their maintenance in an operable and effective condition, including:

(i) Testing of each intrusion alarm at the beginning and end of any period that it is used. If the period of continuous use is longer than seven days, the intrusion alarm shall also be tested at least once every seven days.

(ii) Testing of communications equipment required for communications onsite, including duress alarms, for performance not less frequently than once at the beginning of each security personnel work shift. Communications equipment required for communications offsite shall be tested for performance not less than once a day.

(4) Preventive maintenance programs shall be established for physical protection related subsystems and components to assure their continued maintenance in an operable and effective condition.

(5) All physical protection related subsystems and components shall be maintained in operable condition. The licensee shall develop and employ corrective action procedures and compensatory measures to assure that the effectiveness of the physical protection system is not reduced by failure or other contingencies affecting the operation of the security related equipment or structures. Repairs and maintenance shall be performed by at least two individuals working as a team who have been trained in the operation and performance of the equipment. The security organization shall be notified before and after service is performed and shall conduct performance verification tests after the service has been completed.

(6) The security program must be reviewed at least every 12 months by individuals independent of both security program management and personnel who have direct responsibility for implementation of the security program. The security program review must include an audit of security procedures and practices, an evaluation of the effectiveness of the physical protection system, an audit of the physical protection system testing and maintenance program, and an audit of commitments established for response by local law enforcement authorities. The results and recommendations of the security program review, and any actions taken, must be documented in a report to the licensee's plant manager and to corporate management at least one level higher than that having responsibility for the day-to-day plant operations. These reports must be maintained in an auditable form, available for inspection for a period of 3 years.

(h) *Contingency and response plans and procedures*. (1) The licensee shall establish, maintain, and follow an NRC-approved safeguards contingency plan for responding to threats, thefts, and radiological sabotage related to the strategic special nuclear material and nuclear facilities subject to the provisions of this section. Safeguards contingency plans must be in accordance with the criteria in appendix C to this

part, "Licensee Safeguards Contingency Plans." Contingency plans must include, but not limited to, the response requirements listed in paragraphs (h)(2) through (h)(5) of this section. The licensee shall retain the current safeguards contingency plan as a record until the Commission terminates the license and, if any portion of the plan is superseded, retain that superseded portion for 3 years after the effective date of change.

(2) The licensee shall establish and document response arrangements that have been made with local law enforcement authorities. The licensee shall retain documentation of the current arrangements as a record until the Commission terminates each license requiring the arrangements and, if any arrangement is superseded, retain the superseded material for three years after each change.

(3) A Tactical Response Team consisting of a minimum of five (5) members must be available at the facility to fulfill assessment and response requirements. In addition, a force of guards or armed response personnel also must be available to provide assistance as necessary. The size and availability of the additional force must be determined on the basis of site-specific considerations that could affect the ability of the total onsite response force to engage and impede the adversary force until offsite assistance arrives. The rationale for the total number and availabiliy of onsite armed response personnel must be included in the physical protection plans submitted to the Commission for approval.

(4) Upon detection of abnormal presence or activity of persons or vehicles within an isolation zone, a protected area, a material access area, or a vital area, or upon evidence or indication of intrusion into a protected area, a material access area, or a vital area, the licensee security organization shall:

(i) Determine whether or not a threat exists,

(ii) Assess the extent of the threat, if any,

(iii) Take immediate concurrent measures to neutralize the threat by:

(A) Requiring responding guards or other armed response personnel to interpose themselves between vital areas and material access areas and any adversary attempting entry for purposes of radiological sabotage or theft of strategic special nuclear material and to intercept any person exiting with special nuclear material, and

(B) Informing local law enforcement agencies of the threat and requesting assistance.

(5) The licensee shall instruct every guard and all armed response personnel to prevent or impede acts of radiological sabotage or theft of strategic special nuclear material by using force sufficient to counter the force directed at him including the use of deadly force when the guard or other armed response person has a reasonable belief that it is necessary in self-defense or in the defense of others.

(6) To facilitate initial response to detection of penetration of the protected area and assessment of the existence of a threat, a capability of observing the isolation zones and the physical barrier at the perimeter of the protected area shall be provided, preferably by means of closed circuit television or by other suitable means which limit exposure of responding personnel to possible attack.

(7) Alarms occurring within unoccupied vaults and unoccupied material access areas containing unalloyed or unencapsulated strategic special nuclear material shall be assessed by at least two security personnel using closed circuit television (CCTV) or other remote means.

(8) Alarms occurring within unoccupied material access areas that contain only alloyed or encapsulated strategic special nuclear material shall be assessed as in paragraph (h)(7) of this section or by at least two security personnel who shall undergo a search before exiting the material access area.

(i) *Implementation schedule for revisions to physical protection plans*. (1) By November 28, 1994, each licensee shall submit a revised Fixed Site Physical Protection Plan to the NRC for approval. The revised plan must describe how the licensee will comply with the requirements of paragraphs (b)(10) and (b)(11) of this section or the requirements of (b)(12) of this section. Revised plans must be mailed to the Director, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555.

(2) Each licensee shall implement the approved plan pursuant to paragraphs (b)(10) and (b)(11) of this section or (b)(12) of this section within 1 year after NRC approval of the revised Fixed Site Physical Protection Plan.

[44 FR 68194, Nov. 28, 1979, as amended at 53 FR 19258, May 27, 1988; 53 FR 23383, June 22, 1988; 53 FR 45452, Nov. 10, 1988; 57 FR 33430, July 29, 1992; 58 FR 29522, May 21, 1993; 58 FR 45784, Aug. 31, 1993; 59 FR 38348, July 28, 1994]

§ 73.50 Requirements for physical protection of licensed activities.

[Top of File]

Each licensee who is not subject to § 73.51, but who possesses, uses, or stores formula quantities of strategic special nuclear material that are not readily separable from other radioactive material and which have total external radiation dose rates in excess of 100 rems per hour at a distance of 3 feet from any accessible surfaces without intervening shielding other than at nuclear reactor facility licensed under parts 50 or 52 of this chapter, shall comply with the following:

(a) *Physical security organization*. (1) The licensee shall establish a security organization, including guards, to protect his facility against radiological sabotage and the special nuclear material in his possession against theft.

(2) At least one supervisor of the security organization shall be on site at all times.

(3) The licensee shall establish, maintain, and follow written security procedures that document the structure of the security organization and detail the duties of guards, watchmen, and other individuals responsible for security. The licensee shall retain a copy of the current procedures as a record until the Commission terminates each license for which the procedures were developed and, if any portion of the procedures is superseded, retain the superseded material for three years after each change.

(4) The licensee may not permit an individual to act as a guard, watchman, armed response person, or other member of the security organization unless the individual has been trained, equipped, and qualified to perform each assigned security job duty in accordance with appendix B, "General Criteria for Security Personnel," to this part. Upon the request of an authorized representative of the Commission, the licensee shall demonstrate the ability of the physical security personnel to carry out their assigned duties and responsibilities. Each guard, watchman, armed response person, and other member of the security organization shall requalify in accordance with appendix B to this part at least every 12 months. This requalification must be documented. The licensee shall retain the documentation of each requalification as a record for three years after the requalification.

(b) *Physical barriers*. (1) The licensee shall locate vital equipment only within a vital area, which, in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers. More than one vital area may be within a single protected area.

(2) The licensee shall locate material access areas only within protected areas such that access to the material access area requires passage through at least two physical barriers. More than one material access area may be within a single protected area.

(3) The physical barrier at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier within the protected area, and the intervening space monitored or periodically checked to detect the presence of persons or vehicles so that the facility security organization can respond to suspicious activity or to the breaching of any physical barrier.

(4) An isolation zone shall be maintained around the physical barrier at the perimeter of the protected area and any part of the building used as part of that physical barrier. The isolation zone shall be monitored to detect the presence of individuals or vehicles within the zone so as to allow response by armed members of the license security organization to be initiated at the time of penetration of the protected area. Parking facilities, both for employees and visitors, shall be located outside the isolation zone.

(5) Isolation zones and clear areas between barriers shall be provided with illumination sufficient for the monitoring required by paragraphs (b)(3) and (4) of this section, but not less than 0.2 foot candles.

(c) *Access requirements*. The licensee shall control all points of personnel and vehicle access into a protected area, including shipping or receiving areas, and into each vital area. Identification of personnel and vehicles shall be made and authorization shall be checked at all points.

(1) At the point of personnel and vehicle access into a protected area, all individuals, except employees who possess a NRC or Unites States of Department of Energy access authorization, and all hand carried packages shall be searched for devices such as firearms, explosives, and incendiary devices, or other items which could be used for radiological sabotage. The search shall be conducted either by a physical search or by the use of equipment capable of detecting such devices. Employees who possess an NRC or Department of Energy access authorization shall be searched at random intervals. Subsequent to search, drivers of delivery and service vehicles shall be escorted at all times while within the protection area.

(2) All packages being delivered into the protected area shall be checked for proper identification and authorization. Packages other than hand-carried packages shall be searched at random intervals.

(3) A picture badge identification system shall be used for all individuals who are authorized access to protected areas without escort.

(4) Access to vital areas and material access areas shall be limited to individuals who require such access to perform their duties. Authorization for such individuals shall be provided by the issuance of specially coded numbered badges indicating vital areas and material access areas to which access is authorized. Unoccupied vital areas and material access areas shall be protected by an active intrusion alarm system.

(5) Individuals not employed by the licensee must be escorted by a watchman, or other individual designated by the licensee, while in a protected area and must be badged to indicate that an escort is required. In addition, the licensee shall be required that each individual not employed by the licensee register his or her name, date, time, purpose of visit, employment affiliation, citizenship, name and badge number of escort, and name of the individual to be visited. The licensee shall retain the register of information for three years after the last entry is made in the register. Except for a driver of a delivery or service vehicle, an individual not employed by the licensee who requires frequent and extended access to a protected area or a vital area, need not be escorted if the individual is provided with a picture badge, which the individual must receive upon entrance into the protected area and return each time he or she leaves the protected area, that indicates--

(1) Nonemployee-no escort required,

(ii) Areas to which access is authorized, and

(iii) The period for which access has been authorized.

(6) No vehicles used primarily for the conveyance of individuals shall be permitted within a protected area except under emergency conditions.

(7) Keys, locks, combinations, and related equipment shall be controlled to minimize the possibility of compromise and promptly changed whenever there us evidence that they have been compromised. Upon termination of employment of any employee, keys, locks, combinations, and related equipment to which that employee had access shall be changed.

(d) *Detection aids*. (1) All alarms required pursuant to this part shall annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station, not necessarily within the protected area, such that a single act cannot remove the capability for calling for assistance or otherwise responding to an alarm. All alarms shall be self-checking and tamper indicating. The annunciation of an alarm at the onsite central station shall indicate the type of alarm (e.g., intrusion alarm, emergency exit alarm, etc.) and location. All intrusion alarms, emergency exit alarms, alarm systems, and line supervisory systems shall at minimum meet the performance and reliability indicated by GSA Interim Federal Specification W-A-00450 B (GSA-FSS). The GSA Interim Federal Specification has been approved for incorporation by reference by the Director of the Federal Register. A copy of the material is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738.

(2) All emergency exits in each protected area and each vital area shall be alarmed.

(e) Communication requirements. (1) Each guard or watchman in duty shall be capable of maintaining continuous communication with an individual in a continuously manned central alarm station within the protected area, who shall be capable of calling for assistance from other guards and watchmen and from local law enforcement authorities.

(2) The alarm stations required by paragraph (d)(1) of this section shall have conventional telephone service for communication with the law enforcement authorities described in paragraph (e)(1) of this section.

(3) To provide the capability of continuo's communication, two-way radio voice communication shall be established in addition to conventional telephone service between local law enforcement authorities and the facility and shall terminate at the facility in a continuously manned central alarm station within the protected area.

(4) All communication equipment, including offsite equipment, shall remain operable from independent power sources in the event of loss of primary power.

(f) *Testing and maintenance*. Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows:

(1) All alarms, communications equipment, physical barriers, and other security related devices or equipment shall be maintained in operable and effective condition.

(2) Each intrusion alarm shall be functionally tested for operability and required performance at the beginning and end of each interval during which it is used for security, but not less frequently than every (7) days.

(3) Communications equipment shall be tested for operability and performace not less frequently than once at the beginning of each security personnel work shift.

(g) Response requirement. (1) The licensee shall establish, maintain, and follow an NRC-approved safeguards contingency plan for responding plan for responding to threats, thefts, and radiological sabotage related to the special nuclear material and nuclear facilities subject to the provisions of this section. Safeguards contingency plans must be in accordance with the criteria in appendix C to this part, "Licensee Safeguards Contingency Plans." The licensee shall retain the current safeguards contingency plan as a record until the Commission terminates the license and, if any portion of the plan is superseded, retain the superseded portion for 3 years after the effective date of the change.

(2) The licensee shall establish and document liaison with law enforcement authorities. The licensee shall retain the documentation of the current liaison as a record until the Commission terminates each license for which the liaison was developed and, if any portion of the liaison documentation is superseded, retain the superseded material for three years after each change.

(3) Upon detection of abnormal presence or activity of persons or vehicles within an isolation zone, a protected area, or a vital area; or upon evidence or indication of intrusion into a protected area, material access area, or vital area, the licensee security organization shall:

(i) Determine whether or not a threat exists,

(ii) Assess the extent of the threat, if any, and

(iii) Take immediate concurrent measures to neutralize the threat, by:

(A) Requiring responding guards to interpose themselves between material access areas and vital areas and adversary attempting entry for the purpose of theft of special nuclear material or radiological sabotage and to intercept any person exiting with special nuclear material, and,

(B) Informing local law enforcement agencies of the threat and requesting assistance.

(4) The licensee shall instruct every guard to prevent or impede attempted acts of theft or radiological sabotage by using force sufficient to counter the force directed at him including deadly force when that guard has a reasonable belied it is necessary in self-defense or defense of others.

(h) Each licensee shall establish, maintain, and follow an NRC-approved training and qualifications plan outlining the processes by which guards, watchmen, armed response persons, and other members of the security organization will be selected, trained, tested, and qualified to ensure that these individuals meet the requirements of paragraph (a)(4) of this section.

(Sec. 161i, Pub. L. 83-703, 68 Stat. 948, Pub. L. 93-377, 88 Stat. 475; secs. 201, 204(b)(1), Pub. L. 93-438, 88 Stat. 1242-1243, 1245, Pub. L. 94-79, 89 Stat. 413 (42 U.S.C. 2201, 5841, 5844))

[38 FR 35430, Dec. 28, 1973, as amended at 42 FR 64103, Dec. 22, 1977; 43 FR 11965, Mar. 23, 1978; 43 FR 37426, Aug. 23, 1978; 44 FR 68198, Nov. 28, 1979; 53 FR 19259, May 27, 1988; 57 FR 33430, July 29, 1992; 57 FR 61787, Dec. 29, 1992; 59 FR 50689, Oct. 5, 1994; 63 FR 26962, May 15, 1998; 72 FR 49561, Aug. 28, 2007]

§ 73.51 Requirements for the physical protection of stored spent nuclear fuel and high-level radioactive waste.

[Top of File]

(a) *Applicability.* Notwithstanding the provisions of §§ 73.20, 73.50, or 73.67, the physical protection requirements of this section apply to each licensee that stores spent nuclear fuel and high-level radioactive waste pursuant to paragraphs (a)(1)(i), (ii), and (2) of this section. This includes--

(1) Spent nuclear fuel and high-level radioactive waste stored under a specific license issued pursuant to part 72 of this chapter:

(i) At an independent spent fuel storage installation (ISFSI) or

(ii) At a monitored retrievable storage (MRS) installation; or

(2) Spent nuclear fuel and high-level radioactive waste at a geologic repository operations area (GROA) licensed pursuant to part 60 or 63 of this chapter;

(b) *General performance objectives* (1) Each licensee subject to this section shall establish and maintain a physical protection system with the objective of providing high assurance that activities involving spent nuclear fuel and high level radioactive waste do not constitute an unreasonable risk to public health and safety.

(2) To meet the general objective of paragraph (h)(i) of this section, each licensee subject to this section shall meet the following performance capabilities.

(i) Store spent nuclear fuel and high level radioactive waste only within a protected area;

(ii) Grant access to the protected area only to individuals who are authorized to enter the protected area;

(iii) Detect and assess unauthorized penetration of, or activities within the protected area;

(iv) Provide timely communication to a designated response force whenever necessary; and

(v) Manage the physical protection organization in a manner that maintains its effectiveness.

(3) The physical protection system must be designed to protect against loss of control of the facility that could be sufficient to cause a radiation exposure exceeding the dose as described in § 72.106 of this chapter.

(c) *Plan retention.* Each licensee subject to this section shall retain a copy of the effective physical protection plan f' as a record for 3 years or until termination of the license for which a procedures were developed.

(d) *Physical protection systems, components, and procedures*. A licensee shall comply with the following provisions as methods acceptable to NRC for meeting the performan capabilities of § 73.51(b)(2). The Commission may, on a specific basis and upon request or on its own initiative, authorize other alternative measures for the protection of spent fuel and high-level radioactive waste subtect to the requirements of this section if after evaluation of the specific alternative measures, it finds reasonable assurance of compliance with the performance capabilities of paragraph (b)(2) of this section.

(1) Spent nuclear fuel and high level radioactive waste must be stored only within a protected area so that access to this material requires passage through or penetration of two physical barriers, one barrier at the perimeter of the protected area and one barrier offering substantial penetration resistance. The physical barrier at the perimeter of the protected area must be as defined in § 73.2 Isolation zones, typically 20 feet wide each, on both sides of this barrier, must be provided to facilitate assessment The barrier offering substantial resistance to penetration may be provided by approved storage cask or building walls such as those of a reactor or fuel storage building.

(2) Illumination must be sufficient to permit adequate assessment of unauthorized penetrations of or activities within the protected area.

(3) The perimeter of the protected area must be subject to continual surveillance and be protected by active intrusion alarm system which is capable of detecting penetrations through the isolation zone and that is monitored in a continually staffed primary alarm station and in one additional continually staffed location The primary alarm station must be located within the protected area; have bullet-resisting walls, doors, ceiling and floor; and the interior of the statio must not be visible from outside the protected area. A timely means for assessment of alarms must also be provided. Regarding alarm monitoring the redundant location need only provide a summary indication that an alarm has been generated.

(4) The protected area must be monitored by daily random patrols.

(5) A security organization with written procedures must be established. The security organization must include sufficient personnel per shift to provide for monitoring of detection systems and the conduct of surveillance, assessment access control, and communications to assure adequate response. Members of the security organization must be trained, equipped, qualified, and requalified to perform assigned job duties in accordance with appendix B to part 73, sections I.A. (1) (a) and (b), B(I)(a), and the applicable portions of II.

(6) Documented liaison with a designated response force or local law enforcement agency (LLEA) must be established to permit timely response to unauthorized penetration or activities.

(7) A personnel identification system and a controlled lock system must he established and maintained to limit access to authorized individuals.

(8) Redundant communications capability must be provided between onsite security force members and designated response force or LLEA.

(9) All individuals, vehicles, and hand-carried packages entering the protected area must be checked for proper authorization and visually searched for explosives before entry.

(10) Written response procedures must he established and maintained for addressing unauthorized penetration of or activities within, the protected area including Category 5, "Procedures," of appendix C to part 73. The licensee shall retain a copy of response procedures as a record for 3 years until termination of the license for which the procedures were developed. Copies of superseded material must be retained for 3 years after each change or until termination of the license.

(11) All detection systems and supporting subsystems must be tamper indicating with line supervision. These systems, as well as surveillance/assessment and illumination systems, must be maintained in operable condition. Timely compensatory measures must be taken after discovery of inoperability, to assure that the effectiveness of the of the security system is not reduced.

(12) The physical protection program must be reviewed once every 24 months by individuals independent of both physical protection program management and personnel who have direct responsibility for implementation of the physical protection program. The physical protection program review must include an evaluation of the effectiveness of the physical protection system and a verification of the liaison established with the designated response force or LLEA.

(13) The following documentation must be retained as a record for 3 years after the record is made or until termination of the license. Duplicate records to those required under § 72.180 of part 72 and § 73.71 of this part need not be retained under the requirements of this section:

(i) A log of individuals granted access to the protected area;

(ii) Screening records of members of the security organization;

(iii) A log of all patrols;

(iv) A record of each alarm received, identifying the type of alarm, location, date and time when received, and disposition of the alarm; and

(v) The physical protection program review reports.

(e) A licensee that operates a GROA is exempt from the requirements of this section for that GROA after permanent closure of the GROA.

[63 FR 26962, May 15, 1998, as amended at 63 FR 49414, Sept. 16, 1998; 66 FR 55816, Nov. 2, 2001]

§ 73.55 Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage.

[Top of File]

By Dec. 2, 1986 each licensee, as appropriate, shall submit proposed amendments to its security plan which define how the amended requirements of paragraphs (a), (d)(7), (d)(9), and (e)(1) will be met. Each submittal must include a proposed implementation schedule for Commission approval. The amended safeguards requirements of these paragraphs must be implemented by the licensee within 180 days after Commission approval of the proposed security plan in accordance with the approved schedule.

(a) *General performance objective and requirements.* The licensee shall establish and maintain an onsite physical protection system and security organization which will have as its objective to provide high assurance that activities involving special nuclear material are not inimical to the common defense and security and do not constitute an unreasonable risk to the public health and safety. The physical protection system shall be designed to protect against the design basis threat of radiological sabotage as stated in § 73.1(a). To achieve this general performance objective, the onsite physical protection system and security organization must include, but not necessarily be limited to, the capabilities to meet the specific requirements contained in paragraphs (b) through (h) of this section. The Commission may authorize an applicant or licensee to provide measures for protection against radiological sabotage other than those required by this section if the applicant or licensee demonstrates that the measures have the same high assurance objective as specified in this paragraph and that the overall level of system performance provides protection against radiological sabotage equivalent to that which would be provided by paragraphs (b) through (h) of this section and meets the general performance requirements of this section. Specifically, in the special cases of licensed operating reactors with adjacent reactor power plants under construction, the licensee shall provide and maintain a level of physical protection of the operating reactor against radiological sabotage equivalent to the requirements of this section. In accordance with §§ 50.54(x) and 50.54(y) of part 50, the licensee may suspend any safeguards measures pursuant to § 73.55 in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specification that can provide adequate or equivalent protection is immediately apparent. This suspension must be approved as a minimum by a licensed senior operator prior to taking the action. The suspension of safeguards measures must be reported in accordance with the provisions of § 73.71. Reports made under § 50.72 need not be duplicated under § 73.71.

(b) *Physical Security Organization.* (1) The licensee shall establish a security organization, including guards, to protect his facility against radiological sabotage. If a contract guard force is utilized for site security, the licensee's written agreement with the contractor that must be retained by the licensee as a record for the duration of the contract will clearly show that:

(i) The licensee is responsible to the Commission for maintaining safeguards in accordance with Commission regulations and the licensee's security plan,

(ii) The NRC may inspect, copy, and take away copies of all reports and documents required to be kept by Commission regulations, orders, or applicable license conditions whether the reports and documents are kept by the licensee or the contractor,

(iii) The requirement in paragraph (b)(4) of this section that the licensee demonstrate the ability of physical security personnel to perform their assigned duties and responsibilities, includes demonstration of the ability of the contractor's physical security personnel to perform their assigned duties and responsibilities in carrying out the provisions of the Security Plan and these regulations, and

(iv) The contractor will not assign any personnel to the site who have not first been made aware of these responsibilities.

(2) At least one full time member of the security organization who has the authority to direct the physical protection activities of the security organization shall be onsite at all times.

(3) The licensee shall have a management system to provide for the development, revision, implementation, and enforcement of security procedures. The system shall include:

(i) Written security procedures that document the structure of the security organization and detail the duties of guards, watchmen, and other individuals responsible for security. The licensee shall maintain a copy of the current procedures as a record until the Commission terminates each license for which the procedures were developed and, if any portion of the procedure is superseded, retain the superseded material for three years after each change.

(ii) Provision for written approval of these procedures and any revisions to the procedures by the individual with overall responsibility for the security functions. The licensee shall retain each written approval as a record for three years from the date of the approval.

(4)(i) The licensee may not permit an individual to act as a guard, watchman armed response person, or other member of the security organization unless the individual has been trained, equipped, and qualified to perform each assigned security job duty in accordance with appendix B, "General Criteria for Security Personnel," to this part. Upon the request of an authorized representative of the Commission, the licensee shall demonstrate the ability of the physical security personnel to carry out their assigned duties and responsibilities. Each guard, watchman, armed response person, and other member of the security organization shall requalify in accordance with appendix B to this part at least every 12 months. This requalification must be documented. The licensee shall retain the documentation of each requalification as a record for three years after the requalification.

(ii) Each licensee shall establish, maintain, and follow an NRC-approved training and qualifications plan outlining the processes by which guards, watchmen, armed response persons, and other members of the security organization will be selected, trained, equipped, tested, and qualified to ensure that these individuals meet the requirements of this paragraph. The licensee shall maintain the current training and qualifications plan as a record until the Commission terminates the license for which the plan was developed and, if any portion of the plan is superseded, retain that superseded portion for 3 years after the effective date of the change. The training and qualifications plan must include a schedule to show how all security personnel will be qualified 2 years after the submitted plan is approved. The training and qualifications plan must be followed by the licensee 60 days after the submitted plan is approved by the NRC.

(c) *Physical barriers.* (1) The licensee shall locate vital equipment only within a vital area, which in turn, shall be located within a protected area such that access to vital equipment requires passage through at least two physical barriers of sufficient strength to meet the performance requirements of paragraph (a) of this section. More than one vital area may be located within a single protected area.

(2) The physical barriers at the perimeter of the protected area shall be separated from any other barrier designated as a physical barrier for a vital area within the protected area.

(3) Isolation zones shall be maintained in outdoor areas adjacent to the physical barrier at the perimeter of the protected area and shall be of sufficient size to permit observation of the activities of people on either side of that barrier in the event of its penetration. If parking facilities are provided for employees or visitors, they shall be located outside the isolation zone and exterior to the protected area barrier.

(4) Detection of penetration or attempted penetration of the protected area or the isolation zone adjacent to the protected area barrier shall assure that adequate response by the security organization can be initiated. All exterior areas within the protected area shall be periodically checked to detect the presence of unauthorized persons, vehicles, or materials.

(5) Isolation zones and all exterior areas within the protected area shall be provided with illumination sufficient for the monitoring and observation requirements of paragraphs (c)(3), (c)(4), and (h)(4) of this section, but not less than 0.2 footcandle measured horizontally at ground level.

(6) The walls, doors, ceiling, floor, and any windows in the walls and in the doors of the reactor control room shall be bullet-resisting.

(7) Vehicle control measures, including vehicle barrier systems, must be established to protect against use of a land vehicle, as specified by the Commission, as a means of transportation to gain unauthorized proximity to vital areas.

(8) Each licensee shall compare the vehicle control measures established in accordance with 10 CFR 73.55 (c)(7) to the Commission's design goals (i.e., to protect equipment, systems, devices, or material, the failure of which could directly or indirectly endanger public health and safety by exposure to radiation) and criteria for protection against a land vehicle bomb. Each licensee shall either:

(i) Confirm to the Commission that the vehicle control measures meet the design goals and criteria specified; or

(ii) Propose alternative measures, in addition to the measures established in accordance with 10 CFR 73.55 (c)(7), describe the level of protection that these measures would provide against a land vehicle bomb, and compare the costs of the alternative measures with the costs of measures necessary to fully meet the design goals and criteria. The Commission will approve the proposed alternative measures if they provide substantial protection against a land vehicle bomb, and it is determined by an analysis, using the essential elements of 10 CFR 50.109, that the costs of fully meeting the design goals and criteria are not justified by the added protection that would be provided.

(9) Each licensee authorized to operate a nuclear power reactor shall:

(i) By February 28, 1995 submit to the Commission a summary description of the proposed vehicle control measures as required by 10 CFR 73.55 (c)(7) and the results of the vehicle bomb comparison as required by 10 CFR 73.55 (c)(8). For licensees who choose to propose alternative measures as provided for in 10 CFR 73.55 (c)(8), the proposal must be submitted in accordance with 10 CFR 50.90 and include the analysis and justification for the proposed alternatives.

(ii) By February 29, 1996 fully implement the required vehicle control measures, including site-specific alternative measures as approved by the Commission.

(iii) Protect as Safeguards Information, information required by the Commission pursuant to 10 CFR 73.55(c) (8) and (9).

(iv) Retain, in accordance with 10 CFR 73.70, all comparisons and analyses prepared pursuant to 10 CFR 73.55 (c) (7) and (8).

(10) Each applicant for a license to operate a nuclear power reactor pursuant to 10 CFR 50.21(b) or 10 CFR 50.22, whose application was submitted prior to August 31, 1994, shall incorporate the required vehicle control program into the site Physical Security Plan and implement it by the date of receipt of the operating license.

(d) *Access Requirements.* (1) The licensee shall control all points of personnel and vehicle access into a protected area. Identification and search of all individuals unless otherwise provided in this section must be made and authorization must be checked at these points. The search function for detection of firearms, explosives, and incendiary devices must be accomplished through the use of both firearms and explosive detection equipment capable of detecting those devices. The licensee shall subject all persons except bona fide Federal, State, and local law enforcement personnel on official duty to these equipment searches upon entry to a protected area. Armed security guards who are on duty and have exited the protected area may reenter the protected area without being searched for firearms. When the licensee has cause to suspect that an individual is attempting to introduce firearms, explosives, or incendiary devices into protected areas, the licensee shall conduct a physical pat-down search of that individual. Whenever firearms or explosives detection equipment at a portal is out of service or not operating satisfactorily, the licensee shall conduct a physical pat-down search of all persons who would otherwise have been subject to equipment searches. The individual responsible for the last access control function (controlling admission to the protected area) must be isolated within a bullet-resisting structure as described in paragraph (c)(6) of this section to assure his or her ability to respond or to summon assistance.

(2) At the point of personnel and vehicle access into a protected area, all hand-carried packages shall be searched for devices such as firearms, explosives, and incendiary devices, or other items which could be used for radiological sabotage.

(3) All packages and material for delivery into the protected area shall be checked for proper identification and authorization and searched for devices such as firearms, explosives and incendiary devices or other items which could be used for radiological sabotage, prior to admittance into the protected area, except those Commission approved delivery and inspection activities specifically designated by the licensee to be carried out within vital or protected areas for reasons of safety, security or operational necessity.

(4) All vehicles, except under emergency conditions, must be searched for items which could be used for sabotage purposes prior to entry into the protected area. Vehicle areas to be searched must include the cab, engine compartment, undercarriage, and cargo area. All vehicles, except as indicated in this paragraph, requiring entry into the protected area must be escorted by a member of the security

organization while within the protected area and, to the extent practicable, must be off loaded in the protected area at a specific designated material receiving area that is not adjacent to a vital area. Escort is not required for designated licensee vehicles or licensee-owned or leased vehicles entering the protected area and driven by personnel having unescorted access. Designated licensee vehicles shall be limited in their use to onsite plant functions and shall remain in the protected area except for operational, maintenance, repair, security, and emergency purposes. The licensee shall exercise positive control over all such designated vehicles to assure that they are used only by authorized persons and for authorized purposes.

(5)(i) A numbered picture badge identification system must be used for all individuals who are authorized access to protected areas without escort. An individual not employed by the licensee but who requires frequent and extended access to protected and vital areas may be authorized access to such areas without escort provided that he or she displays a licensee-issued picture badge upon entrance into the protected area which indicates:

(A) Non-employee no escort required;

(B) Areas to which access is authorized; and

(C) The period for which access has been authorized.

(ii) Badges shall be displayed by all individuals while inside the protected area. Badges may be removed from the protected area when measures are in place to confirm the true identity and authorization for access of the badge holder upon entry to the protected area.

(6) Individuals not authorized by the licensee to enter protected areas without escort shall be escorted by a watchman or other individual designated by the licensee while in a protected area and shall be badged to indicate that an escort is required. In addition, the licensee shall require that each individual register his or her name, date, time, purpose of visit, employment affiliation, citizenship, and name of the individual to be visited. The licensee shall retain the register of information for three years after the last entry in the register.

(7) The licensee shall:

(i) Establish an access authorization system to limit unescorted access to vital areas during nonemergency conditions to individuals who require access in order to perform their duties. To achieve this, the licensee shall:

(A) Establish a current authorization access list for all vital areas. The access list must be updated by the cognizant licensee manager or supervisor at least once every 31 days and must be reapproved at least quarterly. The licensee shall include on the access list only individuals whose specific duties require access to vital areas during nonemergency conditions.

(B) Positively control, in accordance with the access list established pursuant to paragraph (d)(7)(i) of this section, all points of personnel and vehicle access to vital areas.

(C) Revoke, in the case of an individual's involuntary termination for cause, the individual's unescorted facility access and retrieve his or her identification badge and other entry devices, as applicable, prior to or simultaneously with notifying this individual of his or her termination.

(D) Lock and protect by an activated intrusion alarm system all unoccupied vital areas.

(ii) Design the access authorization system to accommodate the potential need for rapid ingress or egress of individuals during emergency conditions or situations that could lead to emergency conditions. To help assure this, the licensee shall:

(A) Ensure prompt access to vital equipment.

(B) Periodically review physical security plans and contingency plans and procedures to evaluate their potential impact on plant and personnel safety.

(8) All keys, locks, combinations, and related access control devices used to control access to protected areas must be controlled to reduce the probability of compromise. Whenever there is evidence or suspicion that any key, lock, combination, or related access control devices may have been compromised, it must be changed or rotated. The licensee shall issue keys, locks, combinations and other access control devices to protected areas and vital areas only to persons granted unescorted facility access. Whenever an individual's unescorted access is revoked due to his or her lack of trustworthiness, reliability, or inadequate work performance, key, locks, combinations, and related access control devices to which that person had access, must be changed or rotated.

(e) *Detection aids.* (1) All alarms required pursuant to this part must annunciate in a continuously manned central alarm station located within the protected area and in at least one other continuously manned station not necessarily onsite, so that a single act cannot remove the capability of calling for assistance or otherwise responding to an alarm. The onsite central alarm station must be considered a vital area and its walls, doors, ceiling, floor, and any windows in the walls and in the doors must be bullet-resisting. The onsite central alarm station must be located within a building in such a manner that the interior of the central alarm station is not visible from the perimeter of the protected area. This station must not contain any operational activities that would interfere with the execution of the alarm response function. Onsite secondary power supply systems for alarm annunciator equipment and non-portable communications equipment as required in paragraph (f) of this section must be located within vital areas.

(2) All alarm devices including transmission lines to annunciators shall be tamper indicating and self-checking e.g., an automatic indication is provided when failure of the alarm system or a component occurs, or when the system is on standby power. The annunciation of an alarm at the alarm stations shall indicate the type of alarm (e.g., intrusion alarms, emergency exit alarm, etc.) and location.

(3) All emergency exits in each protected area and each vital area shall be alarmed.

(f) *Communication requirements.* (1) Each guard, watchman or armed response individual on duty shall be capable of maintaining continuous communication with an individual in each continuously manned alarm station required by paragraph (e)(1) of this section, who shall be capable of calling for assistance from other guards, watchmen, and armed response personnel and from local law enforcement authorities.

(2) The alarm stations required by paragraph (e)(1) of this section shall have conventional telephone service for communication with the law enforcement authorities as described in paragraph (f)(1) of this section.

(3) To provide the capability of continuous communication, radio or microwave transmitted two-way voice communication, either directly or through an intermediary, shall be established, in addition to conventional telephone service, between local law enforcement authorities and the facility and shall terminate in each continuously manned alarm station required by paragraph (e)(1) of this section.

(4) Non-portable communications equipment controlled by the licensee and required by this section shall remain operable from independent power sources in the event of the loss of normal power.

(g) *Testing and maintenance.* Each licensee shall test and maintain intrusion alarms, emergency alarms, communications equipment, physical barriers, and other security related devices or equipment utilized pursuant to this section as follows:

(1) All alarms, communication equipment, physical barriers, and other security related devices or equipment shall be maintained in operable condition. The licensee shall develop and employ compensatory measures including equipment, additional security personnel and specific procedures to assure that the effectiveness of the security system is not reduced by failure or other contingencies affecting the operation of the security related equipment or structures.

(2) Each intrusion alarm shall be tested for performance at the beginning and end of any period that it is used for security. If the period of continuous use is longer than seven days, the intrusion alarm shall also be tested at least once every seven (7) days.

(3) Communications equipment required for communications onsite shall be tested for performance not less frequently than once at the beginning of each security personnel work shift. Communications equipment required for communications offsite shall be tested for performance not less than once a day.

(4)(i) The licensee shall review implementation of the security program by individuals who have no direct responsibility for the security program either:

(A) At intervals not to exceed 12 months, or

(B) As necessary, based on an assessment by the licensee against performance indicators and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect security but no longer than 12 months after the change. In any case, each element of the security program must be reviewed at least every 24 months.

(ii) The security program review must include an audit of security procedures and practices, an evaluation of the effectiveness of the physical protection system, an audit of the physical protection system testing and maintenance program, and an audit of commitments established for response by local law enforcement authorities. The results and recommendations of the security program review, management's findings on whether the security program is currently effective, and any actions taken as a result of recommendations from prior program reviews must be documented in a report to the licensee's plant manager and to corporate management at least one level higher than that having responsibility for the day-to-day plant operation. These reports must be maintained in an auditable form, available for inspection, for a period of 3 years.

(h) *Response requirement.* (1) The licensee shall establish, maintain, and follow an NRC-approved safeguards contingency plan for responding to threats, thefts, and radiological sabotage related to the nuclear facilities subject to the provisions of this section. Safeguards contingency plans must be in accordance with the criteria in appendix C to this part, "Licensee Safeguards Contingency Plans."

(2) The licensee shall establish and document liaison with local law enforcement authorities. The licensee shall retain documentation of the current liaison as a record until the Commission terminates each license for which the liaison was developed and, if any portion of the liaison documentation is superseded, retain the superseded material for three years after each change.

(3) The total number of guards, and armed, trained personnel immediately available at the facility to fulfill these response requirements shall nominally be ten (10), unless specifically required otherwise on a case by case basis by the Commission; however, this number may not be reduced to less than five (5) guards.

(4) Upon detection of abnormal presence or activity of persons or vehicles within an isolation zone, a protected area, material access area, or a vital area; or upon evidence or indication of intrusion into a protected area, a material access area, or a vital area, the licensee security organization shall:

(i) Determine whether or not a threat exists,

(ii) Assess the extent of the threat, if any,

(iii) Take immediate concurrent measures to neutralize the threat by:

(A) Requiring responding guards or other armed response personnel to interpose themselves between vital areas and material access areas and any adversary attempting entry for the purpose of radiological sabotage or theft of special nuclear material and to intercept any person exiting with special nuclear material, and,

(B) Informing local law enforcement agencies of the threat and requesting assistance.

(5) The licensee shall instruct every guard and all armed response personnel to prevent or impede attempted acts of theft or radiological sabotage by using force sufficient to counter the force directed at him including the use of deadly force when the guard or other armed response person has a reasonable belief it is necessary in self-defense or in the defense of others.

(6) To facilitate initial response to detection of penetration of the protected area and assessment of the existence of a threat, a capability of observing the isolation zones and the physical barrier at the perimeter of the protected area shall be provided, preferably by means of closed circuit television or by other suitable means which limit exposure of responding personnel to possible attack.

(Sec. 161i, Pub. L. 83-703, 68 Stat. 948, Pub. L. 93-377, 88 Stat. 475; secs. 201, 204(b)(1), Pub. L. 93-438, 88 Stat. 1242-1243, 1245, Pub. L. 94-79, 89 Stat. 413 (42 U.S.C. 2201, 5841))

[42 FR 10838, Feb. 24, 1977, as amended at 42 FR 51607, Sept. 29, 1977; 43 FR 11965, Mar. 23, 1978; 43 FR 34766, Aug. 7, 1978; 44 FR 65970, Nov. 16, 1979; 44 FR 68198, Nov. 28, 1979; 45 FR 79410, Dec. 1, 1980; 45 FR 83196, Dec. 18, 1980; 51 FR 27821, 27825, Aug. 4, 1986; 51 FR 30054, Aug. 22, 1986; 52 FR 12365, Apr. 16, 1987; 53 FR 19259, May 27, 1988; 57 FR 33431, July 29, 1992; 59 FR 38900, Aug. 1, 1994; 60 FR 46498, Sept. 7, 1995; 62 FR 63643, Dec. 2, 1997; 64 FR 14818, Mar. 29, 1999; 64 FR 17947, Apr. 13, 1999]

§ 73.56 Personnel access authorization requirements for nuclear power plants.

[Top of File]

(a) *General*. (1) Each licensee who is authorized on April 25, 1991, to operate a nuclear power reactor pursuant to §§ 50.21(b) or 50.22 of this chapter shall comply with the requirements of this section. By April 27, 1992, the required access authorization program must be incorporated into the site Physical Security Plan as provided for by 10 CFR 50.54(p)(2) and implemented. By April 27, 1992, each licensee shall certify to the NRC that it has implemented an access authorization program that meets the requirements of this part.

(2) Each applicant for a license to operate a nuclear power reactor pursuant to §§ 50.21(b) or 50.22 of this chapter, whose application was submitted prior to April 25, 1991, shall either by April 27, 1992, or the date of receipt of the operating license, whichever is later, incorporate the required access authorization program into the site Physical Security Plan and implement it.

(3) Each applicant for a license to operate a nuclear power reactor under §§ 50.21(b) or 50.22 of this chapter, including an applicant for a combined license under part 52 of this chapter, whose application is submitted after April 25, 1991, shall include the required access authorization program as part of its Physical Security Plan. The applicant, upon receipt of an operating license or upon notice of the Commission's finding under § 52.103(g) of this chapter, shall implement the required access authorization program as part of its site Physical Security Plan.

(4) The licensee may accept an access authorization program used by its contractors or vendors for their employees provided it meets the requirements of this section. The licensee may accept part of an access authorization program used by its contractors, vendors, or other affected organizations and substitute, supplement, or duplicate any portion of the program as necessary to meet the requirements of this section. In any case, the licensee is responsible for granting, denying, or revoking unescorted access authorization to any contractor, vendor, or other affected organization employee.

(b) *General performance objective and requirements*. (1) The licensee shall establish and maintain an access authorization program granting individuals unescorted access to protected and vital areas with the objective of providing high assurance that individuals granted unescorted access are trustworthy and reliable, and do not constitute an unreasonable risk to the health and safety of the public including a potential to commit radiological sabotage.

(2) Except as provided for in paragraphs (c) and (d) of this section, the unescorted access authorization program must include the following:

(i) A background investigation designed to identify past actions which are indicative of an individual's future reliability within a protected or vital area of a nuclear power reactor. As a minimum, the background investigation must verify an individual's true identity, and develop information concerning an individual's employment history, education history, credit history, criminal history, military service, and verify an individual's character and reputation.

(ii) A psychological assessment designed to evaluate the possible impact of any noted psychological characteristics which may have a bearing on trustworthiness and reliability.

(iii) Behavioral observation, conducted by supervisors and management personnel, designed to detect individual behavioral changes which, if left unattended, could lead to acts detrimental to the public health and safety.

(3) The licensee shall base its decision to grant, deny, revoke, or continue an unescorted access authorization on review and evaluation of all pertinent information developed.

(4) Failure by an individual to report any previous suspension, revocation, or denial of unescorted access to nuclear power reactors is considered sufficient cause for denial of unescorted access authorization.

(c) *Existing, reinstated, transferred, and temporary access authorization*. (1) Individuals who have had an uninterrupted unescorted access authorization for at least 180 days on April 25, 1991 need not be further evaluated. Such individuals shall be subject to the behavioral observation requirements of this section.

(2) The access authorization program may specify conditions for reinstating an interrupted access authorization, for transferring an access authorization from another licensee, and for permitting temporary unescorted access authorization.

(3) The licensee shall grant unescorted access authorization to all individuals who have been certified by the Nuclear Regulatory Commission as suitable for such access.

(d) *Requirements during cold shutdown*. (1) The licensee may grant unescorted access during cold shutdown to an individual who does not possess an access authorization granted in accordance with paragraph (b) of this section provided the licensee develops and incorporates into its Physical Security Plan measures to be taken to ensure that the functional capability of equipment in areas for which the access authorization requirement has been relaxed has not been impaired by relaxation of that requirement.

(2) Prior to incorporating such measures into its Physical Security Plan the licensee shall submit those plan changes to the NRC for review and approval pursuant to § 50.90.

(3) Any provisions in licensees' security plans that allow for relaxation of access authorization requirements during cold shutdown are superseded by this rule. Provisions in licensees' Physical Security Plans on April 25, 1991 that provide for devitalization (that is, a change from vital to protected area status) during cold shutdown are not affected.

(e) *Review procedures*. Each licensee implementing an unescorted access authorization program under the provisions of this section shall include a procedure for the review, at the request of the affected employee, of a denial or revocation by the licensee of unescorted access authorization of an employee of the licensee, contractor, or vendor, which adversely affects employment. The procedure must provide that the employee is informed of the grounds for denial or revocation and allow the employee an opportunity to provide additional relevant information, and provide an opportunity for an objective review of the information on which the denial or revocation was based. The procedure may be an impartial and independent internal management review. Unescorted access may not be granted to the individual during the review process.

(f) *Protection of information*. (1) Each licensee, contractor, or vendor who collects personal information on an employee for the purpose of complying with this section shall establish and maintain a system of files and procedures for the protection of the personal information.

(2) Licensees, contractors, and vendors small make available such personal information to another licensee, contractor, or vendor provided that the request is accompanied by a signed release from the individual.

(3) Licensees, contractors, and vendors may not disclose the personal information collected and maintained to persons other than:

(i) Other licensees, contractors, or vendors, or their authorized representatives, legitimately seeking the information as required by this section for unescorted access decisions and who have obtained a signed release from the individual.

(ii) NRC representatives;

(iii) Appropriate law enforcement officials under court order;

(iv) The subject individual or his or her representative;

(v) Those licensee representatives who have a need to have access to the information in performing assigned duties, including audits of licensee's, contractor's, and vendor's programs;

(vi) Persons deciding matters on review or appeal; or

(vii) Other persons pursuant to court order. This section does not authorize the licensee, contractor, or vendor to withhold evidence of criminal conduct from law enforcement officials.

(g) *Audits*. (1) Each licensee shall audit its access authorization program within 12 months of the effective date of implementation of this program and at least every 24 months thereafter to ensure that the requirements of this section are satisfied.

(2) Each licensee who accepts the access authorization program of a contractor or vendor as provided for by paragraph (a)(4) of this section shall have access to records and shall audit contractor or vendor programs every 12 months to ensure that the requirements of this section are satisfied. Licensees may accept audits of contractors and vendors conducted by other licensees. Each sharing utility shall maintain a copy of the audit report, to include findings, recommendations and corrective actions. Each licensee retains responsibility for the effectiveness of any contractor and vendor program it accepts and the implementation of appropriate corrective action.

(h) *Records*. (1) Each licensee who issues an individual unescorted access authorization shall retain the records on which the authorization is based for the duration of the unescorted access authorization and for a five-year period following its termination. Each licensee who

denies an individual unescorted access shall retain the records on which the denial is based for 5 years.

(2) Each licensee shall retain records of results of audits, resolution of the audit findings and corrective actions for three years.

(Approved by the Office of Management and Budget under OMB control number 3150-0002)

[56 FR 19007, Apr. 25, 1991, as amended at 56 FR 24239, May 29, 1991; 72 FR 49561, Aug. 28, 2007]

§ 73.57 Requirements for criminal history records checks of individuals granted unescorted access to a nuclear power facility or access to Safeguards Information.

[Top of File]

(a) *General*. (1) Each licensee who is authorized to operate a nuclear power reactor under part 50 of this chapter, or to engage in an activity subject to regulation by the Commission shall comply with the requirements of this section.

(2) Each applicant for a license to operate a nuclear power reactor under part 50 of this chapter or to engage in an activity subject to regulation by the Commission, as well as each entity who has provided written notice to the Commission of intent to file an application for licensing, certification, permitting, or approval of a product subject to regulation by the Commission shall submit fingerprints for those individuals who will have access to Safeguards Information.

(3) Before receiving its operating license under part 50 of this chapter or before the Commission makes its finding under § 52.103(g) of this chapter, each applicant for a license to operate a nuclear power reactor (including an applicant for a combined license) may submit fingerprints for those individuals who will require unescorted access to the nuclear power facility.

(b) *General performance objective and requirements*. (1) Except those listed in paragraph (b)(2) of this section, each licensee subject to the provisions of this section shall fingerprint each individual who is permitted unescorted access to the nuclear power facility or access to Safeguards Information. Individuals who have unescorted access authorization on April 1, 1987 will retain such access pending licensee receipt of the results of the criminal history check on the individual's fingerprints, so long as the cards were submitted by September 28, 1987. The licensee will then review and use the information received from the Federal Bureau of Investigation (FBI), and based on the provisions contained in this rule, determine either to continue to grant or to deny further unescorted access to the facility or Safeguards Information for that individual. Individuals who do not have unescorted access or access to Safeguards Information after April 1, 1987 shall be fingerprinted by the licensee and the results of the criminal history records check shall be used prior to making a determination for granting unescorted access to the nuclear power facility or access to Safeguards Information.

(2) Licensees need not fingerprint in accordance with the requirements of this section for the following categories:

(i) For unescorted access to the nuclear power facility (but must adhere to provisions contained in §§ 73.21 and 73.22): NRC employees and NRC contractors on official agency business; individuals responding to a site emergency in accordance with the provisions of § 73.55 (a); a representative of the International Atomic Energy Agency (IAEA) engaged in activities associated with the U.S./IAEA Safeguards Agreement at designated facilities who has been certified by the NRC; law enforcement personnel acting in an official capacity; State or local government employees who have had equivalent reviews of FBI criminal history data; and individuals employed at a facility who possess ''Q'' or ''L'' clearances or possess another active government granted security clearance, i.e., Top Secret, Secret, or Confidential;

(ii) For access to Safeguards Information only but must adhere to provisions contained in §§ 73.21, 73.22, and 73.23: the categories of individuals specified in 10 CFR 73.59.

(iii) Any licensee currently processing criminal history requests through the FBI pursuant to Executive Order 10450 need not also submit such requests to the NRC under this section; and

(iv) Upon further notice to licensees and without further rulemaking, the Commission may waive certain requirements of this section on a temporary basis.

(3) The licensee shall notify each affected individual that the fingerprints will be used to secure a review of his/her criminal history record, and inform the individual of proper procedures for revising the record or including explanation in the record.

(4) Fingerprinting is not required if the utility is reinstating the unescorted access to the nuclear power facility or access to Safeguards Information granted an individual if:

(i) The individual returns to the same nuclear power utility that granted access and such access has not been interrupted for a continuous period of more than 365 days; and

(ii) The previous access was terminated under favorable conditions.

(5) Fingerprints need not be taken, in the discretion of the licensee, if an individual who is an employee of a licensee, contractor, manufacturer, or supplier has been granted unescorted access to a nuclear power facility or to Safeguards Information by another licensee, based in part on a criminal history records check under this section. The criminal history check file may be transferred to the gaining licensee in accordance with the provisions of paragraph (f)(3) of this section.

(6) All fingerprints obtained by the licensee under this section must be submitted to the Attorney General of the United States through the Commission.

(7) The licensee shall review the information received from the Attorney General and consider it in making a determination for granting unescorted access to the individual or access to Safeguards Information.

(8) A licensee shall use the information obtained as part of a criminal history records check solely for the purpose of determining an individual's suitability for unescorted access to the nuclear power facility or access to Safeguards Information.

(c) *Prohibitions*. (1) A licensee may not base a final determination to deny an individual unescorted access to the nuclear power facility or access to Safeguards Information solely on the basis of information received from the FBI involving:

(i) An arrest more than 1 year old for which there is no information of the disposition of the case; or

(ii) An arrest that resulted in dismissal of the charge or an acquittal.

(2) A licensee may not use information received from a criminal history check obtained under this section in a manner that would infringe upon the rights of any individual under the First Amendment to the Constitution of the United States, nor shall the licensee use the information in any way which would discriminate among individuals on the basis of race, religion, national origin, sex, or age.

(d) *Procedures for processing of fingerprint checks*. (1) For the purpose of complying with this section, licensees shall, using an appropriate method listed in § 73.4, submit to the NRC's Division of Facilities and Security, Mail Stop T-6E46, one completed, legible standard fingerprint card (Form FD-258, ORIMDNRCOOOZ) or, where practicable, other fingerprint record for each individual requiring unescorted access to the nuclear power facility or access to Safeguards Information, to the Director of the NRC's Division of Facilities and Security, marked for the attention of the Division's Criminal History Check Section. Copies of these forms may be obtained by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, by calling (301) 415-5877, or by e-mail to *forms@nrc.gov*. Guidance on what alternative formats might be practicable is referenced in § 73.4. The licensee shall establish procedures to ensure that the quality of the fingerprints taken results in minimizing the rejection rate of fingerprint cards due to illegible or incomplete cards.

(2) The Commission will review applications for criminal history checks for completeness. Any Form FD-258 or other fingerprint record containing omissions or evident errors will be returned to the licensee for corrections. The fee for processing fingerprint checks includes one free resubmission if the initial submission is returned by the FBI because the fingerprint impressions cannot be classified. The one free resubmission must have the FBI Transaction Control Number reflected on the resubmission. If additional submissions are necessary, they will be treated as an initial submittal and require a second payment of the processing fee. The payment of a new processing fee entitles the submitter to an additional free resubmittal, if necessary. Previously rejected submissions may not be included with the third submission because the submittal will be rejected automatically.

(3) (i) Fees for the processing of fingerprint checks are due upon application. Licensees shall submit payment with the application for the processing of fingerprints through corporate check, certified check, cashier's check, money order, or electronic payment, made payable to "U.S. NRC." (For guidance on making electronic payments, contact the Security Branch, Division of Facilities and Security, at (301) 415-7404). Combined payment for multiple applications is acceptable.

(ii) The application fee is the sum of the user fee charged by the FBI for each fingerprint card or other fingerprint record submitted by the NRC on behalf of a nuclear power plant licensee, and an administrative processing fee assessed by the NRC. The NRC processing fee covers administrative costs associated with NRC handling of licensee fingerprint submissions. The Commission publishes the amount of the fingerprint check application fee on the NRC public Web site. (To find the current fee amount, go to the Electronic Submittals page at *http://www.nrc.gov/site-help/eie.html* and select the link for the Criminal History Program.) The Commission will directly notify licensees who are subject to this regulation of any fee changes.

(4) The Commission will forward to the submitting licensee all data received from the FBI as a result of the licensee's application(s) for criminal history checks, to include the FBI fingerprint record.

(e) *Right to correct and complete information*. (1) Prior to any final adverse determination, the licensee shall make available to the individual the contents of records obtained from the FBI for the purpose of assuring correct and complete information. Confirmation of receipt by the individual of this notification must be maintained by the licensee for a period of 1 year from the date of the notification.

(2) If after reviewing the record, an individual believes that it is incorrect or incomplete in any respect and wishes changes, corrections, or updating (of the alleged deficiency), or to explain any matter in the record, the individual may initiate challenge procedures. These procedures include direct application by the individual challenging the record to the agency, i.e., law enforcement agency, that contributed the questioned information or direct challenge as to the accuracy or completeness of any entry on the criminal history record to the Assistant Director, Federal Bureau of Investigation Identification Division, Washington, DC 20537-9700 as set forth in 28 CFR 16.30 through 16.34. In the latter case, the FBI then forwards the challenge to the agency that submitted the data requesting that agency to verify or correct the challenged entry. Upon receipt of an official communication directly from the agency that contributed the original information, the FBI Identification Division makes any changes necessary in accordance with the information supplied by that agency. Licensees must provide at least 10 days for an individual to initiate action to challenge the results of an FBI criminal history records check after the record being made available for his/her review. The licensee may make a final adverse determination based upon the criminal history record, if applicable, only upon receipt of the FBI's confirmation or correction of the record.

(3) In addition to the right to obtain records from the FBI in paragraph (e)(1) of this section and the right to initiate challenge procedures in paragraph (e)(2) of this section, an individual participating in an NRC adjudication and seeking to obtain Safeguards Information for use in that adjudication may appeal a final adverse determination by the NRC Office of Administration to the presiding officer of the proceeding.

The request may also seek to have the Chief Administrative Judge designate an officer other than the presiding officer of the proceeding to review the adverse determination.

(f) *Protection of information*. (1) Each licensee who obtains a criminal history record on an individual under this section shall establish and maintain a system of files and procedures for protection of the record and the personal information from unauthorized disclosure.

(2) The licensee may not disclose the record or personal information collected and maintained to persons other than the subject individual, his/her representative, or to those who have a need to have access to the information in performing assigned duties in the process of granting or denying unescorted access to the nuclear power facility or access to Safeguards Information. No individual authorized to have access to the information may re-disseminate the information to any other individual who does not have a need to know.

(3) The personal information obtained on an individual from a criminal history record check may be transferred to another licensee:

(i) Upon the individual's written request to the licensee holding the data to re-disseminate the information contained in his/her file; and

(ii) The gaining licensee verifies information such as name, date of birth, social security number, sex, and other applicable physical characteristics for identification.

(4) The licensee shall make criminal history records obtained under this section available for examination by an authorized representative of the NRC to determine compliance with the regulations and laws.

(5) The licensee shall retain all fingerprint and criminal history records received from the FBI, or a copy if the individual's file has been transferred, on an individual (including data indicating no record) for 1 year after termination or denial of unescorted access to the nuclear power facility or access to Safeguards Information.

[52 FR 6314, Mar. 2, 1987; 52 FR 7821, Mar. 13, 1987, as amended at 53 FR 52994, Dec. 30, 1988; 55 FR 35563, Aug. 31, 1990; 56 FR 19008, Apr. 25, 1991; 57 FR 7645, Mar. 4, 1992; 59 FR 662, Jan. 6, 1994; 59 FR 38554, July 29, 1994; 60 FR 24552, May 9, 1995; 68 FR 58820, Oct. 10, 2003; 69 FR 58822, Oct. 1, 2004; 70 FR 69421, Nov. 16, 2005; 72 FR 49561, Aug. 28, 2007; 73 FR 63580, Oct. 24, 2008]

§ 73.59 Relief from fingerprinting, identification and criminal history records checks and other elements of background checks for designated categories of individuals.

[Top of File]

Fingerprinting, and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, and other elements of background checks are not required for the following individuals prior to granting access to Safeguards Information, including Safeguards Information designated as Safeguards Information-Modified Handling as defined in 10 CFR 73.2:

(a) An employee of the Commission or the Executive Branch of the United States government who has undergone fingerprinting for a prior U.S. government criminal history records check;

(b) A member of Congress;

(c) An employee of a member of Congress or Congressional committee who has undergone fingerprinting for a prior U.S. government criminal history records check;

(d) The Comptroller General or an employee of the Government Accountability Office who has undergone fingerprinting for a prior U.S. Government criminal history records check;

(e) The Governor of a State or his or her designated State employee representative;

(f) A representative of a foreign government organization that is involved in planning for, or responding to, nuclear or radiological emergencies or security incidents who the Commission approves for access to Safeguards Information, including Safeguards Information designated as Safeguards Information—Modified Handling;

(g) Federal, State, or local law enforcement personnel;

(h) State Radiation Control Program Directors and State Homeland Security Advisors or their designated State employee representatives;

(i) Agreement State employees conducting security inspections on behalf of the NRC pursuant to an agreement executed under section 274. i. of the Atomic Energy Act of 1954, as amended;

(j) Representatives of the International Atomic Energy Agency (IAEA) engaged in activities associated with the U.S./IAEA Safeguards Agreement who have been certified by the NRC;

(k) Any agent, contractor, or consultant of the aforementioned persons who has undergone equivalent criminal history records and background checks to those required by 10 CFR 73.22(b) or 73.23(b).

[71 FR 33992, June 13, 2006; 73 FR 63580, Oct. 24, 2008]

§ 73.60 Additional requirements for physical protection at nonpower reactors.

[Top of File]

Each nonpower reactor licensee who, pursuant to the requirements of part 70 of this chapter, possesses at any site or contiguous sites subject to control by the licensee uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium, alone or in any combination in a quantity of 5000 grams or more computed by the formula, grams=(grams contained U-235) +2.5 (grams U-233+grams plutonium), shall protect the special nuclear material from theft or diversion pursuant to the requirements of paragraphs 73.67 (a), (b), (c), and (d), in addition to this section, except that a licensee is exempt from the requirements of paragraphs (a), (b), (c), (d), and (e) of this section to the extent that it possesses or uses special nuclear material that is not readily separable from other radioactive material and that has a total external radiation dose rate in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding.

(a) *Access requirements*. (1) Special nuclear material shall be stored or processed only in a material access area. No activities other than those which require access to special nuclear material or equipment employed in the process, use, or storage of special nuclear material, shall be permitted within a material access area.

(2) Material access areas shall be located only within a protected area to which access is controlled.

(3) Special nuclear material not in process shall be stored in a vault equipped with an intrusion alarm or in a vault-type room, and each such vault or vault-type room shall be controlled as a separate material access area.

(4) Enriched uranium scrap in the form of small pieces, cuttings, chips, solutions or in other forms which result from a manufacturing process, contained in 30-gallon or larger containers, with a uranium-235 content of less than 0.25 grams per liter, may be stored within a locked and separately fenced area which is within a larger protected area provided that the storage area is no closer than 25 feet to the perimeter of the protected area. The storage area when unoccupied shall be protected by a guard or watchman who shall patrol at intervals not exceeding 4 hours, or by intrusion alarms.

(5) Admittance to a material access area shall be under the control of authorized individuals and limited to individuals who require such access to perform their duties.

(6) Prior to entry into a material access area, packages shall be searched for devices such as firearms, explosives, incendiary devices, or counterfeit substitute items which could be used for theft or diversion of special nuclear material.

(7) Methods to observe individuals within material access areas to assure that special nuclear material is not diverted shall be provided and used on a continuing basis.

(b) *Exit requirement*. Each individual, package, and vehicle shall be searched for concealed special nuclear material before exiting from a material access area unless exit is into a contiguous material access area. The search may be carried out by a physical search or by use of equipment capable of detecting the presence of concealed special nuclear material.

(c) *Detection aid requirement*. Each unoccupied material access area shall be locked and protected by an intrusion alarm on active status. All emergency exits shall be continuously alarmed.

(d) *Testing and maintenance*. Each licensee shall test and maintain intrusion alarms, physical barriers, and other devices utilized pursuant to the requirements of this section as follows:

(1) Intrusion alarms, physical barriers, and other devices used for material protection shall be maintained in operable condition.

(2) Each intrusion alarm shall be inspected and tested for operability and required functional performance at the beginning and end of each interval during which it is used for material protection, but not less frequently than once every seven (7) days.

(e) *Response requirement*. Each licensee shall establish, maintain, and follow an NRC-approved safeguards contingency plan for responding to threats, thefts, and radiological sabotage related to the special nuclear material and nuclear facilities subject to the provisions of this section. Safeguards contingency plans must be in accordance with the criteria in Appendix C to this part, "Licensee Safeguards Contingency Plans."

(f) In addition to the fixed-site requirements set forth in this section and in § 73.67, the Commission may require, depending on the individual facility and site conditions, any alternate or additional measures deemed necessary to protect against radiological sabotage at nonpower reactors licensed to operate at or above a power level of 2 megawatts thermal.

[38 FR 35430, Dec. 28, 1973, as amended at 44 FR 68199, Nov. 28, 1979; 57 FR 33431, July 29, 1992; 58 FR 13700, Mar. 15, 1993]

§ 73.61 Relief from fingerprinting and criminal history records check for designated categories of individuals permitted unescorted access to certain radioactive materials or other property.

[Top of File]

Notwithstanding any other provision of the Commission's regulations, fingerprinting and the identification and criminal history records checks required by section 149 of the Atomic Energy Act of 1954, as amended, are not required for the following individuals prior to granting unescorted access to radioactive materials or other property that the Commission determines by regulation or order to be of such significance to the public health and safety or the common defense and security as to warrant fingerprinting and background checks:

(a) An employee of the Commission or of the Executive Branch of the U.S. Government who has undergone fingerprinting for a prior U.S. Government criminal history check;

(b) A Member of Congress;

(c) An employee of a member of Congress or Congressional committee who has undergone fingerprinting for a prior U.S. Government criminal history check;

(d) The Governor of a State or his or her designated State employee representative;

(e) Federal, State, or local law enforcement personnel;

(f) State Radiation Control Program Directors and State Homeland Security Advisors or their designated State employee representatives;

(g) Agreement State employees conducting security inspections on behalf of the NRC pursuant to an agreement executed under section 274. i. of the Atomic Energy Act;

(h) Representatives of the International Atomic Energy Agency (IAEA) engaged in activities associated with the U.S./IAEA Safeguards Agreement who have been certified by the NRC.

[72 FR 4948, Feb. 2, 2007]

Physical Protection of Special Nuclear Material of Moderate and Low Strategic Significance

[Top of File]

§ 73.67 Licensee fixed site and in-transit requirements for the physical protection of special nuclear material of moderate and low strategic significance.

(a) *General performance objectives*. (1) Each licensee who possesses, uses or transports special nuclear material of moderate or low strategic significance shall establish and maintain a physical protection system that will achieve the following objectives:

(i) Minimize the possibilities for unauthorized removal of special nuclear material consistent with the potential consequences of such actions; and

(ii) Facilitate the location and recovery of missing special nuclear material.

(2) To achieve these objectives, the physical protection system shall provide:

(i) Early detection and assessment of unauthorized access or activities by an external adversary within the controlled access area containing special nuclear material;

(ii) Early detection of removal of special nuclear material by an external adversary from a controlled access area;

(iii) Assure proper placement and transfer of custody of special nuclear material; and

(iv) Respond to indications of an unauthorized removal of special nuclear material and then notify the appropriate response forces of its removal in order to facilitate its recovery.

(b)(1) A licensee is exempt from the requirements of this section to the extent that he possesses, uses, or transports:

(i) Special nuclear material which is not readily separable from other radioactive material and which has a total external radiation dose rate in excess of 100 rems per hour at a distance of 3 feet from any accessible surface without intervening shielding, or

(ii) Sealed plutonium-beryllium neutron sources totaling 500 grams or less contained plutonium at any one site or contiguous sites, or

(iii) Plutonium with an isotopic concentration exceeding 80 percent in plutonium-238.

(2) A licensee who has quantities of special nuclear material equivalent to special nuclear material of moderate strategic significance distributed over several buildings may, for each building which contains a quantity of special nuclear material less than or equal to a level of

special nuclear material of low strategic significance, protect the material in that building under the lower classification physical security requirements.

(c) Each licensee who possesses, uses, transports, or delivers to a carrier for transport special nuclear material of moderate strategic significance, or 10 kg or more of special nuclear material of low strategic significance shall:

(1) Submit a security plan or an amended security plan describing how the licensee will comply with all the requirements of paragraphs (d), (e), (f), and (g) of this section, as appropriate, including schedules of implementation. The licensee shall retain a copy of the effective security plan as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the original plan was submitted. Copies of superseded material must be retained for three years after each change.

(2) Within 30 days after the plan submitted pursuant to paragraph (c)(1) of this section is approved, or when specified by the NRC in writing, implement the approved security plan.

(d) *Fixed site requirements for special nuclear material of moderate strategic significance*. Each licensee who possesses, stores, or uses quantities and types of special nuclear material of moderate strategic significance at a fixed site or contiguous sites, except as allowed by paragraph (b)(2) of this section and except those who are licensed to operate a nuclear power reactor pursuant to part 50, shall:

(1) Use the material only within a controlled access area which is illuminated sufficiently to allow detection and surveillance of unauthorized penetration or activities,

(2) Store the material only within a controlled access area such as a vault-type room or approved security cabinet or their equivalent which is illuminated sufficiently to allow detection and surveillance of unauthorized penetration or activities,

(3) Monitor with an intrusion alarm or other device or procedures the controlled access areas to detect unauthorized penetration or activities,

(4) Conduct screening prior to granting an individual unescorted access to the controlled access area where the material is used or stored, in order to obtain information on which to base a decision to permit such access,

(5) Develop and maintain a controlled badging and lock system to identify and limit access to the controlled access areas to authorized individuals,

(6) Limit access to the controlled access areas to authorized or escorted individuals who require such access in order to perform their duties,

(7) Assure that all visitors to the controlled access areas are under the constant escort of an individual who has been authorized access to the area,

(8) Establish a security organization or modify the current security organization to consist of at least one watchman per shift able to assess and respond to any unauthorized penetrations or activities in the controlled access areas,

(9) Provide a communication capability between the security organization and appropriate response force,

(10) Search on a random basis vehicles and packages leaving the controlled access areas, and

(11) Establish and maintain written response procedures for dealing with threats of thefts or thefts of these materials. The licensee shall retain a copy of the response procedures as a record for the period during which the licensee possesses the appropriate type and quantity of special nuclear material requiring this record under each license for which the original procedures were developed and, for three years thereafter. Copies of superseded material must be retained for three years after each change.

(e) *In-transit requirements for special nuclear material of moderate strategic significance.* (1) Each licensee who transports, exports or delivers to a carrier for transport special nuclear material of moderate strategic significance shall:

(i) Provide advance notification to the receiver of any planned shipments specifying the mode of transport, estimated time of arrival, location of the nuclear material transfer point, name of carrier and transport identification,

(ii) Receive confirmation from the receiver prior to the commencement of the planned shipment that the receiver will be ready to accept the shipment at the planned time and location and acknowledges the specified mode of transport,

(iii) Check the integrity of the container and locks or seals prior to shipment, and

(iv) Arrange for the in-transit physical protection of the materials in accordance with the requirements of § 73.67(e)(3) unless the receiver is a licensee and has agreed in writing to arrange for the in-transit physical protection.

(2) Each licensee who receives special nuclear material of moderate strategic significance shall:

(i) Check the integrity of the containers and seals upon receipt of the shipment,

(ii) Notify the shipper of receipt of the material as required in § 74.15 of this chapter, and

(iii) Arrange for the in-transit physical protection of the material in accordance with the requirements of § 73.67(e)(3) unless the shipper is a licensee and has agreed in writing to arrange for the in-transit physical protection.

(3) Each licensee who arranges for the in-transit physical protection of special nuclear material of moderate strategic significance, or who takes delivery of this material free on board (f.o.b.) the point at which it is delivered to a carrier for transport shall:

(i) Arrange for telephone or radio communications between the transport and the licensee or its designee: (A) To periodically confirm the status of the shipment (B) for notification of any delays in the scheduled shipment, and (C) to request appropriate local law enforcement agency response in the event of an emergency.

(ii) Minimize the time that the material is in transit by reducing the number and duration of nuclear material transfers and by routing the material in the most safe and direct manner,

(iii) Conduct screening of all licensee employees involved in the transportation of the material in order to obtain information on which to base a decision to permit them control over the material,

(iv) Establish and maintain written response procedures for dealing with threats of thefts or thefts of this material. The licensee shall retain a copy of the current response procedures as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the original procedures were developed and copies of superseded material must be retained for three years after each change.

(v) Make arrangements to be notified immediately of the arrival of the shipment at its destination, or of any such shipment that is lost or unaccounted for after the estimated time of arrival at its destination, and

(vi) Initiate immediately a trace investigation of any shipment that is determined to be lost or unaccounted for after a reasonable time beyond the estimated arrival time.

(vii) Notify the NRC Operations Center[1] within one hour after the discovery of the loss of the shipment and within one hour after recovery of or accounting for such lost shipment in accordance with the provisions of § 73.71 of this part.

(4) Each licensee who arranges the physical protection of strategic special nuclear material in quantities of moderate strategic significance while in transit or who takes delivery of this material free on board (f.o.b.) the point at which it is delivered to a carrier for transport shall comply with the requirements of paragraphs (e)(1), (2), and (3) of this section. The licensee shall retain each record required by paragraphs (e)(1), (2), (3), and (4)(i) and (ii) of this section for three years after close of period licensee possesses special nuclear material under each license that authorizes these licensee activities. Copies of superseded material must be retained for three years after each change. In addition, the licensee shall --

(i) Make all shipments of the material either (A) in dedicated transports with no intermediate stops to load or unload other cargo and with no carrier or vehicle transfers or temporary storage in-transit, or (B) under arrangements whereby the custody of the shipment and all custody transfers are acknowledged by signature, and

(ii) Maintain the material under lock or under the control of an individual who has acknowledged acceptance of custody of the material by signature.

(5) Each licensee who exports special nuclear material of moderate strategic significance shall comply with the requirements specified in paragraphs (c) and (e)(1), (3), and (4) of this section. The licensee shall retain each record required by these sections for three years after the close of period for which the licensee possesses the special nuclear material under each license that authorizes the licensee to export this material. Copies of superseded material must be retained for three years after each change.

(6) Each licensee who imports special nuclear material of moderate strategic significance shall,

(i) Comply with the requirements specified in paragraphs (c) and (e)(2), (3), and (4) of this section. The licensee shall retain each record required by these sections for three years after the close of period for which the licensee possesses the special nuclear material under each license that authorizes the licensee to import this material. Copies of superseded material must be retained for three years after each change.

(ii) Notify the exporter who delivered the material to a carrier for transport of the arrival of such material.

(7) If, after receiving advance notice pursuant to § 73.72 from a licensee planning to import, export, transport, deliver to a carrier for transport in a single shipment, or take delivery at the point where it is delivered to a carrier, special nuclear material of moderate strategic significance containing in any part strategic special nuclear material, it appears to the Commission that two or more shipments of special nuclear material of moderate strategic significance, constituting in the aggregate an amount equal to or greater than a formula quantity of strategic special nuclear material, may be en route at the same time, the Commission may order one or more of the shippers to delay shipment according to the following provisions:

(i) The shipper shall provide to the Commission, upon request, such additional information regarding a planned shipment as the Commission considers pertinent to the decision on whether to delay such shipment.

(ii) The receiver of each shipment, or the shipper if the receiver is not a licensee, shall notify the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response by telephone, no later than 24 hours after arrival of such shipment at its final destination, or after such shipment has left the United States as an export, to confirm the integrity of the shipment at the time of receipt or exit from the United States.

(iii) The Commission shall notify the affected shippers no later than two days before the scheduled shipment date that a given shipment is to be delayed.

(iv) Shipments of special nuclear material of moderate strategic significance which are protected in accordance with the provisions of §§ 73.20, 73.25, and 73.26 shall not be subject to orders to delay shipment nor considered to constitute a portion of an aggregate formula quantity of strategic special nuclear material for the purposes of determining whether any shipments must delayed.

(f) *Fixed site requirements for special nuclear material of low strategic significance*. Each licensee who possesses, stores, or uses special nuclear material of low strategic significance at a fixed site or contiguous sites, except those who are licensed to operate a nuclear power reactor pursuant to part 50, shall:

(1) Store or use the material only within a controlled access area,

(2) Monitor with an intrusion alarm or other device or procedures the controlled access areas to detect unauthorized penetrations or activities,

(3) Assure that a watchman or offsite response force will respond to all unauthorized penetrations or activities, and

(4) Establish and maintain response procedures for dealing with threats of thefts or thefts of this material. The licensee shall retain a copy of the current response procedures as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the procedures were established. Copies of superseded material must be retained for three years after each change.

(g) *In-transit requirements for special nuclear material of low strategic significance*. (1) Each licensee who transports or who delivers to a carrier for transport special nuclear material of low strategic significance shall:

(i) Provide advance notification to the receiver of any planned shipments specifying the mode of transport, estimated time of arrival, location of the nuclear material transfer point, name of carrier and transport identification,

(ii) Receive confirmation from the receiver prior to commencement of the planned shipment that the receiver will be ready to accept the shipment at the planned time and location and acknowledges the specified mode of transport,

(iii) Transport the material in a tamper indicating sealed container,

(iv) Check the integrity of the containers and seals prior to shipment, and

(v) Arrange for the in-transit physical protection of the material in accordance with the requirements of § 73.67(g)(3) of this part, unless the receiver is a licensee and has agreed in writing to arrange for the in-transit physical protection.

(2) Each licensee who receives quantities and types of special nuclear material of low strategic significance shall:

(i) Check the integrity of the containers and seals upon receipt of the shipment,

(ii) Notify the shipper of receipt of the material as required in § 74.15 of this chapter, and

(iii) Arrange for the in-transit physical protection of the material in accordance with the requirements of § 73.67(g)(3) of this part, unless the shipper is a licensee and has agreed in writing to arrange for the in-transit physical protection.

(3) Each licensee, either shipper or receiver, who arranges for the physical protection of special nuclear material of low strategic significance while in transit or who takes delivery of such material free on board (f.o.b.) the point at which it is delivered to a carrier for transport shall;

(i) Establish and maintain response procedures for dealing with threats or thefts of this material. The licensee shall retain a copy of the current response procedures as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the procedures were established. Copies of superseded material must be retained for three years after each change.

(ii) Make arrangements to be notified immediately of the arrival of the shipment at its destination, or of any such shipment that is lost or unaccounted for after the estimated time of arrival at its destination, and

(iii) Conduct immediately a trace investigation of any shipment that is lost or unaccounted for after the estimated arrival time and notify the NRC Operations Center[1] within one hour after the discovery of the loss of the shipment and within one hour after recovery of or accounting for such lost shipment in accordance with the provisions of § 73.71 of this part.

(4) Each licensee who exports special nuclear material of low strategic significance shall comply with the appropriate requirements specified in paragraphs (c) and (g) (1) and (3) of this section. The licensee shall retain each record required by these sections for three years after the close of period for which the licensee possesses the special nuclear material under each license that authorizes the licensee to export this material. Copies of superseded material must be retained for three years after each change.

(5) Each licensee who imports special nuclear material of low strategic significance shall:

(i) Comply with the requirements specified in paragraphs (c) and (g) (2) and (3) of this section and retain each record required by these paragraphs for three years after the close of period for which the licensee possesses the special nuclear material under each license that authorizes the licensee to import this material. Copies of superseded material must be retained for three years after each change.

(ii) Notify the person who delivered the material to a carrier for transport of the arrival of such material.

[44 FR 43283, July 24, 1979. Redesignated at 44 FR 68198, Nov. 28, 1979, and amended at 45 FR 19215, Mar. 25, 1980; 47 FR 19114, May 4, 1982; 52 FR 21657, June 9, 1987; 53 FR 19260, May 27, 1988; 57 FR 33431, July 29, 1992, 59 FR 14087, Mar. 25, 1994; 67 FR 3586, Jan 25, 2002; 67 FR 78143, Dec. 23, 2002; 73 FR 32463, Jun. 9, 2008]

[1] Commercial telephone number of the NRC Operations Center is (301) 816-5100.

Records and Reports

[Top of File]

§ 73.70 Records.

Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records. Each licensee subject to the provisions of §§ 73.20, 73.25, 73.26, 73.27, 73.45, 73.46, 73.55, or 73.60 shall keep the following records:

(a) Names and addresses of all individuals who have been designated as authorized individuals. The licensee shall retain this record of currently designated authorized individuals for the period during which the licensee possesses the appropriate type and quantity of special nuclear material requiring this record under each license that authorizes the activity that is subject to the recordkeeping requirement and, for three years thereafter. Copies of superseded material must be retained for three years after each change.

(b) Names, addresses, and badge numbers of all individuals authorized to have access to vital equipment or special nuclear material, and the vital areas and material access areas to which authorization is granted. The licensee shall retain the record of individuals currently authorized this access for the period during which the licensee possesses the appropriate type and quantity of special nuclear material requiring this record under each license that authorizes the activity that is subject to the recordkeeping requirement and, for three years thereafter. Copies of superseded material must be retained for three years after each change.

(c) A register of visitors, vendors, and other individuals not employed by the licensee pursuant to §§ 73.46(d)(13), 73.55(d)(6), or 73.60. The licensee shall retain this register as a record, available for inspection, for 3 years after the last entry is made in the register.

(d) A log indicating name, badge number, time of entry, and time of exit of all individuals granted access to a vital area except those individuals entering or exiting the reactor control room. The licensee shall retain this log as a record for three years after the last entry is made in the log.

(e) Documentation of all routine security tours and inspections, and of all tests, inspections, and maintenance performed on physical barriers, intrusion alarms, communications equipment, and other security related equipment used pursuant to the requirements of this part. The licensee shall retain the documentation for these events for three years from the date of documenting each event.

(f) A record at each onsite alarm annunciation location of each alarm, false alarm, alarm check, and tamper indication that identifies the type of alarm, location, alarm circuit, date, and time. In addition, details of response by facility guards and watchmen to each alarm, intrusion, or other security incident shall be recorded. The license shall retain each record for three years after the record is made.

(g) Shipments of special nuclear material subject to the requirements of this part, including names of carriers, major roads to be used, flight numbers in the case of air shipments, dates and expected times of departure and arrival of shipments, vertification of communication equipment on board the transfer vehicle, names of individuals who are to communicate with the transport vehicle, container seal descriptions and identification, and any other information to confirm the means utilized to comply with §§ 73.25, 73.26, and 73.27. This information must be recorded prior to shipment. Information obtained during the course of the shipment such as reports of all communications, change of shipping plan, including monitor changes, trace investigations, and others must also be recorded. The licensee shall retain each record about a shipment required by this paragraph (g) for three years after the record is made.

(h) Procedures for controlling access to protected areas and for controlling access to keys for locks used to protect special nuclear material. The licensee shall retain a copy of the current procedures as a record until the Commission terminates each license for which the

procedures were developed and, if any portion of the procedure is superseded, retain the superseded material for three years after each change.

[53 FR 19261, May 27, 1988, as amended at 57 FR 33431, July 29, 1992]

§ 73.71 Reporting of safeguards events.

[Top of File]

(a)(1) Each licensee subject to the provisions of §§ 73.25, 73.26, 73.27(c), 73.37, 73.67(e), or 73.67(g) shall notify the NRC Operations Center[1] within one hour after discovery of the loss of any shipment of SNM or spent fuel, and within one hour after recovery of or accounting for such lost shipment.

(2) This notification must be made to the NRC Operations Center via the Emergency Notification System, if the licensee is party to that system. If the Emergency Notification System is inoperative or unavailable, the licensee shall make the required notification via commercial telephonic service or other dedicated telephonic system or any other methods that will ensure that a report is received by the NRC Operations Center within one hour. The exemption of § 73.21(g)(3) applies to all telephonic reports required by this section.

(3) The licensee shall, upon request to the NRC, maintain an open and continuous communication channel with the NRC Operations Center.

(4) The initial telephonic notification must be followed within a period of 60 days by a written report submitted to the NRC by an appropriate method listed in § 73.4. In addition to the addressees specified in § 73.4, the licensee shall also provide one copy of the written report addressed to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response. The report must include sufficient information for NRC analysis and evaluation.

(5) Significant supplemental information which becomes available after the initial telephonic notification to the NRC Operations Center or after the submission of the written report must be telephonically reported to the NRC Operations Center and also submitted in a revised written report (with the revisions indicated) to the Regional Office and the Document Control Desk. Errors discovered in a written report must be corrected in a revised report with revisions indicated. The revised report must replace the previous report; the update must be a complete entity and not contain only supplementary or revised information. Each licensee shall maintain a copy of the written report of an event submitted under this section as record for a period of three years from the date of the report.

(b)(1) Each licensee subject to the provisions of §§ 73.20, 73.37, 73.50, 73.51, 73.55, 73.60, or 73.67 shall notify the NRC Operations Center within 1 hour of discovery of the safeguards events described in paragraph I(a)(1) of appendix G to this part. Licensees subject to the provisions of §§ 73.20, 73.37, 73.50, 73.51, 73.55, 73.60, or each licensee possessing strategic special nuclear material and subject to § 73.67(d) shall notify the NRC Operations Center within 1 hour after discovery of the safeguards events described in paragraphs I(a)(2), (a)(3), (b), and (c) of appendix G to this part. Licensees subject to the provisions of §§ 73.20, 73.37, 73.50, 73.51, 73.55, or 73.60 shall notify the NRC Operations Center within 1 hour after discovery of the safeguards events described in paragraph 1(d) of appendix G to this part.

(2) This notification must be made in accordance with the requirements of paragraphs (a) (2), (3), (4), and (5) of this section.

(c) Each licensee subject to the provisions of §§ 73.20, 73.37, 73.50, 73.51, 73.55, 73.60, or each licensee possessing SSNM and subject to the provisions of § 73.67(d) shall maintain a current log and record the safeguards events described in paragraphs 11(a) and (b) of appendix G to this part within 24 hours of discovery by a licensee employee or member of the licensee's contract security organization. The licensee shall retain the log of events recorded under this section as a record for 3 years after the last entry is made in each log or until termination of the license.

(d) Each licensee shall submit to the Commission the 60-day written reports required under the provisions of this section that are of a quality that will permit legible reproduction and processing. If the facility is subject to Sec. 50.73 of this chapter, the licensee shall prepare the written report on NRC Form 366. If the facility is not subject to Sec. 50.73 of this chapter, the licensee shall not use this form but shall prepare the written report in letter format. The report must include sufficient information for NRC analysis and evaluation.

(e) Duplicate reports are not required for events that are also reportable in accordance with §§ 50.72 and 50.73 of this chapter.

[52 FR 21658, June 9, 1987; 52 FR 23257, June 18, 1987, as amended at 59 FR 14087, Mar. 25, 1994; 60 FR 13617, Mar. 14, 1995; 63 FR 26963, May 15, 1998; 67 FR 3586, Jan. 25, 2002; 68 FR 33617, June 5, 2003]

[1] Commercial telephone number of the NRC Operation Center is (301) 816-5100.

§ 73.72 Requirement for advance notice of shipment of formula quantities of strategic special nuclear material, special nuclear material of moderate strategic significance, or irradiated reactor fuel.

[Top of File]

(a) A licensee, other than one specified in paragraph (b) of this section, who, in a single shipment, plans to deliver to a carrier for transport, to take delivery at the point where a shipment is delivered to a carrier for transport, to import, to export, or to transport a formula quantity of strategic special nuclear material, special nuclear material of moderate strategic significance, or irradiated reactor fuel required to be protected in accordance with § 73.37, shall:

(1) Notify in writing the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, using any appropriate method listed in § 73.4. Classified notifications shall be sent to the NRC headquarters classified mailing address listed in appendix A to this part.

(2) Assure that the notification will be received at least 10 days before transport of the shipment commences at the shipping facility;

(3) Include the following information in the notification:

(i) The name(s), address(es), and telephone number(s) of the shipper, receiver, and carrier(s);

(ii) A physical description of the shipment:

(A) For a shipment other than irradiated fuel, the elements, isotopes, enrichment, and quantity;

(B) For a shipment of irradiated fuel, the physical form, quantity, type of reactor, and original enrichment;

(iii) A listing of the mode(s) of shipment, transfer point(s), and route(s) to be used;

(iv) The estimated time and date that shipment will commence and that each country along the route is scheduled to be entered; and

(v) The estimated time and date of arrival of the shipment at the destination;

(4) The NRC Headquarters Operations Center shall be notified by telephone at least 2 days before commencement of the shipment at the phone numbers listed in appendix A to this part. Classified notifications shall be made by secure telephone.

(5) The NRC Headquarters Operations Center shall be notified by telephone of schedule changes greater than ± 6 hours at the numbers listed in appendix A to this part. Classified notifications shall be made by secure telephone.

[52 FR 9653, Mar. 26, 1987, as amended at 53 FR 4111, Feb. 12, 1988; 60 FR 24552, May 9, 1995; 67 FR 3586, Jan. 25, 2002; 68 FR 58820, Oct. 10, 2003]

§ 73.73 Requirement for advance notice and protection of export shipments of special nuclear material of low strategic significance.

[Top of File]

(a) A licensee authorized to export special nuclear material of low strategic significance shall:

(1) Notify in writing the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, using any appropriate method listed in § 73.4;

(2) Assure that the notification will be received at least 10 days before transport of the shipment commences at the shipper's facility;

(3) Include the following information in the notification:

(i) The name(s), address(es), and telephone number(s) of the shipper, receiver, and carrier(s);

(ii) A physical description of the shipment (the elements, isotopes, form, etc.);

(iii) A listing of the mode(s) of shipment, transfer points, and routes to be used;

(iv) The estimated time and date that shipment will commence and that each country along the route is scheduled to be entered; and

(v) The estimated time and date of arrival of the shipment at the destination;

(4) Assure that during transport outside the United States, the shipment will be protected in accordance with Annex I to the Convention on the Physical Protection of Nuclear Material (see appendix E of this part).

b) A licensee who needs to amend a written advance notification required by paragraph (a) of this section may notify the NRC Headquarters Operations Center by telephone at the numbers listed in appendix A to this part.

[52 FR 9653, Mar. 26, 1987, as amended at 53 FR 4112, Feb. 12, 1988; 60 FR 24553, May 9, 1995; 67 FR 3586, Jan. 25, 2002; 68 FR 58820, Oct. 10, 2003]

§ 73.74 Requirement for advance notice and protection of import shipments of nuclear material from

countries that are not party to the Convention on the Physical Protection of Nuclear Material.

[Top of File]

(a) A licensee authorized to import special nuclear material of low strategic significance from a country not a party to the Convention on the Physical Protection of Nuclear Material (i.e., not listed in appendix F of this part) shall:

(1) Notify in writing the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, using any appropriate method listed in § 73.4;

(2) Assure that the notification will be received at least 10 days before transport of the shipment commences at the shipper's facility; and

(3) Include the following information in the notification:

(i) The name(s), address(es) and telephone number(s) of the shipper, receiver, and carrier(s);

(ii) A physical description of the shipment (the isotopes, enrichment, quantity, etc.);

(iii) A listing of mode(s) of shipment, transfer points, and routes to be used;

(iv) The estimated time and date that shipment will commence and that each country along the route is scheduled to be entered; and

(v) The estimated time and date of arrival of the shipment at the destination.

b) A licensee who needs to amend a written advance notification required by paragraph (a) of this section may notify the NRC Headquarters Operations Center by telephone at the numbers listed in appendix A to this part.

(c) A licensee authorized to import from a country not a party to the Convention on the Physical Protection of Nuclear Material (i.e., not listed in appendix F of this part) a formula quantity of special nuclear material, special nuclear material of moderate strategic significance, special nuclear material of low strategic significance, or irradiated reactor fuel shall assure that during transport outside the United States the shipment will be protected in accordance with Annex I to the Convention on the Physical Protection of Nuclear Material (see appendix E of this part).

[52 FR 9654, Mar. 26, 1987, as amended at 53 FR 4112, Feb. 12, 1988; 60 FR 24553, May 9, 1995; 67 FR 3586, Jan. 25, 2002; 68 FR 58820, Oct. 10, 2003]

Enforcement

[Top of File]

§ 73.80 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of --

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of --

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended:

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55078, Nov. 24, 1992]

§ 73.81 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 73 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 73 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 73.1, 73.2, 73.3, 73.4, 73.5, 73.6, 73.8, 73.25, 73.45, 73.80, and 73.81.

[57 FR 55079, Nov. 24, 1992]

Appendix A to Part 73--U.S. Nuclear Regulatory Commission Offices and Classified Mailing Addresses

[Top of File]

	Address	Telephone (24 hour)	E-Mail
NRC Headquarters Operations Center	USNRC, Division of Incident Response Operations, Washington, DC 20555-0001.	(301) 816-5100, (301) 951-0550, (301) 816-5151 (fax).	H001@nrc.gov
Region I: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont	USNRC, Region I, 475 Allendale Road, King of Prussia, PA 19406-1415.	(610) 337-5000 (800) 432-1156, TDD: (301) 415-5575.	RidsRgn1MailCenter@nrc.gov
Region II: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Virginia, Virgin Islands, and West Virginia	USNRC, Region II, Sam Nunn Atlanta Federal Center, Suite 23T85, 61 Forsyth Street, SW, Atlanta, GA 30303-8931.	(404) 562-4400 (800) 877-8510, TDD: (301) 415-5575.	RidsRgn2MailCenter@nrc.gov
Region III: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin	USNRC, Region III, 2443 Warrenville, Road, Suite 210, Lisle, IL 60532-4352.	(630) 829-9500 (800) 522-3025, TDD: (301) 415-5575.	RidsRgn3MailCenter@nrc.gov
Region IV: Alaska, Arizona, Arkansas, California, Colorado, Hawaii, Idaho, Kansas, Louisiana, Montana, Nebraska, Nevada, New Mexico, North Dakota, Oklahoma, Oregon, South Dakota, Texas, Utah, Washington, Wyoming, and the U.S. territories and possessions in the Pacific	USNRC, Region IV, 611 Ryan Plaza Drive, Suite 400, Arlington, TX 76011-4005.	(817) 860-8100 (800) 952-9677, TDD: (301) 415-5575.	RidsRgn4MailCenter@nrc.gov

Classified Mailing Addresses

	Address
NRC Headquarters	U.S. NRC, Caller Box 2500, Rockville, MD 20852.
Region I	U.S. NRC, 475 Allendale Road, King of Prussia, PA 19406.
Region II	U.S. NRC, Region II, P.O. Box 2257, Atlanta, GA 30303
Region III	USNRC, Region III, 2443 Warrenville, Road, Suite 210, Lisle, IL 60532-4352.
Region IV	U.S. NRC, Region IV, 611 Ryan Plaza Drive, Suite 4000, Arlington, TX 76011

I. Classified mail shall be transmitted in accordance with § 95.39 of this chapter to the appropriate NRC classified mailing address listed in this appendix.

II. Classified documents may be hand delivered to the NRC to the appropriate NRC street address listed in this appendix. Hand delivered classified documents shall be transmitted in accordance with § 95.39 of this chapter.

[49 FR 47824, Dec. 7, 1984, as amended at 50 FR 46631, Nov. 12, 1985; 51 FR 35500, Oct. 6, 1986; 52 FR 31613, Aug. 21, 1987; 53 FR 3863, Feb. 10, 1988; 54 FR 42288, Oct. 16, 1989; 56 FR 19254, Apr. 26, 1991; 56 FR 41449, Aug. 21, 1991; 58 FR 64112, Dec. 6, 1993; 59 FR 17466, Apr. 13, 1994; 60 FR 24553, May 9, 1995; 62 FR 22880, Apr. 28, 1997; 67 FR 3586, Jan. 25, 2002; 27 FR 77653, Dec. 19, 2002; 68 FR 58820, Oct. 10, 2003; 71 FR 15012, Mar. 27, 2006]

Appendix B to Part 73--General Criteria for Security Personnel

[Top of File]

Table of Contents
Introduction.
Definitions.
Criteria.

I. Employment suitability and qualification.

A. Suitability.
B. Physical and mental qualifications.
C. Medical examination and physical fitness qualifications.
D. Contract security personnel.
E. Physical and medical requalification.
F. Documentation.

II. Training and qualifications.

A. Training requirements.
B. Qualification requirements.
C. Contract personnel.
D. Security knowledge, skills, and abilities.
E. Requalification.

III. Weapons training and qualification.

IV. Weapons qualification and requalification program.

V. Guard, armed response personnel, and armed escort equipment.

A. Fixed site.
B. Transportation.

Introduction

Security personnel who are responsible for the protection of special nuclear material on site or in transit and for the protection of the facility or shipment vehicle against radiological sabotage should, like other elements of the physical security system, be required to meet minimum criteria to ensure that they will effectively perform their assigned security-related job duties. In order to ensure that those individuals responsible for security are properly equipped and qualified to execute the job duties prescribed for them, the NRC has developed general criteria that specify security personnel qualification requirements.

These general criteria establish requirements for the selection, training, equipping, testing, and qualification of individuals who will be responsible for protecting special nuclear materials, nuclear facilities, and nuclear shipments.

When required to have security personnel that have been trained, equipped, and qualified to perform assigned security job duties in accordance with the criteria in this appendix, the licensee must establish, maintain, and follow a plan that shows how the criteria will be met. The plan must be submitted to the NRC for approval and must be implemented within 30 days after approval by the NRC unless otherwise specified by the NRC in writing.

Definitions

Terms defined in parts 50, 70, and 73 of this chapter have the same meaning when used in this appendix.

Criteria

I. Employment suitability and qualification.

A. Suitability: 1. Prior to employment, or assignment to the security organization, an individual shall meet the following suitability criteria:

a. Educational development--Possess a high school diploma or pass an equivalent performance examination designed to measure basic job-related mathematical, language, and reasoning skills, ability, and knowledge, required to perform security job duties.

b. Felony convictions--Have no felony convictions involving the use of a weapon and no felony convictions that reflect on the individual's reliability.

2. Prior to employment or assignment to the security organization in an armed capacity, the individual, in addition to (a) and (b) above, must be 21 years of age or older.

B. Physical and mental qualifications. 1. Physical qualifications:

a. Individuals whose security tasks and job duties are directly associated with the effective implementation of the licensee physical security and contingency plans shall have no physical weaknesses or abnormalities that would adversely affect their performance of assigned security job duties.

b. In addition to a. above, guards, armed response personnel, armed escorts, and central alarm station operators shall successfully pass a physical examination administered by a licensed physician. The examination shall be designed to measure the individual's physical ability to perform assigned security job duties as identified in the licensee physical security and contingency plans. Armed personnel shall meet the following additional physical requirements:

(1) Vision: (a) For each individual, distant visual acuity in each eye shall be correctable to 20/30 (Snellen or equivalent) in the better eye and 20/40 in the other eye with eyeglasses or contact lenses. If uncorrected distance vision is not at least 20/40 in the better eye, the individual shall carry an extra pair of corrective lenses. Near visual acuity, corrected or uncorrected, shall be at least 20/40 in the better eye. Field of vision must be at least 70 horizontal meridian in each eye. The ability to distinguish red, green, and yellow colors is required. Loss of vision in one eye is disqualifying. Glaucoma shall be disqualifying, unless controlled by acceptable medical or surgical means, provided such medications as may be used for controlling glaucoma do not cause undesirable side effects which adversely affect the individual's ability to perform assigned security job duties, and provided the visual acuity and field of vision requirements stated above are met. On-the-job evaluation shall be used for individuals who exhibit a mild color vision defect.

(b) Where corrective eyeglasses are required, they shall be of the safety glass type.

(c) The use of corrective eyeglasses or contact lenses shall not interfere with an individual's ability to effectively perform assigned security job duties during normal or emergency operations.

(2) Hearing: (a) Individuals shall have no hearing loss in the better ear greater than 30 decibels average at 500 Hz, 1,000 Hz, and 2,000 Hz with no level greater that 40 decibels at any one frequency (by ISO 389 ``Standard Reference Zero for the Calibration of Puritone Audiometer" (1975) or ANSI S3.6-1969 (R. 1973) ``Specifications for Audiometers"). ISO 389 and ANSI S3.6-1969 have been approved for incorporation by reference by the Director of the Federal Register. A copy of each standard is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738.

(b) A hearing aid is acceptable provided suitable testing procedures demonstrate auditory acuity equivalent to the above stated requirement.

(c) The use of a hearing aid shall not decrease the effective performance of the individual's assigned security job duties during normal or emergency operations.

(3) Diseases--Individuals shall have no established medical history or medical diagnosis of epilepsy or diabetes, or, where such a condition exists, the individual shall provide medical evidence that the condition can be controlled with proper medication so that the individual will not lapse into a coma or unconscious state while performing assigned security job duties.

(4) Addiction-Individuals shall have no established medical history or medical diagnosis of habitual alcoholism or drug addiction, or, where such a condition has existed, the individual shall provide certified documentation of having completed a rehabilitation program which would give a reasonable degree of confidence that the individual would be capable of performing assigned security job duties.

(5) Other physical requirements--An individual who has been incapacitated due to a serious illness, injury, disease, or operation, which could interfere with the effective performance of assigned security job duties shall, prior to resumption of such duties, provide medical evidence of recovery and ability to perform such security job duties.

2. Mental qualifications: a. Individuals whose security tasks and job duties are directly associated with the effective implementation of the licensee physical security and contingency plans shall demonstrate mental alertness and the capability to exercise good judgment, implement instructions, assimilate assigned security tasks, and possess the acuity of senses and ability of expression sufficient to permit accurate communication by written, spoken, audible, visible, or other signals required by assigned job duties.

b. Armed individuals, and central alarm station operators, in addition to meeting the requirement stated in paragraph a. above, shall have no emotional instability that would interfere with the effective performance of assigned security job duties. The determination shall be made by a licensed psychologist or psychiatrist, or physician, or other person professionally trained to identify emotional instability.

c. The licensee shall arrange for continued observation of security personnel and for appropriate corrective measures by responsible supervisors for indications of emotional instability of individuals in the course of performing assigned security job duties. Identification of emotional instability by responsible supervisors shall be subject to verification by a licensed, trained person.

C. Medical examinations and physical fitness qualifications--Guards, armed response personnel, armed escorts and other armed security force members shall be given a medical examination including a determination and written certification by a licensed physician that there are no medical contraindications as disclosed by the medical examination to participation by the individual in physical fitness tests. Subsequent to this medical examination, guards, armed response personnel, armed escorts and other armed security force members shall demonstrate physical fitness for assigned security job duties by performing a practical physical exercise program within a specific time period. The exercise program performance objectives shall be described in the license training and qualifications plan and shall consider job-related functions such as strenuous activity, physical exertion, levels of stress, and exposure to the elements as they pertain to each individual's assigned security job duties for both normal and emergency operations. The physical fitness qualification of each guard, armed response person, armed escort, and other security force member shall be documented and attested to by a licensee security supervisor. The licensee shall retain this documentation as a record for three years from the date of each qualification.

D. Contract security personnel--Contract security personnel shall be required to meet the suitability, physical, and mental requirements as appropriate to their assigned security job duties in accordance with section I of this appendix.

E. Physical requalification--At least every 12 months, central alarm station operators shall be required to meet the physical requirements of B.1.b of this section, and guards, armed response personnel, and armed escorts shall be required to meet the physical requirements of paragraphs B.1.b (1) and (2), and C of this section. The licensee shall document each individual's physical requalification and shall retain this documentation of requalification as a record for three years from the date of each requalification.

F. Documentation--The results of suitability, physical, and mental qualifications data and test results must be documented by the licensee or the licensee's agent. The licensee or the agent shall retain this documentation as a record for three years from the date of obtaining and recording these results.

G. Nothing herein authorizes or requires a licensee to investigate into or judge the reading habits, political or religious beliefs, or attitudes on social, economic, or political issues of any person.

II. Training and qualifications.

A. Training requirements--Each individual who requires training to perform assigned security-related job tasks or job duties as identified in the licensee physical security or contingency plans shall, prior to assignment, be trained to perform these tasks and duties in accordance with the licensee or the licensee's agent's documented training and qualifications plan. The licensee or the agent shall maintain documentation of the current plan and retain this documentation of the plan as a record for three years after the close of period for which the licensee possesses the special nuclear material under each license for which the plan was developed and, if any portion of the plan is superseded, retain the material that is superseded for three years after each change.

B. Qualification requirements--Each person who performs security-related job tasks or job duties required to implement the licensee physical security or contingency plan shall, prior to being assigned to these tasks or duties, be qualified in accordance with the licensee's NRC-approved training and qualifications plan. The qualifications of each individual must be documented and attested by a licensee security supervisor. The licensee shall retain this documentation of each individual's qualifications as a record for three years after the employee ends employment in the security-related capacity and for three years after the close of period for which the licensee possesses the special nuclear material under each license, and superseded material for three years after each change.

C. Contract personnel--Contract personnel shall be trained, equipped, and qualified as appropriate to their assigned security-related job tasks or job duties, in accordance with sections II, III, IV, and V of this appendix. The qualifications of each individual must be documented and attested by a licensee security supervisor. The licensee shall retain this documentation of each individual's qualifications as a record for three years after the employee ends employment in the security-related capacity and for three years after the close of period for which the licensee possesses the special nuclear material under each license, and superseded material for three years after each change.

D. Security knowledge, skills, and abilities--Each individual assigned to perform the security related task identified in the licensee physical security or contingency plan shall demonstrate the required knowledge, skill, and ability in accordance with the specified standards for each task as stated in the NRC approved licensee training and qualifications plan. The areas of knowledge, skills, and abilities that shall be considered in the licensee's training and qualifications plan are as follows:

1. Protection of nuclear facilities, transport vehicles, and special nuclear material.
2. NRC requirements and guidance for physical security at nuclear facilities and for transportation.
3. The private security guard's role in providing physical protection for the nuclear industry.
4. The authority of private guards.
5. The use of nonlethal weapons.
6. The use of deadly force.
7. Power of arrest and authority to detain individuals.
8. Authority to search individuals and seize property.
9. Adversary group operations.
10. Motivation and objectives of adversary groups.
11. Tactics and force that might be used by adversary groups to achieve their objectives.
12. Recognition of sabotage related devices and equipment that might be used against the licensee's facility or shipment vehicle.
13. Facility security organization and operation.
14. Types of physical barriers.
15. Weapons, lock and key control system operation.
16. Location of SNM and/or vital areas within a facility.
17. Protected area security and vulnerability.
18. Types of alarm systems used.
19. Response and assessment to alarm annunciations and other indications of intrusion.
20. Familiarization with types of special nuclear material processed.
21. General concepts of fixed site security systems.
22. Vulnerabilities and consequences of theft of special nuclear material or radiological sabotage of a facility.
23. Protection of security system information.
24. Personal equipment use and operation for normal and contingency operations.
25. Surveillance and assessment systems and techniques.
26. Communications systems operation, fixed site.
27. Access control systems and operation for individuals, packages, and vehicles.
28. Contraband detection systems and techniques.
29. Barriers and other delay systems around material access or vital areas.
30. Exterior and interior alarm systems operation.
31. Duress alarm operation.

32. Alarm stations operation.
33. Response force organization.
34. Response force mission.
35. Response force operation.
36. Response force engagement.
37. Security command and control system during normal operation.
38. Security command and control system during contingency operation.
39. Transportation systems security organization and operation.
40. Types of SNM transport vehicles.
41. Types of SNM escort vehicles.
42. Modes of transportation for SNM.
43. Road transport security system command and control structure.
44. Use of weapons.
45. Communications systems operation for transportation, shipment to control center and intraconvoy.
46. Vulnerabilities and consequences of theft of special nuclear material or radiological sabotage of a transport vehicle.
47. Protection of transport system security information.
48. Control of area around transport vehicle.
49. Normal convoy techniques and operations.
50. Familiarization with types of special nuclear materials shipped.
51. Fixed post station operations.
52. Access control system operation.
53. Search techniques and systems for individuals, packages and vehicles.
54. Escort and patrol responsibilities and operation.
55. Contengency response to confirmed intrusion or attempted intrusion.
56. Security system operation after component failure.
57. Fixed site security information protection.
58. Security coordination with local law enforcement agencies.
59. Security and situation reporting, documentation and report writing.
60. Contingency duties.
61. Self defense.
62. Use of and defenses against incapacitating agents.
63. Security equipment testing.
64. Contingency procedures.
65. Night vision devices and systems.
66. Mechanics of detention.
67. Basic armed and unarmed defensive tactics.
68. Response force deployment.
69. Security alert procedures.
70. Security briefing procedures.
71. Response force tactical movement.
72. Response force withdrawal.
73. Reponse force use of support fire.
74. Response to bomb and attack threats.
75. Response to civil disturbances (e.g., strikes, demonstrators).
76. Response to confirmed attempted theft of special nuclear material and/or radiological sabotage of facilities.
77. Response to hostage situations.
78. Site specific armed tactical procedures and operation.
79. Security response to emergency situations other than security incidents.
80. Basic transportation defensive response tactics.
81. Armed escort deployment.
82. Armed escort adversary engagement.
83. Armed escort formations.
84. Armed escort use of weapons fire (tactical and combat).
85. Armed escort and shipment movement under fire.
86. Tactical convoying techniques and operations.
87. Armed escort tactical exercises.
88. Armed escort response to bomb and attack threats.
89. Verification of shipment documentation and contents.
90. Continuous surveillance of shipment vehicle.
91. Normal and contingency operation for shipment mode transfer.
92. Armed personnel procedures and operation during temporary storage between mode transfers of shipments.
93. Armed escort threat assessment and response.
94. System for and operation of shipment vehicle lock and key control.
95. Techniques and procedures for isolation of shipment vehicle during a contingency situation.
96. Transportation coordination with local law enforcement agencies.
97. Procedures for verification of shipment locks and seals.
98. Transportation security and situation reporting, documentation, and report writing.
99. Procedures for shipment delivery and pickup.
100. Transportation security system for escort by road, rail, air and sea.

E. Requalification-Security personnel shall be requalified at least every 12 months to perform assigned security-related job tasks and duties for both normal and contingency operations. Requalification shall be in accordance with the NRC-approved licensee training and qualifications plan. The results of requalification must be documented and attested by a licensee security supervisor. The licensee shall retain this documentation of each individual's requalification as a record for three years from the date of each requalification.

III. Weapons training.

A. Guards, armed response personnel and armed escorts requiring weapons training to perform assigned security related job tasks or job duties shall be trained in accordance with the licensees' documented weapons training programs. Each individual shall be proficient in the use of his assigned weapon(s) and shall meet prescribed standards in the following areas:

1. Mechanical assembly, dissasembly, range penetration capability of weapon, and bullseye firing.
2. Weapons cleaning and storage.
3. Combat firing, day and night.
4. Safe weapons handling.
5. Clearing, loading, unloading, and reloading.
6. When to draw and point a weapon.
7. Rapid fire techniques.
8. Close quarter firing.
9. Stress firing.
10. Zeroing assigned weapon(s).

IV. Weapons qualification and requalification program.

Qualification firing for the handgun and the rifle must be for daylight firing, and each individual shall perform night firing for familiarization with assigned weapon(s). The results of weapons qualification and requalification must be documented by the licensee or the licensee's agent. Each individual shall be requalified at least every 12 months. The licensee shall retain this documentation of each qualification and requalification as a record for three years from the date of the qualification or requalification, as appropriate.

A. Handgun--Guards, armed escorts and armed response personnel shall qualify with a revolver or semiautomatic pistol firing the national police course, or an equivalent nationally recognized course. Qualifying score shall be an accumulated total of 70 percent of the maximum obtainable score.

B. Semiautomatic Rifle--Guards, armed escorts and armed response personnel, assigned to use the semiautomatic rifle by the licensee training and qualifications plan, shall qualify with a semiautomatic rifle by firing the 100-yard course of fire specified in section 17.5(1) of the National Rifle Association, High Power Rifle Rules book (effective March 15, 1976),[1] or a nationally recognized equivalent course of fire. Targets used shall be as stated in section 17.5 for the 100-yard course. Time limits for individuals shall be as specified in section 8.2 of the NRA rule book, regardless of the course fired. Qualifying score shall be an accumulated total of 80 percent of the maximum obtainable score.

C. Shotgun--Guards, armed escorts, and armed response personnel assigned to use the 12 gauge shotgun by the licensee training and qualifications plan shall qualify with a full choke or improved modified choke 12 gauge shotgun firing the following course:

Range	Position	No. Rounds[1]	Target[2]
15 yds	Hip fire point	4	B-27
25 yds	Shoulder	4	B-27

[1]The 4 rounds shall be fired at 4 separate targets within 10 seconds using 00 gauge (9 pellet) shotgun shells.
[2]As set forth by the National Rifle Association (NRA) in its official rules and regulations, "NRA Target Manufacturers Index,"' December 1976. The Index has been approved for incorporation by reference by the Director of the *Federal Register*. A copy of the index is available for inspection at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852-2738.

To qualify the individual shall be required to place 50 percent of all pellets (36 pellets) within the black silhouette.

D. Requalification-Individuals shall be weapons requalified at least every 12 months in accordance with the NRC approved licensee training and qualifications plan, and in accordance with the requirements stated in A, B, and C of this section.

V. Guard, armed response personnel, and armed escort equipment.

A. Fixed Site--Fixed site guards and armed response personnel shall either be equipped with or have available the following security equipment appropriate to the individual's assigned contingency security related tasks or job duties as described in the licensee physical security and contingency plans:

1. Semiautomatic rifles with following nominal minimum specifications:

(a) .223 caliber.
(b) Muzzle velocity, 1980 ft/sec.
(c) Muzzle energy, 955 foot-pounds.
(d) Magazine or clip load of 10 rounds.
(e) Magazine reload, < 10 seconds.
(f) Operable in any environment in which it will be used.

2. 12 gauge shotguns with the following capabilities:

(a) 4 round pump or semiautomatic.
(b) Operable in any environment in which it will be used.
(c) Full or modified choke.

3. Semiautomatic pistols or revolvers with the following nominal minimum specifications:

(a) .354 caliber.
(b) Muzzle energy, 250 foot-pounds.
(c) Full magazine or cylinder reload capability < 6 seconds.
(d) Muzzle velocity, 850 ft/sec.
(e) Full cylinder or magazine capacity, 6 rounds.
(f) Operable in any environment in which it will be used.

4. Ammunition:

(a) For each assigned weapon as appropriate to the individual's assigned contingency security job duties and as readily available as the weapon:

(1) 18 rounds per handgun.
(2) 100 rounds per semiautomatic rifle.
(3) 12 rounds each per shotgun (00 gauge and slug).

(b) Ammunition available on site--two (2) times the amount stated in (a) above for each weapon.

5. Personal equipment to be readily available for individuals whose assigned contingency security job duties, as described in the licensee physical security and contingency plans, warrant such equipment:

(a) Helmet, combat.
(b) Gas mask, full face.
(c) Body armor (bullet-resistant vest).
(d) Flashlights and batteries.
(e) Baton.
(f) Handcuffs.
(g) Ammunition/equipment belt.
6. Binoculars.
7. Night vision aids, i.e., hand-fired illumination flares or equivalent.
8. Tear gas or other nonlethal gas.
9. Duress alarms.
10. Two-way portable radios (handi-talkie) 2 channels minimum, 1 operating and 1 emergency.

B. Transportation--Armed escorts shall either be equipped with or have readily available the following security equipment appropriate to the individual's assigned contingency security related tasks or job duties, as described in the licensee physical security and contingency plans:

1. Semiautomatic rifles with the following nominal minimum specifications:

(a) .223 caliber.
(b) Muzzle velocity, 1,980 ft/sec.
(c) Muzzle energy, 955 foot-pounds.
(d) Magazine or clip of 10 rounds.
(e) Reload capability, 10 seconds.
(f) Operable in any environment in which it will be used.

2. 12 gauge shotguns.

(a) 4 round pump or semiautomatic.
(b) Operable in any environment in which it will be used.
(c) Full or modified choke.

3. Semiautomatic pistols or revolvers with the following nominal minimum specifications:

(a) .354 caliber.
(b) Muzzle energy, 250 foot-pounds.
(c) Full magazine or cylinder reload capability 6 seconds.
(d) Muzzle velocity, 850 ft/sec.
(e) Full cylinder or magazine capacity, 6 rounds.
(f) Operable in any environment in which it will be used.

4. Ammunition for each shipment.

(a) For each assigned weapon as appropriate to the individual's assigned contingency security job duties and as readily available as the

weapon:

(1) 36 rounds per handgun.
(2) 120 rounds per semiautomatic rifle.
(3) 12 rounds each per shotgun (00 gauge and slug).

5. Escort vehicles, bullet resisting, equipped with communications systems, red flares, first aid kit, emergency tool kit, tire changing equipment, battery chargers for radios (where appropriate, for recharging portable radio batteries).

6. Personal equipment to be readily available for individuals whose assigned contingency security job duties, as described in the licensee physical security and contingency plans, warrant such equipment:

(a) Helmet, combat.
(b) Gas mask, full face.
(c) Body armor (bullet-resistant vest).
(d) Flashlights and batteries.
(e) Baton.
(f) Ammunition/equipment belt.
(g) Pager/duress alarms.
7. Binoculars.

8. Night vision aids, i.e., hand-fired illumination flares or equivalent.

9. Tear gas or other nonlethal gas.

[43 FR 37426, Aug. 23, 1978, as amended at 46 FR 2026, Jan. 8, 1981; 53 FR 405, Jan. 7, 1988; 53 FR 19261, May 27, 1988; 57 FR 33432, July 29, 1992; 57 FR 61787, Dec. 29, 1992; 59 FR 50689, Oct. 5, 1994]

1. Copies of the "NRA High Power Rifle Rules" may be examined at, or obtained from, the National Rifle Association, 1600 Rhode Island Avenue NW., Washington, DC 20036.

Appendix C to Part 73—Licensee Safeguards Contingency Plans

[Top of File]

Introduction

A licensee safeguards contingency plan is a documented plan to give guidance to licensee personnel in order to accomplish specific defined objectives in the event of threats, thefts, or radiological sabotage relating to special nuclear material or nuclear facilities licensed under the Atomic Energy Act of 1954, as amended. An acceptable
safeguards contingency plan must contain:

(1) A predetermined set of decisions and actions to satisfy stated objectives;

(2) An identification of the data, criteria, procedures, and mechanisms necessary to efficiently implement the decisions; and

(3) A stipulation of the individual, group, or organizational entity responsible for each decision and action. The goals of licensee safeguards contingency plans for responding to threats, thefts, and radiological sabotage are:

(1) To organize the response effort at the licensee level;

(2) To provide predetermined, structured responses by licensees to safeguards contingencies;

(3) To ensure the integration of the licensee response with the responses by other entities; and

(4) To achieve a measurable performance in response capability.

Licensee safeguards contingency planning should result in organizing the licensee's resources in such a way that the participants will be identified, their several responsibilities specified, and the responses coordinated. The responses should be timely.

It is important to note that a licensee's safeguards contingency plan is intended to be complementary to any emergency plans developed under appendix E to part 50 of this chapter, § 52.17 or § 52.79, or to § 70.22(i) of this chapter.

Contents Of The Plan

Each licensee safeguards contingency plan shall include five categories of information:

1. Background
2. Generic Planning Base
3. Licensee Planning Base
4. Responsibility Matrix
5. Procedures

Although the implementing procedures (the fifth category of Plan information) are the culmination of the planning process, and therefore are an integral and important part of the safeguards contingency plan, they entail operating details subject to frequent changes. They need not be submitted to the Commission for approval, but will be inspected by NRC staff on a periodic basis. The licensee is responsible for ensuring that the implementing procedures reflect the information in the Responsibility Matrix, appropriately summarized and suitably presented for effective use by the responding entities.

The following paragraphs describe the contents of the safeguards contingency plan.

1. *Background*. Under the following topics, this category of information shall identify and define the perceived dangers and incidents with which the plan will deal and the general way it will handle these:

a. Perceived Danger--A statement of the perceived danger to the security of special nuclear material, licensee personnel, and licensee property, including covert diversion of special nuclear material, radiological sabotage, and overt attacks. The statement of perceived danger should conform with that promulgated by the Nuclear Regulatory Commission. (The statement contained in 10 CFR 73.55(a) or subsequent Commission statements will suffice.)

b. Purpose of the Plan--A discussion of the general aims and operational concepts underlying implementation of the plan.

c. Scope of the Plan--A delineation of the types of incidents covered in the plan.

d. Definitions--A list of terms and their definitions used in describing operational and technical aspects of the plan.

2. *Generic Planning Base*. Under the following topics, this category of information shall define the criteria for initiation and termination of responses to safeguards contingencies together with the specific decisions, actions, and supporting information needed to bring about such responses:

a. Identification of those events that will be used for signaling the beginning or aggravation of a safeguards contingency according to how they are perceived initially by licensee's personnel. Such events may include alarms or other indications signaling penetration of a protected area, vital area, or material access area; material control or material accounting indications of material missing or unaccounted for; or threat indications--either verbal, such as telephoned threats, or implied, such as escalating civil disturbances.

b. Definition of the specific objective to be accomplished relative to each identified event. The objective may be to obtain a level of awareness about the nature and severity of the safeguards contingency in order to prepare for further responses; to establish a level of response preparedness; or to successfully nullify or reduce any adverse safeguards consequences arising from the contingency.

3. *Licensee Planning Base*. This category of information shall include the factors affecting contingency planning that are specific for each facility or means of transportation. To the extent that the topics are treated in adequate detail in the licensee's approved physical security plan, they may be incorporated by cross reference to that plan. The following topics should be addressed:

a. Licensee's Organizational Structure for Contingency Responses--A delineation of the organization's chain of command and delegation of authority as these apply to safeguards contingencies.

b. Physical Layout--(i) Fixed Sites--A description of the physical structures and their location on the site, and a description of the site in relation to nearby town, roads, and other environmental features important to the effective coordination of response operations. Particular emphasis should be placed on main and alternate entry routes for law-enforcement assistance forces and the location of control points for marshalling and coordinating response activities.

(ii) Transportation--A description of the vehicles, shipping routes, preplanned alternate routes, and related features.

c. Safeguards Systems Hardware--A description of the physical security and accounting system hardware that influence how the licensee will respond to an event. Examples of systems to be discussed are communications, alarms, locks, seals, area access, armaments, and surveillance.

d. Law Enforcement Assistance--A listing of available local law enforcement agencies and a description of their response capabilities and their criteria for response; and a discussion of working agreements or arrangements for communicating with these agencies.

e. Policy Constraints and Assumptions--A discussion of State laws, local ordinances, and company policies and practices that govern licensee response to incidents. Examples that may be discussed include:

Use of deadly force;
Use of employee property;
Use of off-duty employees;
Site security jurisdictional boundaries.

f. Administrative and Logistical Considerations--Descriptions of licensee practices that may have an influence on the response to safeguards contingency events. The considerations shall include a description of the procedures that will be used for ensuring that all equipment needed to effect a successful response to a safeguards contingency will be easily accessible, in good working order, and in sufficient supply to provide redundancy in case of equipment failure.

4. *Responsibility Matrix*. This category of information consists of detailed identification of the organizational entities responsible for each decision and action associated with specific responses to safeguards contingencies. For each initiating event, a tabulation shall be made for each response entity depicting the assignment of responsibilities for all decisions and actions to be taken in response to the initiating event. (Not all entities will have assigned responsibilities for any given initiating event.) The tabulations in the Responsibility Matrix shall provide an overall picture of the response actions and their interrelationships. Safeguards responsibilities shall be assigned in a manner that precludes conflict in duties or responsibilities that would prevent the execution of the plan in any safeguards contingency.

5. Procedures. In order to aid execution of the detailed plan as developed in the Responsibility Matrix, this category of information shall detail the actions to be taken and decisions to be made by each member or unit of the organization as planned in the Responsibility Matrix.

Audit and Review

(1) For nuclear facilities subject to the requirements of § 73.46, the licensee shall provide for a review of the safeguards contingency plan at intervals not to exceed 12 months. For nuclear power reactor licensees subject to the requirements of § 73.55, the licensee shall provide for a review of the safeguards contingency plan either:

(i) At intervals not to exceed 12 months, or

(ii) As necessary, based on an assessment by the licensee against performance indicators, and as soon as reasonably practicable after a change occurs in personnel, procedures, equipment, or facilities that potentially could adversely affect security, but no longer than 12 months after the change. In any case, each element of the safeguards contingency plan must be reviewed at least every 24 months.

(2) A licensee subject to the requirements of either § 73.46 or § 73.55 shall ensure that the review of the safeguards contingency plan is by individuals independent of both security program management and personnel who have direct responsibility for implementation of the security program. The review must include an audit of safeguards contingency procedures and practices, and an audit of commitments established for response by local law enforcement authorities.

(3) The licensee shall document the results and the recommendations of the safeguards contingency plan review, management findings on whether the safeguards contingency plan is currently effective, and any actions taken as a result of recommendations from prior reviews in a report to the licensee's plant manager and to corporate management at least one level higher than that having responsibility for the day-to-day plant operation. The report must be maintained in an auditable form, available for inspection for a period of 3 years.

(Sec. 161i, Pub. L. 83-703, 68 Stat. 948, secs. 201, 204(b)(1), Pub L. 93-438, 88 Stat. 1243, 1245 (42 U.S.C. 2201, 5841, 5844))

[43 FR 11965, Mar. 23, 1978; 43 FR 14007, Apr. 4, 1978, as amended at 57 FR 33432, July 29, 1992; 64 FR 14818, Mar. 29, 1999; 72 FR 49562, Aug. 28, 2007]

Appendix D to Part 73--Physical Protection of Irradiated Reactor Fuel in Transit, Training Program Subject Schedule

[Top of File]

Pursuant to the provision of § 73.37 of 10 CFR part 73, each licensee who transports or delivers to a carrier for transport irradiated reactor fuel is required to assure that individuals used as shipment escorts have completed a training program. The subjects that are to be included in this training program are as follows;

Security Enroute

-- Route planning and selection
-- Vehicle operation
-- Procedures at stops
-- Detours and use of alternate routes

Communications

-- Equipment operation
-- Status reporting
-- Contacts with law enforcement units
-- Communications discipline
-- Procedures for reporting incidents

Radiological Considerations

-- Description of the radioactive cargo

-- Function and characteristics of the shipping casks
-- Radiation hazards
-- Federal, State and local ordinances relative to the shipment of radioactive materials
-- Responsible agencies

Response to Contingencies

-- Accidents
-- Severe weather conditions
-- Vehicle breakdown
-- Communications problems
-- Radioactive "spills"
-- Use of special equipment (flares, emergency lighting, etc.)

Response to Threats

-- Reporting
-- Calling for assistance
-- Use of immobilization features
-- Hostage situations
-- Avoiding suspicious situations

The licensee is also required to assure that armed individuals serving as shipment escorts, other than members of local law enforcement agencies, have completed a weapons training and qualifications program equivalent to that required of guards, as described in III and IV of appendix B of this part, to assure that each such individual is fully qualified to use weapons assigned him.

[44 FR 34468, June 15, 1979, as amended at 45 FR 34710, June 3, 1980]

Appendix E to Part 73--Levels of Physical Protection To Be Applied in International Transport of Nuclear Material[1]

[Top of File]

Category I is a formula quantity of strategic special nuclear material;

(Verbatim from Annex I to the Convention on the Physical Protection of Nuclear Material)

(a) Levels of physical protection for nuclear material during storage incidental to international nuclear transport include:

(1) For Category III materials, storage within an area to which access is controlled;

(2) For Category II materials, storage within an area under constant surveillance by guards or electronic devices, surrounded by a physical barrier with a limited number of points of entry under appropriate control or any area with an equivalent level of physical protection;

(3) For Category I material, storage within a protected area as defined for Category II, to which, in addition, access is restricted to persons whose trustworthiness has been determined, and which is under surveillance by guards who are in close communication with appropriate response forces. Specific measures taken in this context should have as their objective the detection and prevention of any assault, unauthorized access, or unauthorized removal of material.

(b) Levels of physical protection for nuclear material during international transport include:

(1) For Category II and III materials, transportation shall take place under special precautions including prior arrangements among sender, receiver, and carrier, and prior agreement between natural or legal persons subject to the jurisdiction and regulation of exporting and importing States, specifying time, place and procedures for transferring transport responsibility;

(2) For Category I materials, transportation shall take place under special precautions identified for transportation of Category II and III materials, and in addition, under constant surveillance by escorts and under conditions which assure close communication with appropriate response forces;

(3) For natural uranium other than in the form of ore or ore residue, transportation protection for quantities exceeding 500 kilograms U shall include advance notification of shipment specifying mode of transport, expected time of arrival and [shall provide for] confirmation of receipt of shipment.

[52 FR 9654, Mar. 26, 1987]

[1] See appendix C to part 110 of this chapter from the physical description of the categories of nuclear material as set forth in Annex I to the Convention. For the purposes of this part, the following categories of nuclear material are synonymous:
Category I is a formula quantity of strategic special nuclear material;

Category II is special nuclear material of moderate strategic significance or irradiated fuel; and
Category III is special nuclear material of low strategic significance.

Appendix F to Part 73--Nations that are Parties to the Convention on the Physical Protection of Nuclear Material[1]

[Top of File]

Nation	Date of deposit of instrument of ratification with the IAEA
Brazil	Oct. 17, 1985.
Bulgaria	May 2, 1984.
Canada	Mar. 21, 1986.
Czechoslovakia	Apr. 23, 1982.
German Democratic Republic (E. Germany)	Feb. 5, 1981.
Guatemala	Apr 23, 1985.
Hungary	May 4, 1984.
Indonesia	Nov. 5, 1986.
Korea, Republic of	Apr. 7, 1982.
Liechtenstein	Nov. 25, 1986.
Mongolia	May 28, 1986.
Norway	Aug. 15, 1985.
Paraguay	Feb. 6, 1985.
Philippines	Sept. 22, 1981.
Poland	Oct. 5, 1983.
Sweden	Aug. 1, 1980.
Switzerland	Jan. 9, 1987.
Turkey	Feb. 27, 1985.
Yugoslavia	May 14, 1986.
Union of Soviet Socialist Republic	May 25, 1983.
United States of America	Dec. 13, 1982.

[52 FR 9654, Mar. 26, 1987]

[1]An update list of party nations will appear annually in the Department of State's publication, Treaties in Force. Appendix F will be amended as requried to maintain its currency.

Appendix G to Part 73--Reportable Safeguards Events

[Top of File]

Pursuant to the provisions of 10 CFR 73.71 (b) and (c), licensees subject to the provisions of 10 CFR 73.20, 73.37, 73.50, 73.55, 73.60, and 73.67 shall report or record, as appropriate, the following safeguards events.

I. Events to be reported within one hour of discovery, followed by a written report within 60 days.

(a) Any event in which there is reason to believe that a person has commited or caused, or attempted to commit or cause, or has made a credible threat to commit or cause:

(1) A theft or unlawful diversion of special nuclear material; or

(2) Significant physical damage to a power reactor or any facility possessing SSNM or its equipment or carrier equipment transporting nuclear fuel or spent nuclear fuel, or to the nuclear fuel or spent nuclear fuel a facility or carrier possesses; or

(3) Interruption of normal operation of a licensed nuclear power reactor through the unauthorized use of or tampering with its machinery, components, or controls including the security system.

(b) An actual entry of an unauthorized person into a protected area, material access area, controlled access area, vital area, or transport.

(c) Any failure, degradation, or the discovered vulnerability in a safeguard system that could allow unauthorized or undetected access to a protected area, material access area, controlled access area, vital area, or transport for which compensatory measures have not been employed.

(d) The actual or attempted introduction of contraband into a protected area, material access area, vital area, or transport.

II. Events to be recorded within 24 hours of discovery in the safeguards event log.

(a) Any failure, degradation, or discovered vulnerability in a safeguards system that could have allowed unauthorized or undetected access to a protected area, material access area, controlled access area, vital area, or transport had compensatory measures not been established.

(b) Any other threatened, attempted, or committed act not previously defined in appendix G with the potential for reducing the effectiveness of the safeguards system below that committed to in a licensed physical security or contingency plan or the actual condition of such reduction in effectiveness.

[52 FR 21658, June 9, 1987, as amended at 60 FR 13618, Mar. 14, 1995; 68 FR 33617, June 5, 2003]

Appendix H to Part 73--Weapons Qualification Criteria

[Top of File]

The B-27 Target or a target of equivalent difficulty will be used for all weapon qualification testing.

Table H-1 Minimum Day Firing Crteria[1]
[See footnotes at end of Table H-1]

Weapon	Stage	String[2]	Distance	Number of Rounds	Timing[3]	Position	Scoring
Handgun	1	1	3 yards	6	9 seconds	Draw and fire 2 rounds (repeat 2 times) 3 seconds each string.	Minimum qualifying-70%
		2					
		3					
	2	1	7 yards	6	10 seconds	Draw and fire 2 rounds at center mass and 1 round at the head (repeat once) 5 seconds each string.	
		2					
	3	1	7 yards	6	12 seconds (4 seconds each string).	Using weaker hand only, from the low ready position, fire 2 rounds (repeat twice).	
		2					
		3					
	4	1	10 yards	2	4 seconds	Draw and fire 2 rounds, come to low ready position.	
		2	10 yards	2	3 seconds	Fire 2 rounds from low ready position and reholster.	
		3	10 yards	4	12 seconds (revolver) 10 seconds (semiautomatic)	Draw and fire 2 rounds, reload, fire 2 rounds and reholster.	
		4	10 yards	2	4 seconds	Draw and fire 2 rounds, come to low ready position.	
		5	10 yards	2	3 seconds	Fire 2 rounds from low ready position and reholster.	
	5	1	15 yards	2	5 seconds	Standing, draw weapon, move to kneeling position, then fire 2 rounds and reholster.	
		2	15 yards	2	5 seconds	Standing, draw weapon, move to kneeling position, then fire 2 rounds and reholster.	

	5	3	15 yards	4	14 seconds (revolver) 12 seconds (semiautomatic).	Standing, draw weapon, fire 2 rounds, move to kneeling position and fire 2 rounds, reload and reholster.	Minimum qualifying = 70%.
		4	15 yards	2	5 seconds	Draw weapon and fire 2 rounds standing, come to low ready position and...	
		5	15 yards	2	3 seconds	Fire 2 rounds from low ready.	
	6	1	25 yards	2	5 seconds	Draw and fire 2 rounds, standing, left side of barricade.	
		2	25 yards	2	5 seconds	Draw and fire 2 rounds, right side of barricade (standing).	
		3	25 yards	4	15 seconds (revolver) 12 seconds (semi-automatic).	Draw weapon and move from standing to kneeling position, fire 2 rounds, left side of barricade, reload, and from the kneeling position, fire 2 rounds, right side of barricade.	
		4	25 yards	2	10 seconds	Draw weapon and move from standing to prone, fire 2 rounds.	
		5	25 yards	2	10 seconds	Draw weapon and move from standing position to prone, fire 2 rounds.	
	7	1	50 yards	2	8 seconds	Draw weapon and fire 2 rounds from a standing barricade position (right or left side, shooter's option).	
		2	50 yards	2	10 seconds	Draw weapon and fire 2 rounds from a kneeling barricade position (right or left side, shooter's option).	
		3	50 yards	2	12 seconds	Draw weapon and fire 2 rounds from prone position.	
Shotgun	1	1	7 yards	2 Double 0 buck-shot	4 seconds	At low ready position fire 2 rounds standing.	Minimum qualifying = 70%
	2	1 2	15 yards	4 Double 0 buck-shot	15 seconds	At low ready position fire 2 rounds standing, reload and fire 2 rounds.	
	3	1 2	25 yards	4 rifled slugs or 00 buck-shot	20 seconds	On command, load 4 rounds and fire 2 rounds standing and 2 rounds kneeling.	
Rifle	1	1 2 3	15 yards	6	10 seconds (4 seconds for 1st string, 3 seconds for each of 2nd and 3rd string).	Standing in low ready position, move to standing point shoulder position (1 magazine loaded with 6 rounds, weapon in half-load configuration), fire 2 rounds per string.	Minimum qualifying = 70%
	2	1 2 3	25 yards	6	11 seconds (5 seconds for 1st string, 3 seconds for each of 2nd and 3rd string).	Standing in low ready position, move to standing point shoulder position (1 magazine loaded with 6 rounds, weapon in half-load configuration), fire 2 rounds per string.	

	3	1 2 3	25 yards	6	17 seconds (7 seconds for 1st string, 5 seconds for each of 2nd and 3rd string).	Standing in low ready position, move to kneeling point shoulder position (1 magazine loaded with 6 rounds, weapon in half-load configuration), fire 2 rounds per string.	
	4	1 2	50 yards	4	16 seconds (9 seconds for 1st string, 7 seconds for 2nd string).	Standing in low ready position, move to kneeling point shoulder position (1 magazine loaded with 4 rounds, weapon in half-load configuration), fire 2 rounds per string.	
	[4]5	1	50 yards	4	20 seconds	Standing in low ready position, move to prone (weapon in half-load configuration) with two magazines each loaded with 2 rounds, fire 2 rounds, reload with 2nd magazine and fire 2 rounds.	Minimum qualifying = 70%
	[4]6	1	100 yards	4	25 seconds	Standing in low ready position, move to prone (weapon in half-load configuration) two magazines each loaded with 2 rounds, fire 2 rounds, reload with 2nd magazine and fire 2 rounds.	

Footnotes:

[1]This day firing qualifications course is to be used by all TRT members, armed response personnel, and guards.

[2]A string is one of the different phases within a single stage.

[3]Security personnel will be timed as shown.

[4]Stages 5 and 6 are to used for .30 caliber or larger rifles.

Table H-2.-Minimum Night Firing Criteria

Weapon	Stage	Distance	No. of rounds	Timing	Position	Scoring	Lighting
Handgun (Rev.)	1	7 yards	12	35 seconds	Standing-no artificial support.	Minimum qualifying=70%	For all courses 0.2 foot-candles at center mass of target area.
	2	15 yards	12	45 seconds			
Handgun (Semi-)	1	7 yards	2+clip	30 seconds	Standing-no artificial support.		
	2	15 yards	2+clip	40 seconds			
Shotgun	1	25 yards	2 rifled slugs	30 seconds (Load 2 slugs-chamber empty-Time Starts- Commence firing)	Standing-strong shoulder	Rifled slug hits=strike area on target (10, 9, 7).	
	1	15 yards	5 Double 0 buckshot	10 seconds (Load 5rds Buckshot-chamber, empty-Time starts-Commence firing).	Standing-strong shoulder	Double 0 Buckshot: Hits in black=2 pts (5RDS x 9 pellets/rd x 2 pts=90) Minimum qualifying=70%	
Rifle	1	25 yards	1-5rd mag	45 seconds	Standing barricade	Minimum qualifying=70%	
	2	25 yards	1-5rd mag	45 seconds	Standing.		
	3	25 yards	1-5rd mag	45 seconds	Kneeling.		
	4	25 yards	1-5rd mag	45 seconds	Prone.		

Note-All firing is to be done only at night. Use of night simulation equipment during daylight is not allowable. Use of site specific devices (i.

e., laser, etc.) should be included in the licensee amended security plan for NRC approval.

[58 FR 45785, Aug. 31, 1993]

Appendix I to Part 73—Category 1 and 2 Radioactive Materials

[Top of File]

Table I–1—Quantities of Concern Threshold Limits

Radionuclides	Category 1		Category 2	
	Terabecquerels	Curies (TBq)(Ci)[1]	Terabecquerels	Curies (TBq)(Ci)[1]
Americium-241	6×10^{1}	1.6×10^{3}	6×10^{-1}	1.6×10^{1}
Americium-241/Be	6×10^{1}	1.6×10^{3}	6×10^{-1}	1.6×10^{1}
Californium-252	2×10^{1}	5.4×10^{2}	2×10^{-1}	5.4
Curium-244	5×10^{1}	1.4×10^{3}	5×10^{-1}	1.4×10^{1}
Cobalt-60	3×10^{1}	8.1×10^{2}	3×10^{-1}	8.1
Cesium-137	1×10^{2}	2.7×10^{3}	1	2.7×10^{1}
Gadolinium-153	1×10^{3}	2.7×10^{4}	1×10^{1}	2.7×10^{2}
Iridium-192	8×10^{1}	2.2×10^{3}	8×10^{-1}	2.2×10^{1}
Promethium-147	4×10^{4}	1.1×10^{6}	4×10^{2}	1.1×10^{4}
Plutonium-238	6×10^{1}	1.6×10^{3}	6×10^{-1}	1.6×10^{1}
Plutonium-239/Be	6×10^{1}	1.6×10^{3}	6×10^{-1}	1.6×10^{1}
Radium-226	4×10^{1}	1.1×10^{3}	4×10^{-1}	1.1×10^{1}
Selenium-75	2×10^{2}	5.4×10^{3}	2	5.4×10^{1}
Strontium-90 (Y-90)	1×10^{3}	2.7×10^{4}	1×10^{1}	2.7×10^{2}
Thulium-170	2×10^{4}	5.4×10^{5}	2×10^{2}	5.4×10^{3}
Ytterbium-169	3×10^{2}	8.1×10^{3}	3	8.1×10^{1}

[1] The regulatory standard values are given in TBq. Curie (Ci) values are provided for practical usefulness only and are rounded after conversion.

Calculations Concerning Multiple Sources or Multiple Radionuclides

The ''sum of fractions'' methodology for evaluating combinations of multiple sources or multiple radionuclides, is to be used in determining whether a facility or activity meets or exceeds the threshold limits and is thus subject to the physical and/or information security requirements of this part.

I. If multiple sources and/or multiple radionuclides are present in a facility or activity, the sum of the fractions of the activity of each of the radionuclides must be determined to verify the facility or activity is less than the Category 1 or 2 limits of Table 1, as appropriate. Otherwise, if the calculated sum of the fractions ratio, using the following equation, is greater than or equal to 1.0, then the facility or activity meets or exceeds the threshold limits of Table 1 and the applicable physical and/or information security provisions of this part apply.

II. Use the equation below to calculate the sum of the fractions ratio by inserting the actual activity of the applicable radionuclides from Table 1 or of the individual sources (of the same radionuclides from Table 1) in the numerator of the equation and the corresponding threshold activity limit from Table 1 in the denominator of the equation. Sum of the fraction calculations must be performed in metric values (i.e., TBq) and the numerator and denominator values must be in the same units.

R_1 = activity for radionuclides or source number 1
R_2 = activity for radionuclides or source number 2
R_N = activity for radionuclides or source number n
AR_1 = activity limit for radionuclides or source number 1
AR_2 = activity limit for radionuclides or source number 2
AR_N = activity limit for radionuclides or source number n

$$\sum_{1}^{n}\left[\frac{R_1}{AR_1}+\frac{R_2}{AR_2}+\frac{R_n}{AR_n}\right]\geq 1.0$$

[73 FR 63580, Oct. 24, 2008]

PART 74--MATERIAL CONTROL AND ACCOUNTING OF SPECIAL NUCLEAR MATERIAL

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 74.1 Purpose.

(a) This part has been established to contain the requirements for the control and accounting of special nuclear material at fixed sites and for documenting the transfer of special nuclear material. General reporting requirements as well as specific requirements for certain licensees possessing special nuclear material of low strategic significance, special nuclear material of moderate strategic significance, and formula quantities of strategic special nuclear material are included. Requirements for the control and accounting of source material at enrichment facilities are also included.

(b) The general conditions and procedures for the submittal of a license application for the activities covered in this part are detailed in § 70.22 of this chapter.

[50 FR 7579, Feb. 25, 1985, as amended at 56 FR 55998, Oct. 31, 1991; 67 FR 78144, Dec. 23, 2002]

§ 74.2 Scope.

[Top of File]

(a) The general reporting and recordkeeping requirements of subpart B of this part apply to each person licensed under this chapter who possesses special nuclear material in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium; or who transfers or receives a quantity of special nuclear material of one gram or more of contained uranium-235, uranium-233, or plutonium. The general reporting and recordkeeping requirements of subpart B of this part do not apply to licensees whose MC&A reporting and recordkeeping requirements are covered by §§ 72.72, 72.76, and 72.78 of this chapter.

(b) In addition, specific control and accounting requirements are included in subparts C, D, and E for certain licensees who:

(1) Possess and use formula quantities of strategic special nuclear material;

(2) Possess and use special nuclear material of moderate strategic significance;

(3) Possess and use special nuclear material of low strategic significance; or

(4) Possess uranium source material and equipment capable of producing enriched uranium.

(c) As provided in part 76 of this chapter, the regulations of this part establish procedures and criteria for material control and accounting for the issuance of a certificate of compliance or the approval of a compliance plan.

[50 FR 7579, Feb. 25, 1985, as amended at 56 FR 55998, Oct. 31, 1991; 59 FR 48960, Sept. 23, 1994; 67 FR 78144, Dec. 23, 2002; 73 FR 32463, Jun. 9, 2008]

§ 74.4 Definitions.

[Top of File]

As used in this part:

Abrupt loss means a loss occurring in the time interval between consecutive sequential performances of a material control test which is designed to detect anomalies potentially indicative of a loss of strategic special nuclear material from a specific unit of SSNM (i.e., a quantity characterized by a unique measurement) introduced into a process.

Accessible location means a process location at which SSNM could be acquired without leaving evidence of the acquisition, i.e., without tools or other equipment to obviously violate the integrity of the containment.

Act means the Atomic Energy Act of 1954 (68 Stat. 919), including any amendments thereto.

Active inventory means the sum of additions to inventory, beginning inventory, ending inventory, and removals from inventory, after all common terms have been excluded. Common terms are any material values which appear in the active inventory calculation more than once and come from the same measurement.

Additions to material in process means: (1) Receipts that are opened, except for receipts opened only for sampling and subsequently maintained under tamper-safing; (2) opened sealed sources; and (3) material removed from process for nonconformance with chemical or physical specifications that is subsequently reprocessed, measured for contained SSNM, and reintroduced to process.

Alarm Threshold means a predetermined quantity of SSNM calculated from the specified probability of detection for a given loss and the standard deviation associated with a material control test. An alarm threshold serves to trigger a response action.

Batch means a portion of source material or special nuclear material handled as a unit for accounting purposes at a key measurement point and for which the composition and quantity are defined by a single set of measurements. The source material or special nuclear material may be in bulk form or contained in a number of separate items.

Beginning inventory (BI) means the book inventory quantity at the beginning of an inventory period, and is the reconciled physical inventory entered into the books as an adjusted inventory at the completion of the prior inventory period.

Bias means the deviation of the expected value of a random variable from the corresponding correct or assigned value.

Calibration means the process of determining the numerical relationship between the observed output of a measurement system and the value, based upon reference standards, of the characteristic being measured.

Category IA material means SSNM directly useable in the manufacture of a nuclear explosive device, except if:

(1) The dimensions are large enough (at least two meters in one dimension, greater than one meter in each of two dimensions, or greater than 25cm in each of three dimensions) to preclude hiding the item on an individual;

(2) The total weight of an encapsulated item of SSNM is such that it cannot be carried inconspicuously by one person (i.e., at least 50 kilograms gross weight); or

(3) The quantity of SSNM (less than 0.05 formula kilograms) in each container requires protracted diversions to accumulate five formula kilograms.

Category IB material means all SSNM material other than Category IA.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Continuous process means a unit process in which feed material must be introduced in a systematic manner in order to maintain equilibrium conditions.

Controlled access area means any temporarily or permanently established area which is clearly demarcated, access to which is controlled, and which affords isolation of the material or persons within it.

DOE means the U.S. Department of Energy or its duly authorized representatives.

Effective kilograms of special nuclear material means:

(1) For plutonium and uranium-233 their weight in kilograms;

(2) For uranium with an enrichment in the isotope U^{235} of 0.01 (1 percent) and above, its element weight in kilograms multiplied by the square of its enrichment expressed as a decimal weight fraction; and

(3) For uranium with an enrichment in the isotope U^{235} below 0.01 (1 percent), its element weight in kilograms multiplied by 0.0001.

Element means uranium or plutonium.

Estimate means a specific numerical value arrived at by the application of an estimator.

Estimator means a function of a sample measurement used to estimate a population parameter.

Fissile isotope means: (1) Uranium U-233, or (2) uranium-235 by enrichment category, (3) plutonium-239, and (4) plutonium-241.

Formula kilogram means SSNM in any combination in a quantity of 1000 grams computed by the formula, grams=(grams contained U-235) + 2.5 (grams U-233 + grams plutonium).

Formula quantity means strategic special nuclear material in any combination in a quantity of 5,000 grams or more computed by the formula, grams=(grams contained U^{235})+2.5 (grams U^{233}+grams plutonium).

Government agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America, which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

High enriched uranium means uranium enriched to 20 percent or greater in the isotope uranium-235.

Inventory difference (ID) means the arithmetic difference obtained by subtracting the quantity of SNM tabulated from a physical inventory from the book inventory quantity. Book inventory quantity is equivalent to the beginning inventory (BI) plus additions to inventory (A) minus removals from inventory (R), while the physical inventory quantity is the ending inventory (EI) for the material balance period in question (as physically determined). Thus mathematically, ID = (BI + A-R) -EI or ID = BI + A-R-EI

ID is sometimes also referred to as *material unaccounted for* (MUF) in this chapter.

Item means any discrete quantity or container of special nuclear material or source material, not undergoing processing, having an unique identity and also having an assigned element and isotope quantity.

License, except where otherwise specified, means a license issued pursuant to part 70 of this chapter.

Low enriched uranium means uranium enriched below 20 percent in the isotope uranium-235.

Material means special nuclear material.

Material access area means any location which contains special nuclear material, within a vault or a building, the roof, walls, and floor of which constitute a physical barrier.

Material balance means the determination of an inventory difference (ID).

MC&A alarm means a situation in which there is: (1) an out-of-location item or an item whose integrity has been violated, (2) an indication of a flow of SSNM where there should be none, or (3) a difference between a measured or observed amount or property of material and its corresponding predicted or property value that exceeds a threshold established to provide the detection capability required by § 74.53.

Material control test means a comparison of a pre-established alarm threshold with the results of a process difference or process yield performed on a unit process.

Material in process means any special nuclear material possessed by the licensee except in unopened receipts, sealed sources, measured waste discards, and ultimate product maintained under tamper-safing.

Measurement includes sampling and means the determination of mass, volume, quantity, composition or other property of a material where such determinations are used for special nuclear material control and accounting purposes.

Measurement system means all of the apparatus, equipment, instruments and procedures used in performing a measurement.

Person means:

(1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy, except that the Department of Energy shall be considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), any state or any political subdivision of or any political entity within a state, any foreign government or nation or political subdivision of any such government or nation, or other entity; and

(2) Any legal successor, representative, agent, or agency of the foregoing.

Physical inventory means determination on a measured basis of the quantity of special nuclear material on hand at a given time. The methods of physical inventory and associated measurements will vary depending on the material to be inventoried and the process involved.

Plant means a set of processes or operations (on the same site, but not necessarily all in the same building) coordinated into a single manufacturing, R&D, or testing effort. A scrap recovery operation, or an analytical laboratory, serving both onsite and offsite customers (or more than one onsite manufacturing effort) should be treated as a separate plant.

Power of detection means the probability that the critical value of a statistical test will be exceeded when there is an actual loss of a specific SSNM quantity.

Process difference (PD) means the determination of an ID on a unit process level with the additional qualification that difficult to measure components may be modeled.

Process yield means the quantity of SSNM actually removed from a unit process compared with the quantity predicted (based on a measured input) to be available for removal. Process yield differs from a process difference in that holdup and sidestreams are not measured or modeled.

Produce when used in relation to special nuclear material, means: (1) To manufacture, make, produce, or refine special nuclear material; (2) to separate special nuclear material from other substances in which such material may be contained; or (3) to make or to produce new special nuclear material.

Random error means the deviation of a random variable from its expected value.

Receipt means special nuclear material received by a licensee from an off-site source.

Reconciliation means the process of evaluating and comparing licensee reports required under this part to the projected material balances generated by the Nuclear Materials Management and Safeguards System. This process is considered complete when the licensee resolves any differences between the reported and projected balances, including those listed for foreign obligated materials.

Reference standard means a material, device, or instrument whose assigned value is known relative to national standards or nationally accepted measurement systems. This is also commonly referred to as a traceable standard.

Removals from inventory means measured quantities of special nuclear material contained in:

(1) Shipments;

(2) Waste materials transferred to an onsite holding account via a DOE/NRC Form 741 transaction;

(3) Measured discards transported offsite; and

(4) Effluents released to the environment.

Removals of material from process (or removals from process) means measured quantities of special nuclear material contained in:

(1) Effluents released to the environment;

(2) Previously unencapsulated materials that have been encapsulated as sealed sources;

(3) Waste materials that will not be subject to further onsite processing and which are under tamper-safing;

(4) Ultimate product placed under tamper-safing; and

(5) Any materials (not previously designated as removals from process) shipped offsite.

Research and development means: (1) Theoretical analysis, exploration, or experimentation; or (2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials, and processes.

Scrap means the various forms of special nuclear material generated during chemical and mechanical processing, other than recycle material and normal process intermediates, which are unsuitable for continued processing, but all or part of which will be converted to useable material by appropriate recovery operations.

Sealed source means any special nuclear material that is physically encased in a capsule, rod, element, etc. that prevents the leakage or escape of the special nuclear material and that prevents removal of the special nuclear material without penetration of the casing.

Source material means source material as defined in section 11z. of the Act and in the regulations contained in part 40 of this chapter.

Special nuclear material means:

(1) Plutonium, uranium-233, uranium enriched in the isotope U^{233} or in the isotope U^{235}, and any other material which the Commission, pursuant to the provisions of section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material, but does not include source material; or

(2) Any material artificially enriched by any of the foregoing, but does not include source material.

Special nuclear material of low strategic significance means:

(1) Less than an amount of special nuclear material of moderate strategic significance, but more than 15 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U235 isotope) or 15 grams of uranium-233 or 15 grams of plutonium or the combination of 15 grams when computed by the equation, grams=grams contained U^{235}+grams plutonium+grams U^{233}; or

(2) Less than 10,000 grams but more than 1,000 grams of uranium-235 (contained in uranium enriched to 10 percent or more, but less

than 20 percent in the U^{235} isotope); or

(3) 10,000 grams or more of uranium-235 contained in uranium enriched above natural, but less than 10 percent in the U^{235} isotope.

Special nuclear material of moderate strategic significance means:

(1) Less than a formula quantity of strategic special nuclear material but more than 1,000 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U^{235} isotope) or more than 500 grams of uranium-233 or plutonium or in a combined quantity of more than 1,000 grams when computed by the equation, grams=(grams contained U^{235})+2 (grams U233+grams plutonium); or

(2) 10,000 grams or more or uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U^{235} isotope).

Standard Error of the Inventory Difference (SEID) means the standard deviation of an inventory difference that takes into account all measurement error contributions to the components of the ID.

Standard Error of the Process Difference means the standard deviation of a process difference value that takes into account both measurement and nonmeasurement contributions to the components of PD.

Strategic special nuclear material means uranium-235 (contained in uranium enriched to 20 percent or more in the U^{235} isotope), uranium-233, or plutonium.

Tamper-safing means the use of devices on containers or vaults in a manner and at a time that ensures a clear indication of any violation of the integrity of previouly made measurements of special nuclear material within the container or vault.

Traceability means the ability to relate individual measurement results to national standards or nationally accepted measurement systems through an unbroken chain of comparisons.

Ultimate product means any special nuclear material in the form of a product that would not be further processed at that licensed location.

Unit process means an identifiable segment or segments of processing activities for which the amounts of input and output SSNM are based on measurements.

Unopened receipts means receipts not opened by the licensee, including receipts of sealed sources, and receipts opened only for sampling and subsequently maintained under tamper-safing.

Vault means a windowless enclosure with walls, floor, roof and door(s) designed and constructed to delay penetration from forced entry.

[50 FR 7579, Feb. 25, 1985, as amended at 52 FR 10039, Mar. 30, 1987; 56 FR 55998, Oct. 31, 1991; 67 FR 78144, Dec. 23, 2002; 73 FR 32463, Jun. 9, 2008]

§ 74.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretations of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized as binding on the Commission.

§ 74.6 Communications.

[Top of File]

Any communication or report concerning the regulations in this part and any application filed under these regulations may be submitted to the Commission as follows:

(a) By mail addressed to: ATTN: Document Control Desk, Director of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(b) By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland.

(c) Where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can

accept, the use of electronic signatures, and the treatment of nonpublic information.

[50 FR 7579, Feb. 25, 1985, as amended at 53 FR 4112, Feb. 12, 1988; 53 FR 43422, Oct. 27, 1988; 68 FR 58821, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 74.7 Specific exemptions.

[Top of File]

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

§ 74.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0123.

(b) The approved information collection requirements contained in this part appear in §§ 74.11, 74.13, 74.15, 74.17, 74.19, 74.31, 74.33, 74.41, 74.43, 74.45, 74.51, 74.57, and 74.59.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 74.15, DOE/NRC Form-741 is approved under Control No. 3150-0003.

(2) In § 74.13, DOE/NRC Form-742 is approved under Control No. 3150-0004.

(3) In § 74.13, DOE/NRC Form-742C is approved under Control No. 3150-0058.

(4) In § 74.17, NRC Form 327 is approved under Control No. 3150-0139.

[50 FR 7579, Feb. 25, 1985, as amended at 52 FR 10040, Mar. 30, 1987; 52 FR 19305, May 22, 1987; 56 FR 55998, Oct. 31, 1991; 62 FR 52189, Oct. 6, 1997; 67 FR 78144, Dec. 23, 2002]

Subpart B--General Reporting and Recordkeeping Requirements

[Top of File]

§ 74.11 Reports of loss or theft or attempted theft or unauthorized production of special nuclear material.

(a) Each licensee who possesses one gram or more of contained uranium-235, uranium-233, or plutonium shall notify the NRC Operations Center within 1 hour of discovery of any loss or theft or other unlawful diversion of special nuclear material which the licensee is licensed to possess, or any incident in which an attempt has been made to commit a theft or unlawful diversion of special nuclear material. The requirement to report within 1 hour of discovery does not pertain to measured quantities of special nuclear material disposed of as discards or inventory difference quantities. Each licensee who operates an uranium enrichment facility shall notify the NRC Operations Center within 1 hour of discovery of any unauthorized production of enriched uranium. For centrifuge enrichment facilities the requirement to report enrichment levels greater than that authorized by license within 1 hour does not apply to each cascade during its start-up process, not to exceed the first 24 hours.

(b) This notification must be made to the NRC Operations Center via the Emergency Notification System if the licensee is party to that system. If the Emergency Notification System is inoperative or unavailable, the licensee shall make the required notification via commercial telephonic service or other dedicated telephonic system or any other method that will ensure that a report is received by the NRC Operations Center within one hour. The exemption of § 73.21(g)(3) applies to all telephonic reports required by this section.

(c) Reports required under § 73.71 need not be duplicated under requirements of this section.

[52 FR 21659, June 9, 1987; 52 FR 23257, June 18, 1987, as amended at 56 FR 55998, Oct. 31, 1991]

§ 74.13 Material status reports.

[Top of File]

(a) Each licensee, including nuclear reactor licensees as defined in §§ 50.21 and 50.22 of this chapter, possessing, or who had possessed in the previous reporting period, at any one time and location, special nuclear material in a quantity totaling one gram or more of contained uranium-235, uranium-233, or plutonium shall complete and submit, in computer-readable format Material Balance Reports concerning special nuclear material that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost. This prescribed computer-readable report replaces the DOE/NRC form 742 which has been previously submitted in paper form. The Physical Inventory Listing Report must be submitted with each Material Balance Report. This prescribed computer-readable report replaces the DOE/NRC Form 742C which has been previously submitted in paper form. Reports must be submitted for each Reporting Identification Symbol (RIS) account including all holding accounts. Each licensee shall prepare and submit the reports described in this paragraph as specified in the instructions in NUREG/BR–0007 and NMMSS Report D–24 ''Personal Computer Data Input for NRC Licensees.'' Copies of these instructions may be obtained from the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. Each licensee subject to the requirements of § 74.51 shall compile a report as of March 31 and September 30 of each year and file it within 30 days after the end of the period covered by the report. Licensees subject to the requirements of §§ 74.19(c), 74.31(c)(5), 74.33(c)(4), or 74.43(c)(6) shall submit a report within 60 calendar days of the beginning of the physical inventory. All other licensees shall submit a report no later than March 31 of each year. The Commission may permit a licensee to submit the reports at other times for good cause. Each licensee required to report material balance, and inventory information, as detailed in this part, shall resolve any discrepancies identified during the report review and reconciliation process within 30 calendar days of notification of a discrepancy identified by NRC.

(b) Any licensee who is required to submit routine Material Status Reports pursuant to § 75.35 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit these reports only as provided in that section (instead of as provided in paragraph (a) of this section).

[50 FR 7579, Feb. 25, 1985, as amended at 51 FR 9766, Mar. 21, 1986; 52 FR 31613, Aug. 21, 1987; 54 FR 6877, Feb. 15, 1989; 55 FR 5979, Feb. 21, 1990; 59 FR 35621, July 13, 1994; 67 FR 78144, Dec. 23, 2002; 73 FR 32463, Jun. 9, 2008]

§ 74.15 Nuclear material transaction reports.

[Top of File]

(a) Each licensee who transfers or receives special nuclear material in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium shall complete in computer-readable format a Nuclear Material Transaction Report. In addition, each licensee who adjusts the inventory in any manner, other than for transfers and receipts, shall submit a Nuclear Material Transaction Report, in computer-readable format, to coincide with the submission of the Material Balance report. This shall be done as specified in the instructions in NUREG/BR–0006 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees.'' Copies of these instructions NUREG/BR–0006 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees'' may be obtained either by writing the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. Each licensee who transfers the material shall submit a Nuclear Material Transaction Report in computer-readable format as specified in the instructions no later than the close of business the next working day. Each licensee who receives the material shall submit a Nuclear Material Transaction Report in computer-readable format in accordance with instructions within ten (10) days after the material is received. This prescribed computer-readable format replaces the DOE/NRC Form 741 which has been previously submitted in paper form.

(b) Each licensee who receives 1 gram or more of contained uranium-235, uranium-233, or plutonium from a foreign source shall:

(1) Complete in computer-readable format both the supplier's and receiver's portion of the Nuclear Material Transaction Report;

(2) Perform independent tests to assure the accurate identification and measurement of the material received, including its weight and enrichment; and

(3) Indicate the results of these tests on the receiver's portion of the form.

(c) Each licensee who ships special nuclear material in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium to foreign recipient shall complete in computer-readable format the supplier's portion of the Nuclear Material Transaction Report. The licensee shall complete the receiver's portion of the Nuclear Material Transaction Report only if a significant shipper-receiver difference as described in §§ 74.31, 74.43, or 74.59, as applicable, is identified.

(d) Any licensee who is required to submit inventory change reports pursuant to § 75.34 of this chapter (pertaining to implementation of the US/International Atomic Energy Agency (IAEA) Safeguards Agreement) shall prepare and submit these reports only as provided in that section (instead of as provided in paragraphs (a) and (b) of this section).

[59 FR 35621, July 13, 1994; 68 FR 58821, Oct. 10, 2003; 73 FR 32464, Jun. 9, 2008]

§ 74.17 Special nuclear material physical inventory summary report.

[Top of File]

(a) Each licensee subject to the requirements of §§ 74.31 or 74.33 of this part shall submit a completed Special Nuclear Material Physical Inventory Summary Report on NRC Form 327 not later than 60 calendar days from the start of each physical inventory required by §§ 74.31 (c)(5) or 74.33(c)(4). Using an appropriate method listed in § 74.6, the

licensee shall report the inventory results by plant and total facility to the Director of the NRC's Office of Nuclear Material Safety and Safeguards.

(b) Each licensee subject to the requirements of § 74.41(a) of this part shall submit a completed Special Nuclear Material Physical Inventory Summary Report on NRC form 327 not later than 60 calendar days from the start of each physical inventory required by § 74.43(c)(7). Using an appropriate method listed in § 74.6, the licensee shall report the inventory results by plant and total facility to the Director of the NRC's Office of Nuclear Material Safety and Safeguards.

(c) Each licensee subject to the requirements of § 74.51 shall submit a completed Special Nuclear Material Physical Inventory Summary Report on NRC form 327 not later than 45 calendar days from the start of each physical inventory required by § 74.59(f). The licensee shall report the physical inventory results by plant and total facility to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

[52 FR 19305, May 22, 1987, as amended at 54 FR 6877, Feb. 15, 1989; 55 FR 5979, Feb. 21, 1990; 56 FR 55998, Oct. 31, 1991; 67 FR 78145, Dec. 23, 2002; 68 FR 68821, Oct. 10, 2003]

§ 74.19 Recordkeeping.

[Top of File]

(a) Licensees subject to the recordkeeping requirements of §§ 74.31, 74.33, 74.43, or 74.59 of this part are exempt from the requirements of paragraphs (a)(1) through (4) of this section. Otherwise:

(1) Each licensee shall keep records showing the receipt, inventory (including location and unique identity), acquisition, transfer, and disposal of all special nuclear material in its possession regardless of its origin or method of acquisition.

(2) Each record relating to material control or material accounting that is required by the regulations in this chapter or by license condition must be maintained and retained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified by regulation or license condition, the licensee shall retain the record until the Commission terminates the license that authorizes the activity that is subject to the recordkeeping requirement.

(3) Each record of receipt, acquisition, or physical inventory of special nuclear material that must be maintained pursuant to paragraph (a)(1) of this section must be retained as long as the licensee retains possession of the material and for 3 years following transfer or disposal of the material.

(4) Each record of transfer of special nuclear material to other persons must be retained by the licensee who transferred the material until the Commission terminates the license authorizing the licensee's possession of the material.

(b) Each licensee that is authorized to possess special nuclear material in a quantity exceeding one effective kilogram at any one time shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for the special nuclear material in its possession under license. The licensee shall retain these procedures until the Commission terminates the license that authorizes possession of the material and retain any superseded portion of the procedures for 3 years after the portion is superseded.

(c) Other than licensees subject to §§ 74.31, 74.33, 74.41, or 74.51, each licensee who is authorized to possess special nuclear material, at any one time and site location, in a quantity greater than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof, shall conduct a physical inventory of all special nuclear material in its possession under license at intervals not to exceed 12 months. The results of these physical inventories need not be reported to the Commission, but the licensee shall retain the records associated with each physical inventory until the Commission terminates the license that authorized the possession of special nuclear material.

(d) Records that must be maintained pursuant to this part may be the original or a reproduced copy or a microform if the reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, or specifications must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

[67 FR 78145, Dec. 23, 2002]

Subpart C--Special Nuclear Material of Low Strategic Significance

[Top of File]

§ 74.31 Nuclear material control and accounting for special nuclear material of low strategic significance.

(a) *General performance objectives.* Each licensee who is authorized to possess and use more than one effective kilogram of special nuclear material of low strategic significance, excluding sealed sources, at any site or contiguous sites subject to control by the licensee, other than

a production or utilization facility licensed pursuant to part 50 or 70 of this chapter, or operations involved in waste disposal, shall implement and maintain a Commission approved material control and accounting system that will achieve the following objectives:

(1) Confirm the presence of special nuclear material;

(2) Resolve indications of missing material; and

(3) Aid in the investigation and recovery of missing material.

(b) Implementation: Each applicant for a license, and each licensee that, upon application for modification of its license, would become newly subject to the performance objectives of paragraph (a) of this section, shall submit a fundamental nuclear material control (FNMC) plan describing how the requirements of paragraph (c) of this section will be met. The FNMC plan shall be implemented when a license is issued or modified to authorize the activities being addressed in paragraph (a) of this section, or by the date specified in a license condition.

(c) *System capabilities*. To meet the general performance objectives of paragraph (a) of this section, the material control and accounting system must include the capabilities described in paragraph (c) (1) through (8) of this section. The licensee shall:

(1) Establish, document, and maintain a management structure which assures clear overall responsibility for material control and accounting functions, independence from production responsibilities, separation of key responsibilities, and adequate review and use of critical material control and accounting procedures;

(2) Establish and maintain a measurement system which assures that all quantities in the material accounting records are based on measured values;

(3) Follow a measurement control program which assures that measurement bias is estimated and significant biases are eliminated from inventory difference values of record;

(4) In each inventory period, control total material control and accounting measurement uncertainty so that twice its standard error is less than the greater of 9,000 grams of U-235 or 0.25 percent of the active inventory, and assure that any measurement performed under contract is controlled so that the licensee can satisfy this requirement;

(5) Unless otherwise required to satisfy part 75 of this chapter, perform a physical inventory at least every 12 months and, within 60 days after the start of the inventory, reconcile and adjust the book inventory to the results of the physical inventory, and resolve, or report an inability to resolve, any inventory difference which is rejected by a statistical test which has a 90 percent power of detecting a discrepancy of a quantity of uranium-235 established by NRC on a site-specific basis;

(6) Maintain current knowledge of items when the sum of the time of existence of an item, the time to make a record of the item, and the time necessary to locate the item exceeds 14 days. Store and handle, or subsequently measure, items in a manner so that unauthorized removals of substantial quantities of material from items will be detected. Exempted are items individually containing less than 500 grams of U^{235} up to a total of 50 kilograms of U^{235}, solutions with a concentration of less than 5 grams of U^{235} per liter, and items of waste destined for burial or incineration;

(7) Resolve, on a shipment basis and when required to satisfy part 75 of this chapter, on a batch basis, shipper/receiver differences that exceed both twice the combined measurement standard error for that shipment and 500 grams of U^{235}; and

(8) Independently assess the effectiveness of the material control and accounting system at least every 24 months, and document management's action on prior assessment recommendations.

(d) *Recordkeeping*. (1) Each licensee shall establish records that will demonstrate that the requirements of paragraph (c) of this section have been met and maintain these records for at least 3 years, unless a longer retention time is required by part 75 of this chapter.

(2) Records which must be maintained pursuant to this part may be the original or a reproduced copy or a microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures.

The licensee shall maintain adequate safeguards against tampering with and loss of records.

[50 FR 7579, Feb. 25, 1985, as amended at 53 FR 19262, May 27, 1988; 56 FR 55998, Oct. 31, 1991; 67 FR 78145, Dec. 23, 2002]

§ 74.33 Nuclear material control and accounting for uranium enrichment facilities authorized to produce special nuclear material of low strategic significance.

[Top of File]

(a) *General performance objectives*. Each licensee who is authorized by this chapter to possess equipment capable of enriching uranium or operate an enrichment facility, and produce, possess, or use more than one effective kilogram of special nuclear material of low strategic

significance at any site or contiguous sites, subject to control by the licensee, shall establish, implement, and maintain a NRC-approved material control and accounting system that will achieve the following objectives:

(1) Maintain accurate, current, and reliable information of and periodically confirm the quantities and locations of source material and special nuclear material in the licensee's possession;

(2) Protect against and detect production of uranium enriched to 10 percent or more in the isotope U^{235};

(3) Protect against and detect unauthorized production of uranium of low strategic significance;

(4) Resolve indications of missing uranium;

(5) Resolve indications of production of uranium enriched to 10 percent or more in the isotope U^{235} (for centrifuge enrichment facilities this requirement does not apply to each cascade during its start-up process, not to exceed the first 24 hours);

(6) Resolve indications of unauthorized production of uranium of low strategic significance;

(7) Provide information to aid in the investigation of missing uranium;

(8) Provide information to aid in the investigation of the production of uranium enriched to 10 percent or more in the isotope U^{235}; and

(9) Provide information to aid in the investigation of unauthorized production of uranium of low strategic significance.

(b) *Implementation dates*. Each applicant for a license who would, upon issuance of a license pursuant to any part of this chapter, be subject to the requirements of paragraph (a) of this section shall:

(1) Submit a fundamental nuclear material control plan describing how the performance objectives of § 74.33(a), the system features and capabilities of § 74.33(c), and the recordkeeping requirements of § 74.33(d) will be met; and

(2) Implement the NRC approved plan submitted pursuant to paragraph (b)(1) of this section prior to:

(i) The cumulative receipt of 5,000 grams of U^{235} contained in any combination of natural, depleted, or enriched uranium or

(ii) NRC's issuance of a license to test or operate the enrichment facility; whichever occurs first.

(c) *System features and capabilities*. To meet the general performance objectives of paragraph (a) of this section, the Material Control and Accounting (MC&A) system must include the features and capabilities described in paragraphs (c) (1) through (8) of this section. The licensee shall establish, document, and maintain:

(1) A management structure that ensures:

(i) Clear overall responsibility for MC&A functions;

(ii) Independence of MC&A management from production responsibilities;

(iii) Separation of key MC&A responsibilities from each other; and

(iv) Use of approved written MC&A procedures and periodic review of those procedures;

(2) A measurement program that ensures that all quantities of source material and special nuclear material in the accounting records are based on measured values;

(3) A measurement control program that ensures that:

(i) Measurement bias is estimated and minimized through the measurement control program, and any significant biases are eliminated from inventory difference values of record;

(ii) All MC&A measurement systems are controlled so that twice the standard error of the inventory difference, based on all measurement error contributions, is less than the greater of 5,000 grams of U^{235} or 0.25 percent of the U^{235} of the active inventory for each total plant material balance; and

(iii) Any measurements performed under contract are controlled so that the licensee can satisfy the requirements of paragraphs (c)(3) (i) and (ii) of this section;

(4) A physical inventory program that provides for:

(i) Performing, unless otherwise required to satisfy part 75 of this chapter, a dynamic (nonshutdown) physical inventory of in-process (e.g., in the enrichment equipment) uranium and U^{235} at least every 65 days, and performing a static physical inventory of all other uranium and total U^{235} contained in natural, depleted, and enriched uranium located outside of the enrichment processing equipment at least every 370 calendar days, with static physical inventories being conducted in conjunction with a dynamic physical inventory of in-process uranium and U^{235} so as to provide a total plant material balance at least every 370 calendar days; and

(ii) Reconciling and adjusting the book inventory to the results of the static physical inventory and resolving, or reporting an inability to resolve, any inventory difference that is rejected by a statistical test which has a 90 percent power of detecting a discrepancy of a quantity of U^{235}, established by NRC on a site-specific basis, within 60 days after the start of each static physical inventory;

(5) A detection program, independent of production, that provides high assurance of detecting:

(i) Production of uranium enriched to 10 percent or more in the U^{235} isotope, to the extent that SNM of moderate strategic significance could be produced within any 370 calendar day period;

(ii) Production of uranium enriched to 20 percent or more in the U^{235} isotope; and

(iii) Unauthorized production of uranium of low strategic significance;

(6) An item control program that ensures that:

(i) Current knowledge is maintained of items with respect to identity, uranium and U^{235} content, and stored location; and

(ii) Items are stored and handled, or subsequently measured, in a manner so that unauthorized removal of 500 grams or more of U^{235}, as individual items or as uranium contained in items, will be detected. Exempted from the requirements of paragraph (c)(6) (i) and (ii) of this section are licensed-identified items each containing less than 500 grams U^{235} up to a cumulative total of 50 kilograms of U^{235} and items that exist for less than 14 calendar days;

(7) A resolution program that ensures that any shipper-receiver differences are resolved that are statistically significant and exceed 500 grams U^{235} on:

(i) An individual batch basis; and

(ii) A total shipment basis for all source material and special nuclear material;

(8) An assessment program that:

(i) Independently assesses the effectiveness of the MC&A system at least every 24 months;

(ii) Documents the results of the above assessment;

(iii) Documents management's findings on whether the MC&A system is currently effective; and

(iv) Documents any actions taken on recommendations from prior assessments.

(d) *Recordkeeping*. (1) Each licensee shall establish records that will demonstrate that the performance objectives of paragraph (a) of this section and the system features and capabilities of paragraph (c) of this section have been met and maintain these records in an auditable form, available for inspection, for at least 3 years, unless a longer retention time is required by part 75 of this chapter.

(2) Records that must be maintained pursuant to this part may be the original or a reproduced copy or a microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability for producing, on demand, legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications must include all pertinent information such as stamps, initials, and signatures.

(3) The licensee shall maintain adequate safeguards against tampering with and loss of records.

[56 FR 55999, Oct. 31, 1991]

Subpart D--Special Nuclear Material of Moderate Strategic Significance

[Top of File]

§ 74.41 Nuclear material control and accounting for special nuclear material of moderate strategic significance.

(a) *General performance objectives*. Each licensee who is authorized to possess special nuclear material (SNM) of moderate strategic significance or SNM in a quantity exceeding one effective kilogram of strategic special nuclear material in irradiated fuel reprocessing operations other than as sealed sources and to use this material at any site other than a nuclear reactor licensed pursuant to part 50 of this chapter; or as reactor irradiated fuels involved in research, development, and evaluation programs in facilities other than irradiated fuel reprocessing plants; or an operation involved with waste disposal, shall establish, implement, and maintain a Commission-approved material control and accounting (MC&A) system that will achieve the following performance objectives:

(1) Maintain accurate, current, and reliable information on, and confirm, the quantities and locations of SNM in the licensee's possession;

(2) Conduct investigations and resolve any anomalies indicating a possible loss of special nuclear material;

(3) Permit rapid determination of whether an actual loss of a significant quantity of SNM has occurred, with significant quantity being either:

(i) More than one formula kilogram of strategic SNM; or

(ii) 10,000 grams or more of uranium-235 contained in uranium enriched up to 20.00 percent.

(4) Generate information to aid in the investigation and recovery of missing SNM in the event of an actual loss.

(b) Implementation schedule. Each applicant for a license, and each licensee that, upon application for modification of its license, would become newly subject to the requirements of paragraph (a) of this section shall:

(1) Submit a fundamental nuclear material control (FNMC) plan describing how the performance objectives of § 74.41(a) will be achieved, and how the system capabilities required by § 74.41(c) will be met; and

(2) Implement the NRC-approved FNMC plan submitted pursuant to paragraph (b)(1) of this section upon the Commission's issuance or modification of a license or by the date specified in a license condition.

(c) System capabilities. To achieve the performance objectives specified in § 74.41(a), the MC&A system must include the capabilities described in §§ 74.43 and 74.45, and must incorporate checks and balances that are sufficient to detect falsification of data and reports that could conceal diversion of SNM by:

(1) A single individual, including an employee in any position; or

(2) Collusion between two individuals, one or both of whom have authorized access to SNM.

[67 FR 78146, Dec. 23, 2002]

§ 74.43 Internal controls, inventory, and records.

[Top of File]

(a) General. Licensees subject to § 74.41 shall maintain the internal control, inventory, and recordkeeping capabilities required in paragraphs (b), (c), and (d) of this section.

(b) Internal controls.

(1) A management structure shall be established, documented, and maintained that assures:

(i) Clear overall responsibility for material control and accounting (MC&A) functions;

(ii) Independence from production and manufacturing responsibilities; and

(iii) Separation of key responsibilities.

(2) The overall planning, coordination, and administration of the MC&A functions for special nuclear material (SNM) shall be vested in a single individual at an organizational level sufficient to assure independence of action and objectiveness of decisions.

(3) The licensee shall provide for the adequate review, approval, and use of written MC&A procedures that are identified in the approved FNMC plan as being critical to the effectiveness of the described system.

(4) The licensee shall assure that personnel who work in key positions where mistakes could degrade the effectiveness of the MC&A system are trained to maintain a high level of safeguards awareness and are qualified to perform their duties and/or responsibilities.

(5) The licensee shall establish, document, and maintain an item control program that:

(i) Provides current knowledge of SNM items with respect to identity, element and isotope content, and stored location; and

(ii) Assures that SNM items are stored and handled, or subsequently measured, in a manner such that unauthorized removal of 200 grams or more of plutonium or uranium-233 or 300 grams or more of uranium-235, as one or more whole items and/or as SNM removed from containers, will be detected.

(6) Exempted from the requirements of paragraph (b)(5) of this section are items that exist for less than 14 calendar days and licensee-identified items each containing less than 200 grams of plutonium or uranium-233 or 300 grams or more of uranium-235 up to a cumulative total of one formula kilogram of strategic SNM or 17 kilograms of uranium-235 contained in uranium enriched to 10.00 percent or more but less than 20.00 percent in the uranium-235 isotope.

(7) Conduct and document shipper-receiver comparisons for all SNM receipts, both on an individual batch basis and a total shipment basis, and ensure that any shipper-receiver difference that is statistically significant and exceeds twice the estimated standard deviation of the difference estimator and 200 grams of plutonium or uranium-233 or 300 grams of uranium-235 is investigated and resolved; and

(8) Perform independent assessments of the total MC&A system, at intervals not to exceed 18 months, that assess the performance of the system, review its effectiveness, and document management's action on prior assessment recommendations and identified deficiencies. These assessments must include a review and evaluation of any contractor who performs SNM accountability measurements for the licensee.

(c) Inventory control and physical inventories. The licensee shall:

(1) Provide unique identification for each item on inventory and maintain inventory records showing the identity, location, and quantity of SNM for these items;

(2) Document all transfers of SNM between designated internal control areas within the licensee's site;

(3) Maintain and follow procedures for tamper-safing of containers or vaults containing SNM, if tamper-safe seals are to be used for assuring the validity of prior measurements, which include control of access to, and distribution of, unused seals and to records showing the date and time of seal application;

(4) Maintain and follow procedures for confirming the validity of prior measurements associated with unencapsulated and unsealed items on ending inventory;

(5) Maintain and follow physical inventory procedures to assure that:

(i) The quantity of SNM associated with each item on ending inventory is a measured value;

(ii) Each item on ending inventory is listed and identified to assure that all items are listed and no item is listed more than once;

(iii) Cutoff procedures for transfers and processing are established so that all quantities are inventoried and none are inventoried more than once;

(iv) Cutoff procedures for records and reports are established so that only transfers for the inventory and material balance interval are included in the records for the material balance period in question;

(v) Upon completion of the physical inventory, all book and inventory records, for total plant and individual internal control areas, are reconciled with and adjusted to the results of the physical inventory; and

(vi) Measurements will be performed for element and isotope content on all quantities of SNM not previously measured.

(6) Conduct physical inventories according to written instructions for each physical inventory which:

(i) Assign inventory duties and responsibilities;

(ii) Specify the extent to which each internal control area and process is to be shut down, cleaned out, and/or remain static;

(iii) Identify the basis for accepting previously made measurements and their limits of error; and

(iv) Designate measurements to be made for physical inventory purposes and the procedures for making these measurements.

(7) Conduct physical inventories of all possessed SNM for each plant at intervals not to exceed 9 calendar months; and

(8) Within 60 calendar days after the start of each physical inventory required by paragraph (c)(7) of this section:

(i) Calculate, for the material balance period terminated by the physical inventory, the inventory difference (ID) and its associated standard error of inventory difference (SEID) for both element and isotope;

(ii) Reconcile and adjust the book record of quantity of element and isotope content, as appropriate, to the results of the physical inventory; and

(iii) Investigate and report to the Director, Office of Nuclear Material Safety and Safeguards, any occurrence of SEID exceeding 0.125 percent of active inventory, and any occurrence of ID exceeding both three times SEID and 200 grams of plutonium or uranium-233 or 300 grams of uranium-235 contained in high enriched uranium, or 9000 grams of uranium-235 contained in low enriched uranium. The report shall include a statement of the probable reasons for the excessive inventory difference and the corrective actions taken or planned.

(d) Recordkeeping. The licensee shall:

(1) Maintain records of the receipt, shipment, disposal, and current inventory associated with all possessed SNM;

(2) Maintain records of the quantities of SNM added to and removed from process;

(3) Maintain records of all shipper-receiver evaluations associated with SNM receipts;

(4) Retain each record pertaining to receipt and disposal of SNM until the Commission terminates the license; and

(5) Establish records that will demonstrate that the performance objectives of § 74.41(a)(1) through (4), the system capabilities of paragraphs (b) and (c) of this section and § 74.45(b) and (c) have been met, and maintain these records in an auditable form, available for inspection, for at least 3 years, unless a longer retention time is specified by § 74.19(b), part 75 of this chapter, or by a specific license condition.

[67 FR 78146, Dec. 23, 2002]

§ 74.45 Measurements and measurement control.

[Top of File]

(a) General. Licensees subject to § 74.41 of this part shall establish and maintain the measurement and measurement control capabilities required by paragraphs (b) and (c) of this section.

(b) Measurements. The licensee shall:

(1) Establish, maintain, and use a program for the measurement of all SNM received, produced, transferred between internal control areas, on inventory, or shipped, discarded, or otherwise removed from inventory, except for:

(i) Sealed sources that have been determined by other means to contain less than 10 grams of uranium-235, uranium-233, or plutonium each;

(ii) Samples received, transferred between internal control areas, or on inventory that have been determined by other means to contain less than 10 grams of uranium-235, uranium-233, or plutonium each;

(iii) Receipt of sealed sources, of any quantity, previously manufactured and shipped by the licensee and which are returned to the licensee, provided the unique identity and encapsulation integrity have not been compromised, and the booked receipt quantity equals the previously shipped quantity for the involved sealed sources; and

(iv) Heterogeneous scrap that cannot be accurately measured in its as received form, provided this scrap is measured after dissolution within 18 months of receipt. The after dissolution measurement must include measurement of both the resulting solution and any undissolved residues, before any co-mingling with other scrap solutions or residues.

(2) Maintain and follow a program for the development and use of written procedures that includes documented review and approval of these procedures, and any revisions thereof, before use, for:

(i) Preparing or acquiring, maintaining, storing, and using reference standards;

(ii) Calibrating measurement systems, performing bulk mass and volume measurements, conducting nondestructive assay measurements, obtaining samples, and performing laboratory analyses for element concentration and isotope abundance; and

(iii) Recording, reviewing, and reporting measurements.

(c) Measurement control. To maintain measurement quality and to estimate measurement uncertainty values, the licensee shall:

(1) Assign responsibility for planning, developing, coordinating, and administering a measurement control program to an individual who has no direct responsibility for performing measurements or for SNM processing or handling, and who holds a position at an organizational level which permits independence of action and has adequate authority to obtain all the information required to monitor and evaluate measurement quality as required by this section.

(2) Ensure that any contractor who performs MC&A measurements services conforms with applicable requirements in paragraphs (c)(5), (6), (7), (10) and (11) of this section. Conformance must include reporting by the contractor of sufficient measurement control data to allow the licensee to calculate bias corrections and measurement limits of error.

(3) Ensure that potential sources of sampling error are identified and that samples are representative by performing process sampling tests using well characterized materials to establish or verify the applicability of utilized procedures for sampling SNM and for maintaining sample integrity during transport and storage. These sampling tests or sample integrity tests, as appropriate, shall be conducted whenever:

(i) A new sampling procedure or technique is used, or new sampling equipment is installed;

(ii) A sampling procedure, technique, or sampling equipment is modified to the extent that a systematic sampling error could be introduced; and

(iii) Sample containers, sample transport methods, or sample storage conditions are changed or modified to the extent that a systematic sampling error could be introduced.

(4) Establish and maintain a measurement control program so that for each inventory period the SEID is less than 0.125 percent of the active inventory, and assure that any MC&A measurements performed under contract are controlled so that the licensee can satisfy this requirement.

(5) Generate current data on the performance of each measurement system used during each material balance period for the establishment of measured values and estimated measurement uncertainties, including estimates of bias, variance components for calibration, sampling, and repeat measurements. The program data must reflect the current process and measurement conditions existing at the time the control measurements are made.

(6) Use standards on an ongoing basis for the calibration and control of all measurement systems used for SNM accountability. Calibrations shall be repeated whenever any significant change occurs in a measurement system or when program data indicate a need for recalibration. Calibrations and control standard measurements shall be based on standards whose assigned values are traceable to certified reference standards or certified standard reference materials. Additionally, control standards shall be representative of the process material or items being measured by the measurement system in question.

(7) Conduct control measurements to provide current data for the determination of random error behavior. On a predetermined schedule, the program shall include, as appropriate:

(i) Replicate analyses of individual samples;

(ii) Analysis of replicate process samples;

(iii) Replicate volume measurements of bulk process batches;

(iv) Replicate weight measurements of process items and bulk batches, or alternatively, the use of data generated from the replicate weighings of control standard weights as derived from the control standard program; and

(v) Replicate NDA measurements of individual process containers (items), or alternatively, the use of data generated from the replicate measurements of NDA control standards as derived from the control standard program.

(8) Use all measurements and measurement controls generated during the current material balance period for the estimation of the SEID.

(9) Evaluate with appropriate statistical methods all measurement system data generated in paragraph (c)(5) of this section to determine significant contributors to the measurement uncertainties associated with inventory differences and shipper-receiver differences, so that if SEID exceeds the limits established in paragraph (c)(4) of this section, the cause of the excessive SEID can be identified for corrective action with respect to controlling the standard error within applicable limits.

(10) Establish and maintain a statistical control system, including control charts and formal statistical procedures, designed to monitor the quality of each measurement device or system. Control chart limits must be established to be equivalent to levels of significance of 0.05 and 0.001.

(11) Promptly investigate and take any appropriate corrective action whenever a control datum exceeds an 0.05 control limit, and whenever a control datum exceeds an 0.001 control limit, the measurement system that generated the datum shall immediately be placed out-of-service with respect to MC&A measurements until the deficiency has been corrected and the system brought into control within the 0.05 control limits.

[67 FR 78146, Dec. 23, 2002]

Subpart E--Formula Quantities of Strategic Special Nuclear Material

[Top of File]

Source: 52 FR 10040, Mar. 30, 1987, unless otherwise noted.

§ 74.51 Nuclear material control and accounting for strategic special nuclear material.

(a) *General performance objectives.* Each licensee who is authorized to possess five or more formula kilograms of strategic special nuclear material (SSNM) and to use such material at any site, other than a nuclear reactor licensed pursuant to part 50 of this chapter, an irradiated fuel reprocessing plant, an operation involved with waste disposal, or an independent spent fuel storage facility licensed pursuant to part 72 of this chapter shall establish, implement, and maintain a Commission-approved material control and accounting (MC&A) system that will achieve the following objectives:

(1) Prompt investigation of anomalies potentially indicative of SSNM losses;

(2) Timely detection of the possible abrupt loss of five or more formula kilograms of SSNM from an individual unit process;

(3) Rapid determination of whether an actual loss of five or more formula kilograms occurred;

(4) Ongoing confirmation of the presence of SSNM in assigned locations; and

(5) Timely generation of information to aid in the recovery of SSNM in the event of an actual loss.

(b) *System capabilities*. To achieve the general performance objectives specified in § 74.51(a), the MC&A system must provide the capabilities described in §§ 74.53, 74.55, 74.57 and 74.59 and must incorporate checks and balances that are sufficient to detect falsification of data and reports that could conceal diversion by:

(1) An individual, including an employee in any position; or

(2) Collusion between an individual with MC&A responsibilities and another individual who has responsibility or control within both the physical protection and the MC&A systems.

(c) *Implementation dates*. Each applicant for a license, and each licensee that, upon application for modification of a license, would become newly subject to paragraph (a) of this section, shall submit a fundamental nuclear material control (FNMC) plan describing how the MC&A system shall satisfy the requirement of paragraph (b) of this section. The FNMC plan shall be implemented when a license is issued or modified to authorize the activities being addressed in paragraph (a) of this section, or by the date specified in a license condition.

(d) *Inventories*. Notwithstanding § 74.59(f)(1), licensees shall perform at least three bimonthly physical inventories after implementation of the NRC approved FNMC Plan and shall continue to perform bimonthly inventories until performance acceptable to the NRC has been demonstrated and the Commission has issued formal approval to perform semiannual inventories. Licensees who have prior experience with process monitoring and/or can demonstrate acceptable performance against all Plan commitments may request authorization to perform semiannual inventories at an earlier date.

(2) Notwithstanding § 74.59(f)(1), licensees shall perform at least three bimonthly physical inventories after implementation of the NRC approved FNMC Plan and shall continue to perform bimonthly inventories until performance acceptable to the NRC has been demonstrated and the Commission has issued formal approval to perform semiannual inventories. Licensees who have prior experience with process monitoring and/or can demonstrate acceptable performance against all Plan commitments may request authorization to perform semiannual inventories at an earlier date.

[52 FR 10040, Mar. 30, 1987, as amended at 63 FR 26963, May 15, 1998; 67 FR 78148, Dec. 23, 2002]

§ 74.53 Process monitoring.

[Top of File]

(a) Licensees subject to § 74.51 shall monitor internal transfers, storage, and processing of SSNM. The process monitoring must achieve the detection capabilities described in paragraph (b) of this section for all SSNM except:

(1) SSNM that is subject to the item loss detection requirements of § 74.55;

(2) Scrap in the form of small pieces, cuttings, chips, solutions, or in other forms that result from a manufacturing process, held in containers of 30 gallons or larger, with an SSNM content of less than 0.25 grams per liter;

(3) SSNM with an estimated measurement standard deviation greater than five percent that is either input or output material associated with a unit that processes less than five formula kilograms over a consecutive three-month period; and

(4) SSNM involved in research and development operations that process less than five formula kilograms during any seven-consecutive-day period.

(b) *Unit process detection capability*. For each unit process, a licensee shall establish a production quality control program capable of monitoring the status of material in process. The program shall include:

(1) A statistical test that has at least a 95 percent power of detecting an abrupt loss of five formula kilograms within three working days of a loss of Category IA material from any accessible process location and within seven calendar days of a loss of Category IB material from any accessible process location;

(2) A quality control test whereby process differences greater than three times the estimated standard deviation of the process difference estimator and 25 grams of SSNM are investigated; and

(3) A trend analysis for monitoring and evaluating sequences of material control test results from each unit process to determine if they indicate a pattern of losses or gains that are of safeguards significance.

(c) For research and development operations exempt from the requirements of paragraph (b) of this section, the licensee shall:

(1) Perform material balance tests on a lot or a batch basis, as appropriate, or monthly, whichever is sooner, and investigate any difference greater than 200 grams of plutonium or U-233 or 300 grams of U-235 that exceeds three times the estimated standard error of the inventory difference estimator;

(2) Evaluate material balance results generated during an inventory period for indications of measurement biases or unidentified loss streams and investigate, determine the cause(s) of, and institute corrective action for cumulative inventory differences generated during an inventory period that exceed three formula kilograms of SSNM.

§ 74.55 Item monitoring.

[Top of File]

(a) Licensees subject to § 74.51 shall provide the detection capability described in paragraph (b) of this section for laboratory samples containing less than 0.05 formula kilograms of SSNM and any uniquely identified items of SSNM that have been quantitatively measured, the validity of that measurement independently confirmed, and that additionally have been either:

(1) Tamper-safed or placed in a vault or controlled access area that provides protection at least equivalent to tamper-safing; or

(2) Sealed such that removal of SSNM would be readily and permanently apparent (e.g., encapsulated).

(b) The licensee shall verify on a statistical sampling basis, the presence and integrity of SSNM items. The statistical sampling plan must have at least 99 percent power of detecting item losses that total five formula kilograms or more, plant-wide, within:

(1) Thirty calendar days for Category IA items and 60 calendar days for Category IB items contained in a vault or in a permanently controlled access area isolated from the rest of the material access area (MAA);

(2) Three working days for Category IA items and seven calendar days for Category BI items located elsewhere in the MAA, except for reactor components measuring at least one meter in length and weighing in excess of 30 kilograms for which the time interval shall be 30 calendar days;

(3) Sixty calendar days for items in a permanently controlled access area outside of an MAA; or

(4) Sixty calendar days for samples in a vault or permanently controlled access area and 30 calendar days for samples elsewhere in the MAA for samples each containing less than 0.05 formula kilograms of SSNM.

(c) Items containing scrap in the form of small pieces, cuttings, chips, solutions, or in other forms that result from a manufacturing process, held in containers of 30 gallon or larger, with an SSNM concentration of less than 0.25 grams per liter are exempt from the requirements of paragraph (b) of this section.

§ 74.57 Alarm resolution.

[Top of File]

(a) Licensees subject to § 74.51 shall provide the MC&A alarm resolution capabilities described in paragraphs (b) through (f) of this section.

(b) Licensees shall resolve the nature and cause of any MC&A alarm within approved time periods.

(c) Each licensee shall notify the NRC Operations Center by telephone of any MC&A alarm that remains unresolved beyond the time period specified for its resolution in the licensee's fundamental nuclear material control plan. Notification must occur within 24 hours except when a holiday or weekend intervenes in which case the notification must occur on the next scheduled workday. The licensee may consider an alarm to be resolved if:

(1) Clerical or computational error is found that clearly was the cause for the alarm; or

(2) An assignable cause for the alarm is identified or it is substantiated that no material loss has occurred.

(d) If a material loss has occurred, the licensee shall determine the amount of SSNM lost and take corrective action to:

(1) Return out-of-place SSNM, if possible, to its appropriate place;

(2) Update and correct associated records; and

(3) Modify the MC&A system, if appropriate, to prevent similar future occurrences.

(e) The licensee shall provide an ability to rapidly assess the validity of alleged thefts.

(f) If an abrupt loss detection estimate exceeds five formula kilograms of SSNM:

(1) Material processing operations related to the alarm must be suspended until completion of planned alarm resolution activities, unless the suspension of operations will adversely affect the ability to resolve the alarm. Operation of continuous processes may continue for 24 hours from the time of the occurrence of the alarm during which time checks shall be made for mistakes in records or calculations that could have caused the alarm.

(2) Within 24 hours, the licensee shall notify the NRC Operations Center by telephone that an MC&A alarm resolution procedure has been initiated.

[52 FR 10040, Mar. 30, 1987, as amended at 54 FR 6877, Feb. 15, 1989; 55 FR 5979, Feb. 21, 1990; 60 FR 24553, May 9, 1995; 67 FR 78148, Dec. 23, 2002]

§ 74.59 Quality assurance and accounting requirements.

[Top of File]

(a) Licensees subject to § 74.51 shall provide the quality assurance and accounting capabilities described in paragraphs (b) through (h) of this section.

(b) *Management structure*. The licensee shall:

(1) Establish and maintain a management structure that includes clear overall responsibility for planning, coordinating, and administering material control and accounting functions, independence of material control and accounting functions from production responsibilities, and separation of functions such that the activities of one individual or organizational unit serve as controls over and checks of the activities of others; and

(2) Provide for the adequate review, approval, and use of those material control and accounting procedures that are identified in the approved FNMC plan as being critical to the effectiveness of the described system.

(c) *Personnel qualification and training*. The licensee shall assure that personnel who work in key positions where mistakes could degrade the effectiveness of the material control and accounting system are trained to maintain a high level of safeguards awareness and are qualified to perform their duties and/or responsibilities.

(d) *Measurements*. The licensee shall establish and maintain a system of measurements sufficient to:

(1) Substantiate the plutonium element and uranium element and isotope content of all SSNM received, produced, transferred between areas of custodial responsibility, on inventory, or shipped, discarded, or otherwise removed from inventory;

(2) Enable the estimation of the standard deviation associated with each measured quantity; and

(3) Provide the data necessary for performance of the material control tests required by § 74.53(b).

(e) *Measurement control*. The licensee shall assure that the quality of SSNM measurement systems and material processing practices is continually controlled to a level of effectiveness sufficient to satisfy the capabilities required for detection, response, and accounting. To achieve this objective the licensee shall:

(1) Perform engineering analyses and evaluations of the design, installation, preoperational tests, calibration, and operation of all measurement systems to be used for MC&A purposes;

(2) Perform process and engineering tests using well characterized materials to establish or to verify the applicability of existing procedures for mixing and sampling SSNM and maintaining sample integrity during transport and storage. Tests must be repeated at least every three years, at any time there is a process modification that alters the physical or chemical composition of the SSNM, or whenever there is a change in the sampling technique or equipment; and

(3) Generate current data on the performance of measurement processes, including, as appropriate, values for bias corrections, uncertainties on calibration factors, and random error standard deviations. The program must include:

(i) The onging use of standards for calibration and control of all applicable measurement systems. Calibrations must be repeated whenever any change in a measurement system occurs which has the potential to affect a measurement result or when program data, generated by tests performed at a pre-determined frequency, indicate a need for recalibration. Calibrations and tests must be based on standards with traceability to national standards or nationally accepted measurement systems; and

(ii) A system of control measurements to provide current data for the estimation of the standard deviations that are significant contributors to the measurement uncertainties associated with shipper/receiver differences, inventory differences, and process differences.

(4) Utilize the data generated during the current material balance period for the estimation of the standard error of the inventory difference (SEID) and the standard error of the process differences. Calibration and measurement error data collected and used during immediately preceeding material balance periods may be combined with current data provided that the measurement systems are in statistical control and the combined data are utilized in characterizing the unknowns.

(5) Evaluate all program data and information to assure that measurement performance is so controlled that the SEID estimator is less than 0.1 percent of active inventory.

(6) Apply bias corrections by an appropriate procedure whereby:

(i) Bias corrections are applied to individual items if for any measurement system the relative bias estimate exceeds twice the standard deviation of its estimator, the absolute bias estimate exceeds 50 grams of SSNM when applied across all affected items, and the absolute bias estimate on an individual item basis exceeds the rounding error of affected items; and

(ii) All biases (regardless of significance) that are not applied as corrections to individual items are applied as a correction to the inventory difference.

(7) Investigate and take corrective action, as appropriate, to identify and reduce associated measurement biases when, for like material types (i.e., measured by the same measurement system), the net cumulative shipper/receiver differences accumulated over a six-month period exceed the larger of one formula kilogram or 0.1 percent of the total amount received.

(8) Establish and maintain a statistical control system designed to monitor the quality of each type of program measurement. Control limits must be established to be equivalent to levels of significance of 0.05 and 0.001. Control data exceeding the 0.05 limits must be investigated and corrective action taken in a timely manner. Whenever a single data point exceeds the 0.001 control limit, the measurement system in question must not be used for material control and accounting purposes until it has been brought into control at the 0.05 level.

(f) *Physical inventory*. The licensee shall:

(1) Except as required by part 75 of this Chapter, perform a physical inventory at least every six calendar months and within 45 days after the start of the ending inventory:

(i) Calculate the inventory difference (ID); estimate the standard error of the inventory difference (SEID); and investigate and report any SEID estimate of 0.1 percent or more of active inventory, and any ID that exceeds both three times SEID and 200 grams of plutonium or uranium-233, or 300 grams of uranium-235 contained in high enriched uranium.

(ii) If required to perform an investigation pursuant to paragraph (f)(1)(i) of this section, evaluate the significance of the inventory difference relative to expected performance as determined from an analysis of an appropriate sequence of historical inventory differences;

(iii) Investigate and report, by an appropriate method listed in § 74.6, to the Director, Office of Nuclear Material Safety and Safeguards, any difference that exceeds three times the standard deviation determined from the sequential analysis;

(iv) Perform a reinventory if directed to do so by the Commission; and

(v) Reconcile and adjust the plant and subsidiary book records to the results of the physical inventory.

(2) Implement policies, practices, and procedures designed to ensure the quality of physical inventories. These must include:

(i) Development of procedures for tamper-safing of containers or vaults containing SSNM not in process that include adequate controls to assure the validity of assigned SSNM values;

(ii) Maintenance of records of the quantities of SSNM added to and removed from process;

(iii) Requirements for signed documentation of all SSNM transfers between areas with different custodial responsibility that reflect all quantities of SSNM transferred;

(iv) Means for control of and accounting for internal transfer documents;

(v) Cutoff procedures for transfers and processing so that all quantities of SSNM are inventoried and none are inventoried more than once;

(vi) Cutoff procedures for records and reports so that all transfers for the inventory and material balance interval and no others are included

in the records;

(vii) Inventory procedures for sealed sources and containers or vaults containing SSNM that assure reliable identification and quantification of contained SSNM;

(viii) Inventory procedures for in-process SSNM that provide for measurement of quantities not previously measured for element and isotope, as appropriate, and remeasurement of material previously measured but whose validity has not been assured by tamper-safing or equivalent protection; and

(ix) Written instructions for conducting physical inventories that detail assignments, responsibilities, and preparation for and performance of an inventory.

(g) *Accounting*. The licensee shall establish auditable records sufficient to demonstrate that the requirements of §§ 74.53, 74.55, 74.57, and 74.59 have been met and retain those records for at least three years unless a longer retention period is required by part 75 of this Chapter.

(h) *Internal control*. The licensee shall:

(1) Establish procedures for shipping and receiving SSNM that provide for:

(i) Accurate identification and measurement of the quantities shipped and received;

(ii) Review and evaluation of shipper/receiver differences on an individual container or lot basis, as appropriate, on a shipment basis, and on a batch basis when required by part 75 of this Chapter;

(iii) Investigation and corrective action when shipper/receiver differences exceed twice the estimated standard deviation of the difference estimator and the larger of 0.5 percent of the amount of SSNM in the container, lot, or shipment, as appropriate, or 50 grams of SSNM; and

(iv) Documentation of shipper/receiver difference evaluations, investigations, and corrective actions.

(2) Establish a scrap control program that assures that:

(i) Internally generated scrap and scrap from other licensees or contractors is segregated until accountability is established; and

(ii) Any scrap measured with a standard deviation greater than five percent of the measured amount is recovered so that the results are segregated by inventory period and recovered within six months of the end of the inventory period in which the scrap was generated except where it can be demonstrated that the scrap measurement uncertainty will not cause noncompliance with § 74.59(e)(5).

(3) Incorporate checks and balances in the MC&A system sufficient to control the rate of human errors in material control and accounting information.

(4) Perform independent assessments at least every 12 months that assess the performance of the MC&A system, review its effectiveness, and document management's action on prior assessment recommendations. Assessments must include an evaluation of the measurement control program of any outside contractor laboratory performing MC&A measurements for a licensee, unless the contractor is also subject to the requirements of § 74.59(e).

(5) Assign custodial responsibility in a manner that ensures that such responsibility can be effectively executed for all SSNM possessed under license.

[52 FR 10040, Mar. 30, 1987, as amended at 54 FR 6878, Feb. 15, 1989; 55 FR 5979, Feb. 21, 1990; 60 FR 24553, May 9, 1995; 67 FR 78148, Dec. 23, 2002; 68 FR 58822, Oct. 10, 2003]

Subpart F--Enforcement

[Top of File]

Source: 52 FR 10040, Mar. 30, l987, unless otherwise noted.

§ 74.81 Inspections.

(a) Each licensee shall afford to the Commission at all reasonable times opportunity to inspect special nuclear material and the premises and facilities wherein special nuclear material is used, produced, or stored.

(b) Each licensee shall make available to the Commission for inspection, upon reasonable notice, records kept by the licensee pertaining to its receipt, possession, use, acquisition, import, export, or transfer of special nuclear material.

(c)(1) In the case of fuel cycle facilities where nuclear reactor fuel is fabricated or processed, each licensee shall upon request by the

Director, Office of Nuclear Material Safety and Safeguards or the appropriate NRC Regional Administrator, provide rent-free office space for the exclusive use of Commission inspection personnel. Heat, air conditioning, light, electrical outlets, and janitorial services shall be furnished by each licensee. The office shall be convenient to and have full access to the facility, and shall provide the inspector both visual and acoustic privacy.

(2) For a site with a single fuel facility licensed pursuant to part 70 of this chapter, the space provided shall be adequate to accommodate a full-time inspector, a part-time secretary, and transient NRC personnel. It will be generally commensurate with other office facilities at the site. A space of 250 square feet either within the site's office complex or in an office trailer or other on-site space is suggested as a guide. For sites containing multiple fuel facilities, additional space may be requested to accommodate additional full-time inspector(s). The office space that is provided shall be subject to the approval of the Director, Office of Nuclear Material Safety and Safeguards or the appropriate NRC Regional Administrator. All furniture, supplies, and communication equipment will be furnished by the Commission.

(3) The licensee shall afford any NRC resident inspector assigned to their site, or other NRC inspectors identified by the Director of the Office of Nuclear Material Safety and Safeguards as likely to inspect the facility, immediate unfettered access, equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection, and personal safety.

(d) At a facility using and possessing a formula quantity of strategic special nuclear material in unirradiated form, the licensee may not announce or otherwise communicate to its employees or site contractors the arrival or presence of an NRC safeguards inspector unless specifically requested to do so by the safeguards inspector.

[50 FR 7579, Feb. 25, 1985, as amended at 52 FR 31613, Aug. 21, 1987; 54 FR 6878, Feb. 15, 1989; 55 FR 5979, Feb. 21, 1990; 58 FR 29522, May 21, 1993]

§ 74.82 Tests.

[Top of File]

Each licensee shall perform, or permit the Commission to perform, any tests that the Commission deems appropriate or necessary for the administration of the regulations in this part, including tests of:

(a) Special nuclear material;

(b) Facilities where special nuclear material is utilized, produced, or stored; and

(c) Other equipment and devices used in connection with the production, utilization, or storage of special nuclear material.

§ 74.83 Violations.

[Top of File]

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55079, Nov. 24, 1992]

§ 74.84 Criminal penalties.

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 74 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 74 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 74.1, 74.2, 74.4, 74.5, 74.6, 74.7, 74.8, 74.83 and 74.84.

[57 FR 55079, Nov. 24, 1992]

PART 75—SAFEGUARDS ON NUCLEAR MATERIAL—IMPLEMENTATION OF US/IAEA AGREEMENT

[Top of File]

General Provisions

[Top of File]

§ 75.1 Purpose.

The purpose of this part is to implement the requirements established by treaties between the United States and the International Atomic Energy Agency (IAEA). These treaties include the Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America (Safeguards Agreement) and the Protocol Additional to the Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America (Additional Protocol). This part contains requirements to ensure that the United States meets its nuclear non-proliferation obligations under these US/IAEA Safeguards treaties. These obligations include providing information to the IAEA on the place of applicant, licensee, or certificate holder activities; information on source and special nuclear materials; and access to the place of applicant, licensee, or certificate holder activities. These obligations are similar to the obligations accepted by other countries.

[73 FR 78607, Dec. 23, 2008]

§ 75.2 Scope.

[Top of File]

(a) All persons licensed by the Nuclear Regulatory Commission or an Agreement State, or who hold a certificate of compliance, or construction permit or authorization issued by the Nuclear Regulatory Commission are subject to the requirements of this part. These requirements also apply to all persons who have filed an application with the NRC to construct a facility or to receive source or special nuclear material. Locations determined by the U.S. Government to be associated with activities or information of direct national security significance to the United States are excluded from these requirements. Specifically, these requirements pertain to the following locations and activities of licensees and certificate holders:

(1) A facility, as defined in § 75.4, and the site of the facility;

(2) A location performing nuclear fuel cycle-related research and development, as defined in § 75.4;

(3) A location manufacturing, assembling, or constructing nuclear fuel cycle-related equipment or materials as defined in § 75.4;

(4) A location of a uranium or thorium mine or concentration plant (*e.g.,* in-situ leach mines and activities involving ore processing);

(5) A location importing or possessing ''impure'' source material [i.e., source material not in the form of purified chemical products (*e.g.,* UF_6, U metal, UO_2)];

(6) A location possessing source or special nuclear material on which IAEA safeguards have been exempted or terminated;

(7) A location receiving imports of material or equipment that is subject to export controls; and

(8) The activity of exporting source materials for non-nuclear purposes or exporting of non-nuclear material or equipment that is subject to export controls.

(b) Facilities referred to in § 75.2(a)(1) are also subject to the reporting requirements of § 75.6(b) and (c), IAEA inspections in § 75.8, Facility information in § 75.10, and the Material Accounting and Control requirements in §§ 75.21 through 75.45.

(c) Locations referred to in § 75.2(a)(2) through 75.2(a)(7) are also subject to the reporting requirements of § 75.6(b) and (d), and IAEA inspections in § 75.8, and location information in § 75.11.

[45 FR 50711, July 31, 1980, as amended at 53 FR 43422, Oct. 27, 1988; 64 FR 48954, Sept. 9, 1999; 73 FR 78607, Dec. 23, 2008]

§ 75.3 Exemptions.

[Top of File]

(a) The Commission may, upon application of any interested person or upon its own initiative, grant exemptions from the requirements of this Part that it determines are authorized by law and consistent with the Safeguards Agreement or the Additional Protocol, are not inimical to the common defense and security, and are otherwise in the public interest.

(b) Without limiting the generality of paragraph (a) of this section, the U.S. Government may request from the IAEA an exemption with respect to nuclear material of the following types:

(1) Source and special nuclear material in gram quantities or less as a sensing component in instruments;

(2) Nuclear material used in nonnuclear activities; and

(3) Plutonium with an isotopic concentration of plutonium-238 exceeding 80 percent.

[73 FR 78607, Dec. 23, 2008]

§ 75.4 Definitions.

[Top of File]

As used in this part:

Unless otherwise defined in this section, the terms defined in §§ 40.4, 50.2, and 70.4 of this chapter have the same meaning when used in this part.

Additional Protocol means the Protocol Additional to the Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America, concluded between the United States and the IAEA in Vienna, Austria, on June 12, 1998, that follows the provisions of INFCIRC/540.

Agreement, except as used in the term Agreement State, means the Agreement between the United States and the International Atomic Energy Agency for the Application of Safeguards in the United States. Unless otherwise specified, the term refers both to the principal text of the Agreement, consisting of 90 articles, and to the Protocol thereto.

Agreement State as designated in part 150 of this chapter means any State with which the Commission has entered into an effective agreement under subsection 274b. of the Act.

Batch means a portion of nuclear material handled as a unit for accounting purposes at a key measurement point and for which the composition and quantity are defined by a single set of specifications or measurements. The nuclear material may be in bulk form or contained in a number of separate items.

Complementary Access means access provided to IAEA inspectors in accordance with the provisions of the Additional Protocol.

Containment (with respect to IAEA safeguards) means containers, devices, or structures that are used to prevent undetected access to or movement of nuclear material.

Effective kilogram means a unit used in safeguarding nuclear material. The quantity is:

(1) For special nuclear material: The amount specified in § 70.4 of this chapter.

(2) For source material: The amount specified in § 40.4 of this chapter.

Eligible Facilities List means the list of facilities that are eligible for IAEA safeguards inspections under the US/IAEA Safeguards Agreement, which the Secretary of State or his designee last submitted for Congressional review and which was not disapproved. A copy of this list is available for inspection at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room. In accordance with the provisions of the Safeguards Agreement, facilities of direct national security significance are excluded from the Eligible Facilities List.

Environmental Sampling (with respect to IAEA Safeguards) means the collection of environmental samples (*e.g.,* air, water, vegetation, soil, or smears from surfaces) at a location specified by the IAEA for the purpose of assisting the IAEA to draw a conclusion about the absence of undeclared nuclear material or nuclear activities.

Facility means:

(1) A production facility or utilization facility as defined in § 50.2 of this chapter;

(2) A plant that converts nuclear material from one chemical form to another (e.g., Uranium hexafluoride plant);

(3) A fuel fabrication plant;

(4) An enrichment plant or isotope separation plant for the separation of isotopes of uranium or to increase the abundance of ^{235}U.

(5) An installation designed to store nuclear material, such as an independent spent fuel storage installation (ISFSI) or a monitored retrievable storage installation (MRS) as defined in § 72.3 of this chapter; or

(6) Any plant or location where the possession of more than 1 effective kilogram of nuclear material is licensed pursuant to Parts 40, 50, 60, 61, 63, 70, 72, 76, or 150 of this chapter or an Agreement State license.

Facility Attachment means a document negotiated between the U.S. and the IAEA that establishes safeguards commitments for a particular facility.

IAEA means the International Atomic Energy Agency or its duly authorized representatives.

IAEA Material Balance Area means an area established for IAEA material accounting purposes, so that:

(1) The quantity of nuclear material in each transfer into or out of each material balance area can be determined; and

(2) The physical inventory of nuclear material in each material balance area can be determined when necessary in accordance with specified procedures.

Initial Protocol means the protocol to the *Agreement Between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America* that was concluded with the IAEA and provides the IAEA the right to select a facility for material accounting reporting only without the right to conduct inspections.

Inventory change means an increase or decrease in the quantity of source or special nuclear material in an IAEA material balance area.

Key Measurement Point means a location where source or special nuclear material appears in such a form that it may be measured to determine material flow or inventory. Key measurement points include, but are not limited to, the inputs and outputs (including measured discards) and storages in IAEA material balance areas.

Location means any geographical point or area identified by the United States in its declarations, or by the IAEA resulting from a question, under the Additional Protocol.

Managed Access means procedures to protect sensitive or classified information or, to meet safety or physical protection requirements, while allowing the IAEA to accomplish the purpose of a complementary access request.

Nuclear Fuel Cycle-Related Manufacturing and Construction means those activities related to the manufacture or construction of any of the following: Components for separating the isotopes of uranium or enriching uranium in the isotope 235, zirconium tubes, heavy water or deuterium, nuclear-grade graphite, irradiated fuel casks and canisters, reactor control rods, criticality safe tanks and vessels, irradiated fuel element chopping machines, and hot cells.

Nuclear Fuel Cycle-Related Research and Development means those activities specifically related to any process or system development aspect of any of the following: Conversion of nuclear material; enrichment of nuclear material; nuclear fuel fabrication; reactors; critical facilities; reprocessing of nuclear fuel; and processing of intermediate or high-level waste containing plutonium, high-enriched uranium, or uranium-233.

Nuclear material means any source material or any special nuclear material.

Safeguards Agreement means the Agreement Between the United States and the IAEA for the Application of Safeguards in the United States, and all protocols and subsidiary arrangements to the agreement.

Subsidiary Arrangement means a document, negotiated between the U.S. and the IAEA, that formally defines the technical and administrative procedures to implement the measures contained in the Safeguards Agreement.

Surveillance (with respect to IAEA Safeguards) means instrumental or human observation aimed at detecting the movement of nuclear material.

Transitional Facility Attachment means that portion of the ''Transitional Subsidiary Arrangements to the Protocol to the Safeguards Agreement'' that pertains to a particular facility that has been identified under the Initial Protocol.

[45 FR 50711, July 13, 1980, as amended at 46 FR 58283, Dec. 1, 1981; 53 FR 31683, Aug. 19, 1988; 57 FR 18393, Apr. 30, 1992; 57 FR 33432, July 29, 1992; 63 FR 26963, May 15, 1998; 66 FR 55816, Nov. 2, 2001; 73 FR 78608, Dec. 23, 2008]

§ 75.5 Interpretations.

[Top of File]

Except as authorized specifically by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 75.6 Facility and location reporting.

[Top of File]

(a) Except where otherwise specified, all communications concerning the regulations in this Part shall be addressed to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555–0001. Written communications may be delivered in person to the Nuclear Regulatory Commission at One White Flint North, 11555 Rockville Pike, Rockville, MD 20852–2738 between 7:30 a.m. and 4:15 p.m. eastern time. If a submittal deadline falls on a Saturday, Sunday, or a Federal holiday, the next Federal working day becomes the official due date.

(b) Each applicant, licensee, or certificate holder who has been given notice by the Commission in writing that its facility or location is required to report under the Safeguards Agreement shall make its initial and subsequent reports, including attachments, in an appropriate format defined in the instructions.

(c) Facilities—Specific information regarding facilities is to be reported as follows:

Item	Section	Manner of delivery
Initial Inventory Report	75.32	As specified by printed instructions for preparation of DOE/NRC Form-742.
Inventory Change Reports	75.34	As specified by printed instructions for preparation of DOE/NRC Form-741 and Form-740M.
Material Status Reports	75.35	As specified by printed instructions for preparation of DOE/NRC Form-742, Form-742C, and Form-740M.
Special Reports	75.36	To the NRC Headquarters Operations Center.
Facility information	75.10(d)	As specified by printed instructions for Form N–71 and associated forms.
Site information	75.10(e)	As specified by printed instructions for preparation of DOC/NRC Form AP–A and associated forms.

(d) Locations—Specific information regarding locations is to be reported as follows:

Item	Section	Manner of delivery
Fuel cycle-related research and development information.	75.11(c)(1)	As specified by printed instructions for preparation of DOC/NRC Form AP–1 and associated forms.
Fuel cycle-related manufacturing and construction information.	75.11(c)(2)	As specified by printed instructions for preparation of DOC/NRC Form AP–1 and associated forms.
Mines and concentration plant information	75.11(c)(3)	As specified by printed instructions for preparation of DOC/NRC Form AP–1 and associated forms.
Impure source material possession information	75.11(c)(4)	As specified by printed instructions for preparation of DOC/NRC Form AP–1 and associated forms.
Imports and exports of source material for nonnuclear end uses.	75.11(c)(5)	As specified by printed instructions for preparation of DOC/NRC Form AP–1 and associated forms.
IAEA safeguards-exempted and terminated nuclear material information.	75.11(c)(6)	As specified by printed instructions for preparation of DOC/NRC Form AP–1 and associated forms.
Imports and exports of non-nuclear material and equipment.	75.11(c)(7)	As specified by printed instructions for preparation of DOC/NRC Form AP–1 and associated forms.

[45 FR 50711, July 31, 1980, as amended at 52 FR 31613, Aug. 21, 1987; 53 FR 6139, Mar. 1, 1988; 53 FR 19262, May 27, 1988; 53 FR 43422, Oct. 27, 1988; 68 FR 58822, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 72 FR 49562, Aug. 28, 2007; 73 FR 5725, Jan. 31, 2008; 73 FR 78609, Dec. 23, 2008]

§ 75.7 Notification of IAEA safeguards.

[Top of File]

(a) The licensee must inform the NRC:

(1) Before the licensee begins an activity that may be subject to the Safeguards Agreement; or

(2) Within 30 days of beginning an activity subject to the Additional Protocol.

(b) The Commission, by written notice, will inform the applicant, licensee, or certificate holder of those facilities subject to the application of IAEA safeguards.

(c) Such notice is effective until the Commission informs the licensee or certificate holder, in writing, that its facility or location is no longer so designated. Whenever a previously designated facility or location is no longer subject to the application of IAEA safeguards, the Commission will give the licensee or certificate holder prompt notice to that effect.

[73 FR 78609, Dec. 23, 2008]

§ 75.8 IAEA inspections.

[Top of File]

(a) As provided in the Safeguards Agreement and Additional Protocol, inspections may be ad hoc, routine, special, or a complementary access (or a combination of the foregoing). The objectives of the IAEA inspectors in the performance of inspections are as follows:

(1) Ad hoc inspections to verify information contained in the licensee's, applicant's, or certificate holder's facility information or initial inventory report, or to identify and verify changes in the situation which have occurred after the initial inventory reporting date at any location where the initial inventory report or any inspections carried out indicate that nuclear material subject to safeguards under the Safeguards Agreement may be present;

(2) Ad hoc inspections to identify and, if possible, verify the quantity and composition of the nuclear material referred to in notifications specified under § 75.43(b) (pertaining to exports) or § 75.43(c) (pertaining to imports) at any place where nuclear material may be located;

(3) Routine inspections are conducted as specified by the facility attachments referred to in § 75.15 to verify nuclear material and as-built facility design at the strategic points and the records maintained under this part;

(4) Special inspections may be conducted at any of the places specified above and any additional places where the Commission (in coordination with other Federal agencies), in response to an IAEA request, finds access to be necessary;

(5) Complementary access may be conducted at a location, using measures permitted under the Additional Protocol and as specified by managed access procedures, for the IAEA inspectors to verify the completeness and accuracy of the information provided on DOC/NRC Form AP–1 or AP–A and associated forms; and

(6) Complementary access must be provided at any additional locations where the Commission (in coordination with other Federal agencies), in response to an IAEA request, finds access to be necessary.

(b) The NRC will notify the applicant, licensee, or certificate holder of each such inspection or complementary access in writing as soon as possible after receiving the IAEA's notice from the U.S. Department of State. The applicant, licensee, or certificate holder should consult with the Commission immediately if the inspection or complementary access would unduly interfere with its activities or if its key personnel cannot be available.

(c) Each applicant, licensee, or certificate holder subject to the provisions of this part shall recognize as a duly authorized representative of the IAEA any person bearing IAEA credentials for whom the NRC has provided written or electronic authorization that the IAEA representative is permitted to conduct inspection activities on specified dates. If the IAEA representative's credentials have not been confirmed by the NRC, the applicant, licensee, or certificate holder shall not admit the person until the NRC has confirmed the person's credentials. The applicant, licensee, or certificate holder shall notify the Commission promptly, by telephone, whenever an IAEA representative arrives at a facility or location without advance notification. The applicant, licensee, or certificate holder shall also contact the Commission, by telephone, within one hour with respect to the credentials of any person who claims to be an IAEA representative and shall accept written or electronic confirmation of the credentials from the NRC. Confirmation may be requested through the NRC Operations Center (commercial telephone number 301–816–5100).

(d) Each applicant, licensee, or certificate holder subject to the provisions of this part shall allow the IAEA opportunity to conduct an NRC-approved inspection or complementary access of the facility or location to verify the information submitted under §§ 75.10, 75.11, and 75.31 through 75.43. The NRC will assign an employee to accompany IAEA representative(s) at all times during the inspection or complementary access. The applicant, licensee, or certificate holder may accompany IAEA representatives who inspect or access the facility or location. The IAEA representatives should not be delayed or otherwise impeded in the exercise of their duties.

(e) Each applicant, licensee, or certificate holder shall permit the IAEA, in conducting an ad hoc, routine, or special inspection at a facility, to:

(1) Examine records kept under § 75.21;

(2) Observe that the measurements of nuclear material at key measurement points for material balance accounting are representative;

(3) Verify the function and calibration of instruments and other measurement control equipment;

(4) Observe that samples at key measurement points for material balance accounting are taken in accordance with procedures that produce representative samples, observe the treatment and analysis of the samples, and obtain duplicates of these samples;

(5) Arrange to use the IAEA's own equipment for independent measurement and surveillance; and

(6) Perform other measures requested by the IAEA and approved by the NRC.

(f) Each applicant, licensee, or certificate holder shall, at the request of an IAEA inspector during an ad hoc, routine, or special inspection at a facility:

(1) Ship material accountancy samples taken for the IAEA's use, in accordance with applicable packaging and export licensing regulations, by the method of carriage and to the address specified by the inspector; and

(2) Take other actions contemplated by the Safeguards Agreement, and included in the safeguards approach approved by the United States and the IAEA, including but not limited to the following examples:

(i) Enabling the IAEA to arrange to install its equipment for measurement and surveillance;

(ii) Enabling the IAEA to apply its seals and other identifying and tamperindicating devices to containers;

(iii) Making additional measurements and taking additional samples for the IAEA's use;

(iv) Analyzing the IAEA's standard analytical samples;

(v) Using appropriate standards in calibrating instruments and other equipment; and

(vi) Carrying out other calibrations.

(g) Each applicant, licensee, or certificate holder shall permit the IAEA, in conducting complementary access at a location, under the provisions of the Additional Protocol and subsidiary arrangements, to:

(1) Perform visual observations and record observations as photographs;

(2) Conduct environmental sampling, when authorized by the U.S. Government;

(3) Use radiation detection and measurement devices;

(4) Apply seals and other identifying and tamper-indicating devices;

(5) Perform nondestructive measurements and sampling;

(6) Examine records relevant to quantities, origin, and disposition of materials to confirm the accuracy of the information provided under § 75.11;

(7) Examine safeguards-relevant production and shipping records; and

(8) Other objective measures that have been demonstrated to be technically feasible and the use of which has been agreed upon by the IAEA Board of Governors and following consultations between the IAEA and U.S. Government.

(h) Nothing in this section requires or authorizes an applicant, licensee, or certificate holder to carry out any operation that would otherwise constitute a violation of the terms of any applicable license, regulation, or order of the Commission.

[73 FR 78609, Dec. 23, 2008]

§ 75.9 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission, or another U.S. Government agency, has submitted the information collection requirements contained in this Part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this Part under control number 3150–0055.

(b) The approved information collection requirements contained in this Part appear in §§ 75.6, 75.7a, 75.10, 75.11, 75.21, 75.22, 75.23, 75.24, 75.31, 75.32, 75.33, 75.34, 75.35, 75.36, 75.43, 75.44, and 75.45.

(c) This Part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 75.10, Form N–71 and associated forms are approved under control number 3150–0056.

(2) In §§ 75.31, 75.32, 75.33, and 75.35, DOE/NRC Form 742 is approved under control number 3150-0004.

(3) In §§ 75.33 and 75.34, DOE/NRC Form 741 is approved under control number 3150-0003.

(4) In §§ 75.34 and 75.35, DOE/NRC Form 740M is approved under OMB control number 3150-0057.

(5) In § 75.35, DOE/NRC Form 742C is approved under control number 3150-0058.

(6) In §§ 75.10 and 75.11, DOC/NRC Forms AP–1, AP–A, and associated forms are approved under control number 0694–0135.

[49 FR 19628, May 9, 1984, as amended at 62 FR 52189, Oct. 6, 1997; 67 FR 67101, Nov. 4, 2002; 73 FR 78610, Dec. 23, 2008]

Facility and Location Information

[Top of File]

§ 75.10 Facility information.

(a) Each applicant, licensee, or certificate holder subject to the provisions of this Part shall submit facility information, in response to written notification from the Commission, with respect to any facility that the Commission indicates has been identified under the Safeguards Agreement, the Initial Protocol to the Agreement, or meets the Additional Protocol reporting criteria, and in which the applicant, licensee, or certificate holder carries out licensed activities. (The Commission request must state whether the facility has been identified under Article 39 (b) of the principal text of the Safeguards Agreement or Article 2(a) of the Initial protocol.) The applicant, licensee, or certificate holder shall submit the requested information to the Commission within the period specified in the Commission's request.

(b) Facility information includes:

(1) The identification of the facility, stating its general character, purpose, nominal capacity (thermal power level, in the case of power reactors), and geographic location, and the name and address to be used for routine purposes;

(2) A description of the general arrangement of the facility with reference, to the extent feasible, to the form, location and flow of nuclear material, and to the general layout of important items of equipment which use, produce, or process nuclear material;

(3) A description of features of the facility relating to material accounting, containment, and surveillance;

(4) A description of the existing and proposed procedures at the facility for nuclear material accounting and control, with special reference to material balance areas established by the licensee, measurement of flow, and procedures for physical inventory taking (As part of this description, the applicant, licensee, or certificate holder may identify a process step involving information that it deems to be commercially sensitive and for which it proposes that a special material balance area be established so as to restrict IAEA access to this information); and

(5) A map of the site and information on the size of the buildings and on the general nature of the activities conducted in each building.

(c) Each licensee or certificate holder shall thereafter submit to the Commission information with respect to any modification at the facility affecting the information referred to in paragraph (a) of this section. The following information must be submitted:

(1) Regarding a modification of a type described in the license or certificate conditions: At least 180 days before the modification is scheduled to be started, except that in an emergency or other unforeseen situation a shorter period may be approved by the Commission.

(2) Regarding any other modification relevant to the application of the provisions of the Safeguards Agreement: At the time the first inventory change report is submitted after the modification is completed.

(d) The information specified in paragraphs (b) and (c) of this section, except for the information specified in paragraph (b)(5) of this section, must be prepared on IAEA approved Design Information Questionnaire forms (Form N–71 and associated forms or other forms supplied by the Commission). The information must be sufficiently detailed to enable knowledgeable determinations to be made in the development of Facility Attachments or amendments thereto, including:

(1) Identification of the features of facilities and nuclear material relevant to the application of safeguards to nuclear material in sufficient detail to facilitate verification;

(2) Determination of IAEA material balance areas to be used for IAEA accounting purposes and selection of those strategic points which are key measurement points and which will be used to determine flow and inventory of nuclear material;

(3) Establishment of the nominal timing and procedures for taking of physical inventories of nuclear material for IAEA accounting purposes;

(4) Establishment of the records and reports requirements and records evaluation procedures;

(5) Establishment of requirements and procedures for verification of the quantity and location of nuclear material;

(6) Selection of appropriate combinations of containment and surveillance methods and techniques at the strategic points at which they are to be applied; and

(7) Information on organizational responsibility for material accounting and control.

(e) Information specified in paragraph (b)(5) of this section must be submitted as specified by instructions for DOC/NRC Form AP–A and associated forms and shall contain a site map drawn to scale as an attachment.

(f) The applicant's, licensee's, or certificate holder's security rules for physical protection that will impact the IAEA inspectors at the facility must be included in the facility information only when and to the extent specifically requested by the Commission.

(g) Health and safety rules that are to be observed by the IAEA inspectors at the facility must be included in the facility information.

(h) Information must be provided on the need to manage IAEA access to the facility to protect health and safety or to protect classified, proprietary, or other sensitive information, and on other protective measures that should be implemented should an IAEA access be requested.

[73 FR 78611, Dec. 23, 2008]

§ 75.11 Location information.

[Top of File]

(a) As required by the Additional Protocol, each applicant, licensee, or certificate holder shall submit location information to the Commission as specified in the instructions for DOC/NRC Form AP–1 and associated forms.

(b) Location information includes:

(1) Nuclear fuel cycle-related research and development information including a general description of the activity and information specifying the location of the activity.

(2) Nuclear fuel cycle-related manufacturing or construction information including a description of the scale of operations for the activity.

(3) Uranium and thorium mine and concentration plant information including information on the location, operational status, and the estimated annual production capacity and current annual production of the activity.

(4) Impure source material possession information including the quantities, the chemical composition, and the use or intended use of the material (*e.g.,* nuclear or non-nuclear use).

(5) Imports and exports of source material for non-nuclear end uses including the location, quantities, chemical compositions, and use of the imported or exported material.

(6) IAEA-exempted and -terminated nuclear material information including information regarding the quantities, uses, and location of the nuclear material.

(7) Imports and exports of non-nuclear material and equipment including the location, quantity and description of the materials and equipment.

(c) Information specified in paragraphs (b)(1) through (b)(7) of this section must be supplied as specified in the instructions for DOC/NRC Form AP–1 and associated forms. The Information provided on DOC/NRC Form AP–1 and associated forms must be submitted annually. If the information has not changed, a ''No change'' report must be provided. NRC should also be notified when the activity is no longer performed. The annual report must be submitted by January 31 of each succeeding year after the initial report. The initial report must be submitted no later than 30 calendar days following the date of publication of this rule.

(d) Information must be provided on the need to manage IAEA access to the location to protect health and safety or to protect classified, proprietary, or other sensitive information, and on other protective measures that should be implemented should an IAEA access be requested.

[45 FR 50711, July 31, 1980, as amended at 49 FR 19628, May 9, 1984; 73 FR 78611, Dec. 23, 2008]

§ 75.12 Communication of information to IAEA.

[Top of File]

(a) Except as otherwise provided in this section, the Commission will furnish to the IAEA all information submitted under §§ 75.10, 75.11,

and 75.31 through 75.43.

(b)(1) An applicant, licensee, or certificate holder may request that information of particular sensitivity, that it customarily holds in confidence, not be transmitted physically to the IAEA. An applicant, licensee, or certificate holder who makes this request shall, at the time the information is submitted, identify the pertinent document or part thereof and make a full statement of the reasons supporting the request. The applicant, licensee, or certificate holder shall retain a copy of the request and all documents related to the request as a record until the Commission terminates the license or certificate for each facility or location involved with the request, or until the Commission notifies the applicant, licensee, or certificate holder that the applicant, licensee, or certificate holder is no longer under the Safeguards Agreement. Superseded material must be retained for 3 years after each change is made.

(2) In considering such a request, it is the policy of the Commission to achieve an effective balance between legitimate concerns of licensees, applicants, or certificate holders, including protection of the competitive position of the owner of the information, and the undertaking of the United States to cooperate with the IAEA to facilitate the implementation of the safeguards provided for in the Safeguards Agreement and Additional Protocol. The Commission will take into account the obligation of the IAEA to take every precaution to protect commercial and industrial secrets and other confidential information coming to its knowledge in the implementation of the Safeguards Agreement and Additional Protocol.

(3) A request made under § 2.390 of this chapter will not be treated as a request under this section unless the application makes specific reference to this section, nor shall a determination to withhold information from public disclosure necessarily require a determination that such information not be transmitted physically to the IAEA.

(4) If a request is granted, the Commission will determine a location where the information will remain readily available for examination by the IAEA and will so inform the applicant, licensee, or certificate holder. The applicant, licensee, or certificate holder shall retain this information as a record until the Commission terminates the license or certificate for the facility involved with the request or until the Commission notifies the applicant, licensee, or certificate holder that the applicant, licensee, or certificate holder is no longer under the Safeguards Agreement. Superseded material must be retained for 3 years after each change is made.

(c) A request made under § 2.390(b) of this chapter will not be treated as a request under this section unless the application makes specific reference to this section, nor shall a determination to withhold information from public disclosure necessarily require a determination that this information not be transmitted physically to the IAEA.

(d) Where consistent with the Safeguards Agreement, the Commission may at its own initiative, or at the request of a licensee, determine that any information submitted under §§ 75.10, and 75.11 shall not be physically transmitted to, or made available for examination by, the IAEA.

[45 FR 50711, July 31, 1980, as amended at 53 FR 19262, May 27, 1988; 69 FR 2281, Jan. 14, 2004; 73 FR 78612, Dec. 23, 2008]

Material Accounting and Control for Facilities

[Top of File]

§ 75.15 Facility attachments.

(a) The Facility Attachment or Transitional Facility Attachment will document the determinations referred to in § 75.10 and will contain other appropriate provisions.

(b) The Commission will issue license or certificate amendments, as necessary, to implement the Safeguards Agreement and the Facility Attachment (as amended from time to time). The license or certificate amendments through reference to the Facility Attachment or Transitional Facility Attachment, or otherwise, will specify:

(1) IAEA material balance areas;

(2) Types of modifications for which information is required, under § 75.10, to be submitted in advance;

(3) Procedures, as referred to in § 75.21;

(4) The extent to which isotopic composition must be included in batch data (under § 75.22) and advance notification (§ 75.45);

(5) Items to be reported in the concise notes accompanying inventory change reports, as referred to in § 75.34;

(6) Loss limits and changes in containment, as referred to in § 75.36 (pertaining to special reports);

(7) Actions required to be taken under § 75.8(f) at the request of an IAEA inspector;

(8) Procedures to be used for documentation of requests under § 75.46 (pertaining to expenses); and

(9) Other appropriate matters.

(c) The Commission will also issue license or certificate amendments, as necessary, for implementing the Initial Protocol to the Safeguards Agreement and the Transitional Facility Attachment (as amended from time to time).

(d) License or certificate amendments will be made under the Commission's rules of practice (part 2 of this chapter). Specifically, if the licensee or certificate holder does not agree to an amendment, an order modifying the license would be issued under § 2.204 of this chapter.

(e) Subject to constraints imposed by the Safeguards Agreement, the Commission will afford the applicant, licensee, or certificate holder a reasonable opportunity to participate in the development of the Facility Attachment or Transitional Facility Attachment applicable to the facility, and any amendments thereto, and to review and comment upon any instrument before it has been agreed to by the United States. The Commission will provide to the applicant, licensee, or certificate holder a copy of any such instrument that has been completed under the Safeguards Agreement.

(f) Locations reporting under the Additional Protocol, unless located in a facility selected under Article 39(b) of the main text of the Safeguards Agreement, do not have Facility Attachments or Transitional Facility Attachments.

[73 FR 78612, Dec. 23, 2008]

§ 75.21 General requirements.

[Top of File]

(a) Each licensee or certificate holder who has been given notice by the Commission in writing that its facility has been identified under the Safeguards Agreement shall establish, maintain, and follow written material accounting and control procedures. The licensee or certificate holder shall retain as a record current material accounting and control procedures until the Commission terminates the license or certificate for the facility involved with the request or until the Commission notifies the licensee or certificate holder that the licensee or certificate holder is no longer under the Safeguards Agreement. Superseded material must be retained for 3 years after each change is made.

(b) The material accounting and control procedures required by paragraph (a) of this section shall include, as appropriate:

(1) A measurement system for the determination of the quantities of nuclear material received, produced, shipped, lost or otherwise removed from inventory, and the quantities on inventory;

(2) The evaluation of precision and accuracy of measurements and the estimation of measurement uncertainty;

(3) Procedures for identifying, reviewing and evaluating differences in shipper/receiver measurements;

(4) Procedures, including frequency, for taking a physical inventory;

(5) Procedures for the evaluation of accumulations of unmeasured inventory and unmeasured losses; and

(6) A system of accounting and operating records.

(c)(1) The procedures must, unless otherwise specified in license or certificate conditions, conform to the facility information submitted by the licensee under § 75.10.

(2) Until facility information has been submitted by the applicant, licensee, or certificate holder, the procedures must be sufficient to document changes in the quantity of nuclear material in or at its facility. Observance of the procedures described in §§ 40.61 or 74.15 of this chapter (or the corresponding provisions of the regulations of an Agreement State) by any applicant, licensee, or certificate holder subject thereto constitutes compliance with this paragraph.

(d) The requirements of this section are in addition to any other requirements of this chapter, relating to material accounting and control, that may apply to the licensee.

[45 FR 50711, July 31, 1980, as amended at 53 FR 19263, May 27, 1988; 67 FR 78149, Dec. 23, 2002; 73 FR 78613, Dec. 23, 2008]

§ 75.22 Accounting records.

[Top of File]

(a) The accounting records required by § 75.21 shall include, for each IAEA material balance area:

(1) All inventory changes, so as to permit a determination of the book inventory at any time;

(2) All measurement results that are used for determination of nuclear material quantities; and

(3) All adjustments and corrections that have been made with respect to inventory changes, book inventories and physical inventories.

(b) The records shall show, for each batch of nuclear material: material identification, batch data and source data. The *batch data* means a separate listing of the total weight of each element of nuclear material (including, as specified in the license conditions, isotopic composition for special nuclear material) with plutonium and enriched uranium measured in grams and natural or depleted uranium and thorium measured in kilograms. The *source data* are the data, recorded during measurement or calibration or used to derive empirical relationships, which identify nuclear material and provide batch data.

(c) For each inventory change, the records shall show the date of the inventory change and, when appropriate, (1) the originating IAEA material balance area or the shipper, and (2) the receiving IAEA material balance area or the recipient.

§ 75.23 Operating records.

[Top of File]

The operating records required by § 75.21 shall include, as appropriate, for each IAEA material balance area:

(a) Those operating data which are used to establish changes in the quantities and composition of nuclear material;

(b) The data obtained from the calibration of tanks and instruments and from sampling and analyses, the procedures employed to control the quality of measurements, and the derived estimates of random and systematic error;

(c) A description of the sequence of the actions taken in preparing for, and in taking, a physical inventory, to ensure that it is correct and complete; and

(d) A description of the actions taken to ascertain the magnitude and cause of any accidental or unmeasured loss that might occur.

§ 75.24 Retention of records.

[Top of File]

The records referred to in §§ 75.22 and 75.23 shall be retained by the licensee for at least five years.

Reports

[Top of File]

§ 75.31 General requirements.

Each licensee or certificate holder who has been given notice by the Commission in writing that its facility has been identified under the Safeguards Agreement shall make, in an appropriate computer-readable format, an initial inventory report, and thereafter shall make accounting reports, with respect to the facility and, in addition, licensees or certificate holders who have been given notice, under § 75.7 that their facilities are subject to the application of IAEA safeguards, shall make the special reports described in § 75.36. These reports must be based on the records kept under § 75.21. At the request of the Commission, the licensee or certificate holder shall amplify or clarify any report with respect to any matter relevant to implementation of the Safeguards Agreement. Any amplification or clarification must be in writing and must be submitted, to the address specified in the request, within 20 days or other time as may be specified by the Commission.

[59 FR 35621, July 13, 1994; 73 FR 78613, Dec. 23, 2008]

§ 75.32 Initial inventory report.

[Top of File]

(a) The initial inventory reporting date shall be the last day of the calendar month in which the Commission gives the licensee notice that an initial inventory report is required.

(b) The initial inventory report, to be submitted to the Commission as specified by the instructions (NUREG/BR–0007 and NMMSS Report D–24 ''Personal Computer Data Input for NRC Licensees''), must show the quantities of nuclear material contained in or at a facility as of the initial inventory reporting date. The information in the initial inventory report may be based upon the licensee's or certificate holder's book record.

(c) The initial inventory report shall be dispatched within twenty (20) days after the initial inventory reporting date.

[45 FR 50711, July 31, 1980, as amended at 59 FR 35622, July 13, 1994; 73 FR 78613, Dec. 23, 2008]

§ 75.33 Accounting reports.

[Top of File]

(a)(1) The accounting reports for each IAEA material balance area must consist of:

(i) Nuclear Material Transaction Reports (Inventory Change Reports); and

(ii) Material status reports showing the material balance based on a physical inventory of nuclear material actually present.

(2) These prescribed computer-readable forms replace the following forms which have been submitted in paper form:

(i) The DOE/NRC Form 741; and

(ii) The DOE/NRC Form 742.

(b) The reports shall be based on data available as of the date of reporting and may be corrected at a later date, as required.

[45 FR 50711, July 31, 1980, as amended at 49 FR 19629, May 9, 1984; 59 FR 35622, July 13, 1994; 73 FR 78613, Dec. 23, 2008]

§ 75.34 Inventory change reports.

[Top of File]

(a) Nuclear Material Transaction Reports (Inventory Change Reports) in computer-readable format to be completed in accordance with instructions (NUREG/BR-0006 and NMMSS Report D-24 "Personal Computer Data Input for NRC Licensees"), must specify identification and batch data for each batch of nuclear material, the date of the inventory change, and, as appropriate,

(1) The originating IAEA material balance area or the shipper; and

(2) The receiving IAEA material balance area or the recipient.

Each licensee who receives special nuclear material from a foreign source shall complete both the supplier's and receiver's portion of the form.

(b) Nuclear Material Transactions Reports (Inventory Change Reports), when appropriate, must be accompanied by Concise Notes, completed as specified in the instructions (NUREG/BR–0006 and NMMSS Report D–24 ‘‘Personal Computer Data Input for NRC Licensees’’). Copies of these instructions may be obtained from the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001. This Concise Note is used in:

(1) Explaining the inventory changes on the basis of the operating records provided for under § 75.23; and

(2) Describing, to the extent specified in the license conditions, the anticipated operational program for the facility, including particularly, but not exclusively, the schedule for taking physical inventory.

[59 FR 35622, July 13, 1994; 73 FR 78613, Dec. 23, 2008]

§ 75.35 Material status reports.

[Top of File]

(a) A material status report must be submitted for each physical inventory which is taken as part of the material accounting and control procedures required by § 75.21. The material status report must include a material balance report and a physical inventory report which lists all batches separately and specifies material identification and batch data for each batch. When appropriate, the material status report must be accompanied by a Concise Note. The reports described in this section must be prepared and submitted in accordance with instructions (NUREG/BR–0006, NUREG/BR–0007, and NMMSS Report D–24 ‘‘Personal Computer Data Input for NRC Licensees’’). Copies of these instructions may be obtained from the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001.

(b) Unless otherwise specified in the license conditions, material status reports shall be dispatched as soon as possible and in any event within thirty (30) days after the start of the physical inventory.

[45 FR 50711, July 31, 1980, as amended at 59 FR 35622, July 13, 1994; 73 FR 78613, Dec. 23, 2008]

§ 75.36 Special reports.

[Top of File]

(a) This section applies only to licensees or certificate holders who have been given notice under § 75.7(b) that their facilities are subject to the application of IAEA safeguards.

(b) Each licensee who is subject to this section shall immediately make a special report to the Commission, by telephone (and also by telegraph, mailgram, or facsimile), in those situations described in license conditions.

(c) The situations referred to in paragraph (b) of this section include (1) the possibility of loss of nuclear material in excess of specified limits and (2) unexpected changes in containment to the extent that unauthorized removal of nuclear material has become possible.

[73 FR 78613, Dec. 23, 2008]

Advanced Notification and Expenses

[Top of File]

§ 75.43 Circumstances requiring advance notification.

(a) Each applicant, licensee, or certificate holder who has been given notice under § 75.7 shall give advance written notification to the Commission regarding the international and domestic transfers specified in this section.

(b) *Exports*. Notification shall be given of any proposed shipment of nuclear material for peaceful purposes under an export license issued pursuant to part 110 of this chapter, in an amount exceeding one effective kilogram, directly or indirectly to any non-nuclear-weapon state (as referred to in Article III(2) of the Treaty on the Non-Proliferation of Nuclear Weapons, 21 U.S.T. 483). If the licensee anticipates that it will make two or more shipments for peaceful purposes, within any period of 90 days, directly or indirectly to destinations in the same non-nuclear-weapon state, notification shall be given of each shipment if the aggregate quantity of nuclear material to be transferred exceeds one effective kilogram.[2]

(c) *Imports*. (1) Notification shall be given (to the fullest extent possible on the basis of available information) with respect to nuclear material which immediately prior to export is subject to safeguards, under an agreement with the IAEA, in the country from which the material, directly or indirectly, is being exported. Such notification is only required, however, if the quantities of nuclear material are as specified in paragraph (c)(2) of this section.

(2) Notification shall be given with respect to any proposed import of nuclear material described in paragraph (c)(1) of this section in an amount exceeding one effective kilogram. If the licensee anticipates that it will receive two or more shipments of such nuclear material, within any 90-day period from points of origin in the same country, notification shall be given with respect to each shipment if the aggregate quantity of such nuclear material to be received exceeds one effective kilogram.

(d) *Domestic Transfers*. Notification must be given regarding any shipments of nuclear material (other than small quantities in the form of samples containing less than 0.01 effective kilogram per sample) to a non-eligible destination. As used in this paragraph, a *non-eligible destination* means any destination in the United States other than a facility on the Eligible Facilities List.

[2] All foreign countries, with the exception of the People's Republic of China, France, the Soviet Union, and the United Kingdom, are non-nuclear-weapon states. Treaty on the Non-Proliferation of Nuclear Weapons, Article IX(3).

[73 FR 78613, Dec. 23, 2008]

§ 75.44 Timing of advance notification.

[Top of File]

(a) Except as provided in paragraph (b) of this section, notification to the Commission, when required by § 75.43, must be given:

(1) In the case of exports and domestic transfers, at least 20 days in advance of the preparation of the nuclear material for shipment from the facility.

(2) In the case of imports, at least 12 days in advance of the unpacking of nuclear material at the facility.

(b) For a particular receipt or shipment of nuclear material, the Commission will approve a shorter notice period than that specified by paragraph (a) of this section, for good cause, if it determines that observing the specified notification period would result in delay in shipment or unpackaging.

(c) The licensee shall inform the Commission, by phone, as soon as possible, with respect to any delay in the receipt (or unpackaging) or the shipment (or preparation for shipment) of nuclear material for which advance notification is required. New dates should be provided, if known.

[73 FR 78614, Dec. 23, 2008]

§ 75.45 Content of advance notification.

[Top of File]

(a) The notifications required by § 75.43 must include the element weight of nuclear material being received or shipped, the chemical composition and physical form, the isotopic composition (to the extent specified by license conditions), the estimated date and place at the reporting facility where the nuclear material is to be unpackaged or prepared for shipment (and where the quantity and composition can be verified), the applicable IAEA material balance area at the reporting facility, the approximate number of items to be received or shipped, and the probable dates of receipt or shipment. The notification must indicate that the information is being supplied under § 75.43.

(b) The notifications required with respect to export and import shipments shall also include

(1) If available, a general description of containers (including, in the case of exports, features that would permit sealing);

(2) Destination of export as authorized under an export license issued pursuant to part 110 of this chapter, or origin of import (by country and, if known, place);

(3) Means of transport; and

(4) Expected date and place of arrival in the destination country (for exports) or in the United States (for imports).

[73 FR 78614, Dec. 23, 2008]

§ 75.46 Expenses.

[Top of File]

(a) Under the Safeguards Agreement, the IAEA undertakes to reimburse an applicant, licensee, or certificate holder who has been given notice under § 75.7 for extraordinary expenses incurred as a result of its specific request: *Provided,* That the IAEA has agreed in advance to do so. The Safeguards Agreement also contemplates that, in any case, the IAEA will reimburse an applicant, licensee, or certificate holder for the cost of making additional measurements or taking samples at the specific request of an IAEA inspector.

(b) The Commission will inform the licensee, in the license conditions or other written communication, of those items of extraordinary expense which the Agency has agreed in advance to reimburse.

(c) The Commission will inform the licensee, in the license conditions, of the procedures to be used to document:

(1) An IAEA inspector's request for making additional measurements or taking additional samples; and

(2) An IAEA request for a particular action by the licensee that will give rise to reimbursable extraordinary expense.

(d) The Commission will take appropriate action to assist the applicant, licensee, or certificate holder regarding the reimbursement of any expense which, under the Safeguards Agreement, is to be borne by the IAEA.

[73 FR 78614, Dec. 23, 2008]

Enforcement

[Top of File]

§ 75.51 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(l)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

(c) The Commission may issue orders to secure compliance with the provisions of this part or to prohibit any violation of such provisions as may be proper to protect the common defense and security. Enforcement actions, including proceedings instituted with respect to Agreement State licensees, will be conducted in accordance with the procedures set forth in part 2, subpart B of this chapter. Only NRC licensees, however, are subject to license modification, suspension, or revocation as a result of enforcement action.

[57 FR 55079, Nov. 24, 1992]

§ 75.53 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, or conspiracy to violate, any regulation issued under sections 161b., 161i., or 161o. of the Act. For purposes of criminal sanctions under section 223, all the regulations in Part 75 are issued under one or more of sections 161b., 161i., or 161o., except as provided in paragraphs (b) and (c) of this section.

(b) The regulations in Part 75 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 75.1, 75.2, 75.3, 75.4, 75.5, 75.7, 75.9, 75.12, 75.15, 75.46, 75.51, and 75.53.

(c) Any provision in Part 75 that implements the ''Protocol Additional to the Agreement between the United States of America and the International Atomic Energy Agency for the Application of Safeguards in the United States of America,'' known as the ''Additional Protocol,'' signed by the United States on June 12, 1998, is not issued under sections 161b., 161i., or 161o, for the purposes of criminal sanctions under section 223.

[57 FR 55079, Nov. 24, 1992; 73 FR 78614, Dec. 23, 2008]

PART 76—CERTIFICATION OF GASEOUS DIFFUSION PLANTS

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 76.1 Purpose.

(a) This part establishes requirements that will govern the operation of those portions of the Portsmouth and Paducah Gaseous Diffusion Plants located in Piketon, Ohio, and Paducah, Kentucky, respectively, that are leased by the United States Enrichment Corporation. These requirements are promulgated to protect the public health and safety from radiological hazards and provide for the common defense and security. This part also establishes the certification process that will be used to ensure compliance with the established requirements.

(b) The regulations contained in this part are issued pursuant to the Atomic Energy Act of 1954, as amended (68 Stat. 919); Title II of the Energy Reorganization Act of 1974, as amended (88 Stat. 1242); and Titles IX and XI of the Energy Policy Act of 1992 (106 Stat. 2923, 2951).

§ 76.2 Scope.

[Top of File]

The regulations in this part apply only to those portions of the Portsmouth and Paducah Gaseous Diffusion Plants leased by the Corporation, per the Lease Agreement between the Department of Energy and the United States Enrichment Corporation. This part also gives notice to all persons who knowingly provide to the Corporation or any contractor, or subcontractor any components, equipment, materials, or other goods or services that relate to the activities subject to this part that they may be individually subject to NRC enforcement action for violation of § 76.10.

§ 76.4 Definitions.

[Top of File]

As used in this part:

Act means the Atomic Energy Act of 1954 (68 Stat 919), and includes any amendments to the Act.

Administrative controls means the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to ensure operation of the plant in a safe manner.

Agreement State means any State with which the Commission has entered into an effective agreement under subsection 274b. of the Act.

Non-Agreement State means any other State.

Alert means events may occur, are in progress, or have occurred that could lead to a release of radioactive material[s] but that the release is not expected to require a response by an offsite response organization to protect persons offsite.

Atomic energy means all forms of energy released in the course of nuclear fission or nuclear transformation.

Certificate of compliance or certificate means a certificate of compliance issued pursuant to this part.

Classified matter means documents or material revealing classified information.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Common defense and security means the common defense and security of the United States.

Compliance plan means a plan for achieving compliance approved pursuant to this part.

Corporation means the United States Enrichment Corporation (USEC), or its successor, a Corporation that is authorized by statute to lease the gaseous diffusion enrichment plants in Paducah, Kentucky, and Piketon, Ohio, from the Department of Energy, or any person authorized to operate one or both of the gaseous diffusion plants, or other facilities, pursuant to a plan for the privatization of USEC that is approved by the President.

Department and Department of Energy (DOE) means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 et seq.), to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U. S. Energy Research and Development Administration and to the Administrator thereof pursuant to Sections 104(b), (c), and (d) of the Energy Reorganization Act of 1974, as amended, (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to Section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

Depleted uranium means the byproduct residues from the uranium enrichment process in which the concentration of the isotope U_{235} is less than that occurring in natural uranium.

Director means the Director, or his or her designee, of the Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission.

Effective dose equivalent means the sum of the products of the dose equivalent to the body organ or tissue and the weighting factors applicable to each of the body organs or tissues that are irradiated, as defined in 10 CFR Part 20 (§§ 20.1001 through 20.2402).

Effective kilograms of special nuclear material means:

(1) For uranium with an enrichment in the isotope U-235 of 0.01 (1 percent) and above, its element weight in kilograms multiplied by the square of its enrichment expressed as a decimal weight fraction; and

(2) For uranium with an enrichment in the isotope U-235 below 0.01 (1 percent), its element weight in kilograms multiplied by 0.0001.

Formula quantity means strategic special nuclear material in any combination in a quantity of 5000 grams or more computed by the formula, grams = (grams contained U-235) + 2.5(grams U-233+grams plutonium).

Lease Agreement means the agreement entered into as of July 1, 1993, and any subsequent revisions between the United States Department of Energy and the United States Enrichment Corporation.

Limiting conditions for operation means the lowest functional capability or performance levels of structures, systems, components, and their support systems required for normal safe operation of the plant.

Limiting control settings means settings for automatic alarm or protective devices related to those variables having significant safety functions.

National Security Information means information that has been determined pursuant to Executive Order 12356 or any predecessor order to require protection against unauthorized disclosure and that is so designated.

Person means:

(1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government Agency other than the Commission or the Department, except that the Department shall be considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to Section 202 of the Energy Reorganization Act of 1974, as amended, (88 Stat. 1244); any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and

(2) Any legal successor, representative, agent, or agency of the foregoing.

Process means a series of actions that achieves an end or result.

Produce, when used in relation to special nuclear material, means:

(1) To manufacture, make, produce, or refine special nuclear material;

(2) To separate special nuclear material from other substances in which such material may be contained; or

(3) To make or to produce new special nuclear material.

Radioactive material means source material, special nuclear material, or byproduct material, possessed, used, transferred, or disposed of under part 76.

Restricted Data means all data concerning design, manufacture or utilization of atomic weapons, the production of special nuclear material, or the use of special nuclear material in the production of energy, but does not include data declassified or removed from the Restricted Data category pursuant to Section 142 of the Act.

Safety limits means those bounds within which the process variables must be maintained for adequate control of the operation and that

must not be exceeded in order to protect the integrity of the physical system that is designed to guard against the uncontrolled release of radioactivity.

Sealed source means any radioactive material that is encased in a capsule designed to prevent leakage or escape of the radioactive material.

Security facility approval means that a determination has been made by the NRC that a facility is eligible to use, process, store, reproduce, transmit, or handle classified matter.

Site area emergency means events may occur, are in progress, or have occurred that could lead to a significant release of radioactive material and that could require a response by offsite response organizations to protect persons offsite.

Source material means source material as defined in Section 11z. of the Act and in the regulations contained in part 40 of this chapter.

Special nuclear material means:

(1) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of Section 51 of the Act, determines to be special nuclear material, but does not include source material; or

(2) Any material artificially enriched in any of the foregoing, but does not include source material.

Special nuclear material of low strategic significance means:

(1) Less than an amount of special nuclear material of moderate strategic significance, as defined in this section, but more than 15 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), or 15 grams of uranium-233, or 15 grams of plutonium, or the combination of 15 grams when computed by the equation, grams = (grams contained U-235) + (grams plutonium) + (grams U-233); or

(2) Less than 10,000 grams but more than 1000 grams of uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U-235 isotope), or

(3) 10,000 grams or more of uranium-235 (contained in uranium enriched above natural but less than 10 percent in the U - 235 isotope).

Special nuclear material of moderate strategic significance means:

(1) Less than a formula quantity of strategic special nuclear material but more than 1000 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), or more than 500 grams of uranium-233 or plutonium, or in a combined quantity of more than 1000 grams when computed by the equation, grams = (grams contained U-235) + 2 (grams U-233 + grams plutonium); or

(2) 10,000 grams or more of uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U-235 isotope).

Special nuclear material scrap means the various forms of special nuclear material generated during chemical and mechanical processing, other than recycle material and normal process intermediates, which are unsuitable for use in their present form, but all or part of which will be used after further processing.

Strategic special nuclear material means uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope), uranium-233, or plutonium.

Surveillance requirements means requirements relating to test, calibration, or inspection to ensure that the necessary quality of systems and components is maintained, that plant operation will be within the safety limits, and that the limiting conditions of operation will be met.

Unclassified Controlled Nuclear Information is information whose unauthorized dissemination is prohibited under Section 148 of the Atomic Energy Act.

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

Unreviewed safety question means a change which involves any of the following:

(1) The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report may be increased;

(2) A possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report may be created; or

(3) The margin of safety as defined in the basis for any technical safety requirement is reduced.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6669, Feb. 12, 1997]

§ 76.5 Communications.

[Top of File]

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent as follows:

(a) By mail addressed to: ATTN: Document Control Desk, Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, U.S Nuclear Regulatory Commission, Washington, DC 20555-0001;

(b) By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or

(c) Where practicable, by electronic submission, for example, Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(d) Classified communications shall be transmitted in accordance with § 95.39 of this chapter to the NRC Headquarters' classified mailing address listed in appendix A to part 73 of this chapter or delivered by hand in accordance with § 95.39 of this chapter to the NRC Headquarters' street address listed in appendix A to part 73 of this chapter.

[68 FR 58822, Oct. 10, 2003 as amended at 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 76.6 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 76.7 Employee protection.

[Top of File]

(a) Discrimination by the Corporation, a contractor, or a subcontractor of the Corporation against an employee for engaging in certain protected activities is prohibited. Discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment. The protected activities are established in Section 211 of the Energy Reorganization Act of 1974, as amended, and in general are related to the administration or enforcement of a requirement imposed under the Atomic Energy Act or the Energy Reorganization Act.

(1) The protected activities include but are not limited to:

(i) Providing the Commission or his or her employer information about alleged violations of either of the above statutes or possible violations of requirements imposed under either of the above statutes;

(ii) Refusing to engage in any practice made unlawful under either of the above statutes or under these requirements if the employee has identified the alleged illegality to the employer;

(iii) Requesting the Commission to institute action against his or her employer for the administration or enforcement of these requirements;

(iv) Testifying in any Commission proceeding, or before Congress, or at any Federal or State proceeding regarding any provision (or proposed provision) of either of the above statutes; and

(v) Assisting or participating in, or attempting to assist or participate in, the protected activities.

(2) These activities are protected even if no formal proceeding is actually initiated as a result of the employee assistance or participation.

(3) This section has no application to any employee alleging discrimination prohibited by this section who, acting without direction from his or her employer (or the employer's agent), deliberately causes a violation of any requirement of the Energy Reorganization Act of 1974, as amended, or the Atomic Energy Act of 1954, as amended.

(b) Any employee who believes that he or she has been discharged or otherwise discriminated against by any person for engaging in protected activities specified in paragraph (a)(1) of this section may seek a remedy for the discharge or discrimination through an

administrative proceeding in the Department of Labor. The administrative proceeding must be initiated within 180 days after an alleged violation occurs by filing a complaint alleging the violation with the Department of Labor, Employment Standards Administration, Wage and Hour Division. The Department of Labor may order reinstatement, back pay, and compensatory damages.

(c) A violation of paragraphs (a), (e), or (f) of this section by the Corporation, or a contractor or subcontractor of the Corporation may be grounds for:

(1) Denial, revocation, or suspension of the certificate.

(2) Imposition of a civil penalty on the Corporation or a contractor or subcontractor of the Corporation.

(3) Other enforcement action.

(d) Actions taken by an employer or others which adversely affect an employee may be predicated upon nondiscrimination grounds. The prohibition applies when the adverse action occurs because the employee has engaged in protected activities. An employee's engagement in protected activities does not automatically render him or her immune from discharge or discipline for legitimate reasons or from adverse action dictated by nonprohibited considerations.

(e)(1) The Corporation shall prominently post the revision of NRC Form 3, "Notice to Employees," referenced in 10 CFR 19.11(c). This form must be posted at locations sufficient to permit employees protected by this section to observe a copy on the way to or from their place of work. Premises must be posted during the term of the certificate and for 30 days following certificate termination.

(2) The Corporation shall notify its contractors of the prohibition against discrimination for engaging in protected activities.

(3) Copies of NRC Form 3 may be obtained by writing to the NRC Region III Office listed in appendix D to part 20 of this chapter, by calling (301) 415-5877, via e-mail to *forms@nrc.gov*, or by accessing the NRC Website at *http://www.nrc.gov* and selecting forms from the index found on the home page.

(f) No agreement affecting the compensation, terms, conditions, or privileges of employment, including an agreement to settle a complaint filed by an employee with the Department of Labor pursuant to Section 211 of the Energy Reorganization Act of 1974, as amended, may contain any provision which would prohibit, restrict, or otherwise discourage an employee from participating in protected activity as defined in paragraph (a)(1) of this section including, but not limited to, providing information to the NRC or to his or her employer on potential violations or other matters within NRC's regulatory responsibilities.

[59 FR 48960, Sept. 23, 1994, as amended at 60 FR 24553, May 9, 1995; 63 FR 15744, Apr. 1, 1998; 64 FR 44649, Aug. 17, 1999; 68 FR 58822, Oct. 10, 2003; 72 FR 63975, Nov. 14, 2007]

§ 76.8 Information collection requirements: OMB approval not required.

[Top of File]

The information collection requirements contained in this part of limited applicability apply to a wholly-owned instrumentality of the United States and affect fewer than ten respondents. Therefore, Office of Management and Budget clearance is not required pursuant to the Paperwork Reduction Act (44 U.S.C. 3501, et seq.).

[62 FR 52190, Oct. 6, 1997]

§ 76.9 Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission or information required by statute or by the Commission's rules, regulations, standards, orders, or other conditions to be maintained by the Corporation must be complete and accurate in all material respects.

(b) The Corporation shall notify the Commission of information identified as having for the regulated activity a significant implication for public health and safety or common defense and security. The Corporation violates this paragraph only if the Corporation fails to notify the Commission of information that the Corporation has identified as having a significant implication for public health and safety or common defense and security. Notification must be provided to the Administrator of NRC's Region III Office within 2 working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[59 FR 48960, Sept. 23, 1994, as amended at 64 FR 44649, Aug. 17, 1999]

§ 76.10 Deliberate misconduct.

[Top of File]

(a) The Corporation or any employee of the Corporation and any contractor (including a supplier or consultant), subcontractor, or any

employee of a contractor or subcontractor, who knowingly provides to the Corporation, or any contractor or subcontractor, components, equipment, materials, or other goods or services, that relate to the Corporation's activities subject to this part; may not:

(1) Engage in deliberate misconduct that causes or, but for detection, would have caused, the Corporation to be in violation of any rule, regulation, or order, or any term, condition, or limitation of a certificate or approval issued by the Commission; or

(2) Deliberately submit to the NRC, the Corporation, or its contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause the Corporation to be in violation of any rule, regulation, or order, or any term, condition, or limitation of a certificate or approved compliance plan issued by the Director; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order or policy of the Corporation, contractor, or subcontractor.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6669, Feb. 12, 1997]

§ 76.21 Certificate required.

[Top of File]

(a) The Corporation or its contractors may not operate the gaseous diffusion plants at Piketon, Ohio, and Paducah, Kentucky, unless an appropriate certificate of compliance, and/or an approved compliance plan is in effect under this part. Unless authorized by the NRC under other provisions of this chapter, a person other than the Corporation or its contractors may not acquire, deliver, receive, possess, use, or transfer radioactive material at the gaseous diffusion plants at Piketon, Ohio, and Paducah, Kentucky.

(b) For the purposes of §§ 30.41, 40.51, and 70.42 of this chapter, the Corporation shall be authorized to receive, and licensees shall be authorized to transfer to the Corporation, byproduct material, source material, or special nuclear material to the extent permitted under the certificate of compliance issued, and/or the compliance plan approved, pursuant to this part.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6669, Feb. 12, 1997; 64 FR 44649, Aug. 17, 1999]

§ 76.22 Ineligibility of certain applicants.

[Top of File]

A certificate of compliance may not be issued to the Corporation if the Commission determines that:

(a) The Corporation is owned, controlled, or dominated by an alien, a foreign corporation, or a foreign government; or

(b) The issuance of such a certificate of compliance would be inimical to--

(1) The common defense and security of the United States; or

(2) The maintenance of a reliable and economical domestic source of enrichment services.

[62 FR 6670, Feb. 12, 1997]

§ 76.23 Specific exemptions.

[Top of File]

The Commission may, upon its own initiative or upon application of the Corporation, grant such exemptions from the requirements of the certification regulations as it determines are authorized by law and will not endanger life, or property, or the common defense and security, and are otherwise in the public interest.

Subpart B--Application

[Top of File]

§ 76.31 Periodic application requirement.

The Corporation shall periodically apply to the Commission for a certificate of compliance, in accordance with § 76.36, on or before April 15 of the year specified in an existing certificate of compliance as determined by the Commission, but not less frequently than every 5 years.

[62 FR 6670, Feb. 12, 1997]

§ 76.33 Application procedures.

[Top of File]

(a) *Filing requirements.* (1) An application for a certificate of compliance must be tendered by filing the application with the Director of the NRC's Office of Nuclear Material Safety and Safeguards, with copies sent to the NRC Region III Office and appropriate resident inspector, in accordance with § 76.5. If the application is to be submitted electronically, see Guidance for Electronic Submission to the Commission at *http://www.nrc.gov/site-help/eie.html*.

(2) The application must include the full name, address, age (if an individual), and citizenship of the applicant. If the applicant is a corporation or other entity, the application must indicate the State where it was incorporated or organized; the location of the principal office; and the names, addresses, and citizenship of its principal officers. The applicant shall include any known information concerning the control or ownership, if any, exercised over the applicant by any alien, foreign corporation, or foreign government.

(b) *Oath or affirmation.* An application for a certificate of compliance must be executed in a signed original by a duly authorized officer of the Corporation under oath or affirmation.

(c) *Pre-filing consultation.* The Corporation may confer with the Commission's staff before filing an application.

(d) *Additional information.* At any time during the review of an application, the Corporation may be required to supply additional information to the Commission's staff to enable the Commission or the Director, as appropriate, to determine whether the certificate should be issued or denied, or to determine whether a compliance plan should be approved.

(e) *Withholdable information.* If an application contains Restricted Data, National Security Information, Safeguards Information, Unclassified Controlled Nuclear Information, proprietary data, or other withholdable information, the applicant shall ensure that the withholdable information is separate from the information to be made publicly available.

[64 FR 44649, Aug. 17, 1999; 68 FR 58822, Oct. 10, 2003]

§ 76.35 Contents of application.

[Top of File]

The application for a certificate of compliance must include the information identified in this section.

(a) A safety analysis report which must include the following information:

(1) The activities and locations involving special nuclear material and the general plan for carrying out these activities;

(2) The name, amount, and specifications (including the chemical and physical form and, where applicable, isotopic content) of the special nuclear material, source and byproduct material the Corporation proposes to use, possess or produce, including any material held up in equipment from previous operations;

(3) The qualifications requirements, including training and experience, of the Corporation's management organization and key individuals responsible for safety in accordance with the regulations in this chapter;

(4) An assessment of accidents based on the requirements of § 76.85;

(5) A training program that meets the requirements of § 76.95;

(6) A description of equipment and facilities which will be used by the Corporation to protect health and minimize danger to life or property (such as handling devices, working areas, shields, measuring and monitoring instruments, devices for the treatment and disposal of radioactive effluent and wastes, storage facilities, provisions for protection against natural phenomena, fire protection systems, criticality accident alarm systems, etc.);

(7) A description of the management controls and oversight program to ensure that activities directly relevant to nuclear safety and safeguards and security are conducted in an appropriately controlled manner that ensures protection of employee and public health and safety and protection of the national security interests; and

(8) A description of the plant site, and a description of the principal structures, systems, and components of the plant.

(b) A plan prepared and approved by DOE for achieving compliance with respect to any areas of noncompliance with the NRC's regulations that are identified by the Corporation as of the date of the application that includes:

(1) A description of the areas of noncompliance;

(2) A plan of actions and schedules for achieving compliance; and

(3) A justification for continued operation with adequate safety and safeguards.

(c) Any relevant information concerning deviations from the published Environmental Impact Statement, Environmental Assessments, or environmental permits under which the plants currently operate from which the Commission can prepare an environmental assessment related to the compliance plan.

(d) A quality assurance program that meets the requirements of § 76.93.

(e) Technical safety requirements in accordance with § 76.87. A summary statement of the bases or reasons for the requirements, other than those covering administrative controls, must also be included in the application, but will not be considered part of the technical safety requirements.

(f) An emergency plan that meets the requirements of § 76.91.

(g) A compliance status report that includes the status of various State, local and Federal permits, licenses, approvals, and other entitlements, as described in § 51.45(d) of this chapter. The report must include environmental and effluent monitoring data.

(h) A fundamental nuclear material control plan which describes the measures used to control and account for special nuclear material that the Corporation uses, possesses, or has access to. The plan must describe, as appropriate:

(1) How formula quantities of strategic special nuclear material will be controlled and accounted for in accordance with the relevant requirements of subpart E;

(2) How special nuclear material of moderate strategic significance will be controlled and accounted for in accordance with the relevant requirements of subpart E; and

(3) How special nuclear material of low strategic significance will be controlled and accounted for in accordance with the relevant requirements of subpart E.

(i) A transportation protection plan which describes the measures used to protect shipments of special nuclear material of low strategic significance in accordance with the relevant requirements of subpart E when in transit offsite.

(j) A physical protection plan which describes the measures used to protect special nuclear material that the Corporation uses, possesses, or has access to at fixed sites. The plan must describe, as appropriate:

(1) How formula quantities of special nuclear material will be protected against both theft and radiological sabotage in accordance with the relevant requirements of subpart E;

(2) How special nuclear material of moderate strategic significance will be protected in accordance with the relevant requirements of subpart E;

(3) How special nuclear material of low strategic significance will be protected in accordance with the relevant requirements of subpart E; and

(4) The measures used to protect special nuclear material while in transit between protected areas, all of which are located on a single fixed site under the control of the applicant. The level of protection afforded the material while in transit may not be less than that afforded the same material while it was within the protected area from which transit began.

(k) A plan describing the facility's proposed security procedures and controls as set forth in § 95.15(b) of this chapter for protection of classified matter.

(l)(1) In response to a written request by the Commission, each applicant for a certificate and each recipient of a certificate shall submit facility information, as described in § 75.10 of this chapter, on Form N–71 and associated forms and site information on DOC/NRC Form AP–A and associated forms;

(2) As required by the Additional Protocol, shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms; and

(3) Shall permit verification thereof by the International Atomic Energy Agency (IAEA); and shall take other action as may be necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

(m) A description of the program, as appropriate, for processing, management, and disposal of mixed and radioactive wastes and depleted uranium generated by operations. This description must be limited to processing, management, and disposal activities conducted during operation of the facilities while under lease to the Corporation. The application must also include a description of the waste streams generated by enrichment operations, annual volumes of depleted uranium and waste expected, identification of radioisotopes contained in the waste, physical and chemical forms of the depleted uranium and waste, plans for managing the depleted uranium and waste, and plans for ultimate disposition of the waste and depleted uranium before turnover of the facilities to the Department of Energy under the terms of the lease agreement between the United States Enrichment Corporation and the Department.

(n) A description of the funding program to be established to ensure that funds will be set aside and available for those aspects of the ultimate disposal of waste and depleted uranium, decontamination and decommissioning, relating to the gaseous diffusion plants leased to the Corporation by the Department of Energy, which are the financial responsibility of the Corporation. The Corporation shall establish financial surety arrangements to ensure that sufficient funds will be available for the ultimate disposal of waste and depleted uranium, and decontamination and decommissioning activities which are the financial responsibility of the Corporation. The funding mechanism, such as prepayment, surety, insurance, or external sinking fund, must ensure availability of funds for any activities which are required to be completed both before or after the return of the gaseous diffusion facilities to the Department of Energy in accordance with the lease between the Department and the Corporation. The funding program must contain a basis for cost estimates used to establish funding levels and must contain means of adjusting cost estimates and associated funding levels over the duration of the lease. The funding program need not address funding for those aspects of decontamination and decommissioning of the gaseous diffusion plants assigned to the Department of Energy under the Atomic Energy Act of 1954, as amended. The Corporation should address the adequacy of the financing mechanism selected in its periodic application for certification.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6670, Feb. 12, 1997; 64 FR 44649, Aug. 17, 1999; 73 FR 78614, Dec. 23, 2008]

§ 76.36 Renewals.

[Top of File]

(a) After issuance by the Commission of the initial certificate of compliance and/or an approved compliance plan, the Corporation shall file periodic applications for renewal, as required by § 76.31.

(b) Information contained in previous applications, statements, or reports filed with the Commission may be referenced as part of the application, provided that the reference is clear and specific.

(c) An application for renewal is subject to the requirements in § 76.33 and must contain the following information:

(1) The information specified in § 76.35; or,

(2) A statement by the Corporation that the NRC may rely upon the information provided in the previous application(s) upon which the existing certificate is based, except for:

(i) Any proposed changes in the existing certificate of compliance conditions or technical safety requirements;

(ii) Any proposed changes to the documents submitted with the previous application in accordance with § 76.35;

(iii) Any changes which the Corporation has made without prior NRC approval pursuant to § 76.68; and,

(iv) Any changes to certificate conditions or technical safety requirements for which the Corporation has sought and received Commission approval pursuant to § 76.45.

(d) The changes which are submitted as part of an application for renewal in accordance with paragraph (c)(2) of this section, must be in the form of specific changes to the documentation specified in § 76.35. The changes must be marked and dated for easy identification.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6670, Feb. 12, 1997; 64 FR 44649, Aug. 17, 1999]

§ 76.37 Federal Register notice.

[Top of File]

The Director may, at his or her discretion, publish in the Federal Register:

(a) A notice of the filing of an application specifying that copies of the application, except for Restricted Data, Unclassified Controlled Nuclear Information, Classified National Security Information, Safeguards Information, Proprietary Data, or other withholdable information will be made available for the public inspection at the NRC Web site, *http://www.nrc.gov*;

(b) A notice of opportunity for written public comment on the application for renewal; and

(c) The date of any scheduled public meeting regarding the application for renewal.

[64 FR 44649, Aug. 17, 1999, as amended at 64 FR 48955, Sept. 9, 1999]

§ 76.39 Public meeting.

[Top of File]

(a) A public meeting will be held on an application for renewal if the Director, in his or her discretion, determines that a meeting is in the public interest with respect to a decision on the application for renewal.

(b) Conduct of public meeting.

(1) The Director shall conduct any public meeting held on the application for renewal.

(2) Public meetings will take place near the locale of the subject plant, unless otherwise specified by the Director.

(3) A public meeting will be open to all interested members of the public and be conducted as deemed appropriate by the Director.

(4) Members of the public will be given an opportunity during a public meeting to make their views regarding the application for renewal known to the Director.

(5) A transcript will be kept of each public meeting.

(6) No Restricted Data, Classified National Security Information, Unclassified Controlled Nuclear Information, Safeguards Information, Proprietary Data, or other withholdable information may be introduced at the meeting.

[59 FR 48960, Sept. 23, 1994, as amended at 64 FR 44649, Aug. 17, 1999]

§ 76.41 Record underlying decisions.

[Top of File]

(a) Any decision of the Commission or its designee under this part in any proceeding regarding an application for a certificate must be based on information in the record and facts officially noticed in the proceeding.

(b) All public comments and correspondence in any proceeding regarding an application for a certificate must be made a part of the public docket of the proceeding, except as provided under 10 CFR 2.390.

[69 FR 2281, Jan. 14, 2004]

§ 76.43 Date for decision.

[Top of File]

The Director will render a decision on an application within 6 months of the receipt of the application unless the Director alters the date for decision and publishes notice of the new date in the Federal Register.

[62 FR 6670, Feb. 12, 1997]

§ 76.45 Application for amendment of certificate.

[Top of File]

(a) *Contents of an amendment application.* In addition to the application for certification submitted under § 76.31, the Corporation may at any time apply for an amendment of the certificate to cover proposed new or modified activities. The amendment application should contain sufficient information for the NRC to make findings of compliance or acceptability for the proposed activities in the same manner as was required for the original certificate.

(b) *Oath or affirmation.* An application for an amendment of the certificate of compliance must be executed in a signed original by the Corporation under oath or affirmation.

(c) *Amendment application determinations.* If the NRC staff approves an application for a certificate amendment, it will be effective on a date specified by the NRC staff. If an application for a certificate amendment is not approved by the NRC staff, the Corporation will be informed in writing. The NRC staff may, at its discretion, publish notice of its determination on an amendment application in the Federal Register.

(d) *Request for review of staff's determination on an amendment application.* The Corporation, or any person whose interest may be affected, may file a petition requesting the Director's review of an NRC staff determination on an amendment application. A petition requesting the Director's review may not exceed 30 pages and must be filed within 30 days after the date of the NRC staff's determination. Any person described in this paragraph may file a written response to a petition requesting the Director's review. This response may not exceed 30 pages and must be filed within 15 days after the filing date of the petition requesting the Director's review. The Director may adopt, modify, or set aside the findings, conclusions, conditions, or terms in the NRC staff's amendment determination by providing a written basis for the action. If the Director does not issue a decision or take other appropriate action within 60 days after receiving the petition for review, the NRC staff's determination on the amendment application remains in effect.

(e) *Request for review of a Director's decision.* The Corporation, or any person whose interest may be affected and who filed a petition for review or filed a response to a petition for review under § 76.45(d), may file a petition requesting the Commission's review of a Director's decision on an amendment application.

(1) A petition requesting the Commission's review may not exceed 30 pages and must be filed within 30 days after the date of the Director's decision. A petition requesting the Commission's review may be either:

(i) Delivered to the Rulemakings and Adjudications Staff of the Office of the Secretary at One White Flint North, 11555 Rockville Pike, Rockville, MD 20852; or

(ii) Sent by mail or telegram to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff.

(2) Any person described in paragraph (e) of this section may file a written response to a petition requesting the Commission's review. This response may not exceed 30 pages and must be filed within 15 days after the filing date of the petition requesting the Commission's review.

(3) The Commission may adopt, by order, further procedures that, in its judgment, would serve the purpose of review of the Director's decision. The Commission may adopt, modify, or set aside the findings, conclusions, conditions, or terms in the Director's amendment review decision and will state the basis of its action in writing. If the Commission does not issue a decision or take other appropriate action within 90 days after receiving the petition for review, the Director's decision, under § 76.45(d), on the amendment application remains in effect.

[64 FR 44649, Aug. 17, 1999]

Subpart C--Certification

[Top of File]

§ 76.51 Conditions of certification.

The Corporation shall comply with the certificate of compliance, any approved compliance plan, and the requirements set forth and referenced in this part, except as may be modified by the certificate or approved compliance plan.

§ 76.53 Consultation with Environmental Protection Agency.

[Top of File]

In reviewing an application for a certificate, including the provisions of any compliance plan, the Director shall consult with the Environmental Protection Agency and solicit the Environmental Protection Agency's written comments on the application.

§ 76.55 Timely renewal.

[Top of File]

In any case in which the Corporation has timely filed a sufficient application for a certificate of compliance, the existing certificate of compliance or approved compliance plan does not expire until the application for a certificate of compliance has been finally determined by the NRC. For purposes of this rule, a sufficient application is one that addresses all elements of § 76.36.

[62 FR 6670, Feb. 12, 1997]

§ 76.60 Regulatory requirements which apply.

[Top of File]

The Nuclear Regulatory Commission will use the following requirements for certification of the Corporation for operation of the gaseous diffusion plants:

(a) The Corporation shall provide for adequate protection of the public health and safety and common defense and security.

(b) The Corporation shall comply with the provisions of this part.

(c) The Corporation shall comply with the applicable provisions of 10 CFR part 19, "Notices, Instructions and Reports To Workers: Inspection and Investigations," with the following modifications:

(1) [Reserved]

(2) The Corporation shall post NRC Form 3 during the term of the certificate and for 30 days following certificate termination.

(d) The Corporation shall comply with the applicable provisions of 10 CFR part 20, "Standards For Protection Against Radiation," with the following modifications:

(1) [Reserved]

(2) The Corporation shall comply with the requirements in this part or as specified in an approved plan for achieving compliance.

(e) The Corporation shall comply with the applicable provisions of 10 CFR part 21, "Reporting of Defects and Noncompliance," with the following modifications:

(1) The Corporation shall comply with the requirements in §§ 21.6 and 21.21.

(2) Under § 21.31, procurement documents issued by the Corporation must specify that the provisions of 10 CFR Part 21 apply.

(f) The Corporation shall comply with the applicable provisions of 10 CFR part 26, "Fitness-for-Duty Programs." The requirements of this section apply only if the Corporation elects to engage in activities involving formula quantities of strategic special nuclear material. When applicable, the requirements apply only to the Corporation and personnel carrying out the activities specified in § 26.2(a) (1) through (5).

(g) The Corporation shall comply with the applicable provisions of 10 CFR part 71, "Packaging and Transportation of Radioactive Material."

(h) The Corporation shall comply with the applicable provisions for physical security and material control and accounting as specified in subpart E to this part and contained in 10 CFR part 70, "Domestic Licensing of Special Nuclear Material," part 73, "Physical Protection of Plants and Materials," and part 74, "Material Control and Accounting of Special Nuclear Material." The requirements in these parts address safeguards for three different kinds of nuclear material: Special nuclear material of low strategic significance (Category III), special nuclear material of moderate strategic significance (Category II), and formula quantities of strategic special nuclear material (Category I). The requirements for Category III material apply to the production of low enriched uranium. The requirements for Category II and Category I material apply only if the Corporation elects to engage in activities that involve these kinds of material and then only to the situations and locations that involve these kinds of material.

(i) The Corporation shall comply with the applicable provisions of 10 CFR part 95, "Security Facility Approval and Safeguarding of National Security Information and Restricted Data," as specified in subpart E to this part.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6670, Feb. 12, 1997; 64 FR 44650, Aug. 17, 1999]

§ 76.62 Issuance of certificate and/or approval of compliance plan.

[Top of File]

(a) Upon a finding of compliance with the Commission's regulations for issuance of a certificate and/or approval of a compliance plan, the Director shall issue a written decision explaining the decision. The Director may issue a certificate of compliance covering those areas where the Corporation is in compliance with applicable Commission requirements and approve a compliance plan for the remaining areas, if any, of noncompliance. The Director may impose any appropriate terms and conditions.

(b) The Director shall publish notice of the decision in the Federal Register.

(c) The Corporation, or any person whose interest may be affected, may file a petition, not to exceed 30 pages, requesting review of the Director's decision. This petition must be filed with the Commission not later than 30 days after publication of the Federal Register notice. Any person described in this paragraph may file a response to any petition for review, not to exceed 30 pages, within 15 days after the filing of the petition. If the Commission does not issue a decision or take other appropriate action within 90 days after the publication of the Federal Register notice, the Director's decision remains in effect. The Commission may adopt, by order, further procedures that, in its judgment, would serve the purpose of review of the Director's decision.

(d) The Commission may adopt, modify, or set aside the findings, conclusions, conditions, or terms in the Director's decision and will state the basis of its action in writing.

[59 FR 48960, Sept. 23, 1994, as amended at 64 FR 44650, Aug. 17, 1999]

§ 76.64 Denial of certificate or compliance plan.

[Top of File]

(a) The Director may deny an application for a certificate of compliance or not approve a compliance plan upon a written finding that the application is in noncompliance with one or more of the Commission's requirements for the plant, or that the compliance plan is inadequate to protect the public health and safety or the common defense and security.

(b) The Director shall publish notice of the decision in the Federal Register.

(c) Before a denial of an application for a certificate of compliance, the Director shall advise the Corporation and the Department in writing of any areas of noncompliance with the Commission's regulations and offer the Department or the Corporation an opportunity to submit a proposed compliance plan prepared by the Department regarding the identified areas of noncompliance. The Director shall take this action even if the Department or the Corporation has previously submitted a proposed compliance plan addressing in whole or in part the identified areas of noncompliance.

(d) The Corporation, or any person whose interest may be affected, may file a petition for review, not to exceed 30 pages, requesting review of the Director's decision. This petition for review must be filed with the Commission not later than 30 days after publication of the Federal Register notice. Any person described in this paragraph may file a response to any petition for review, not to exceed 30 pages, within 15 days after the filing of the petition for review. If the Commission does not issue a decision or take other appropriate action within 90 days after the publication of the Federal Register notice, the Director's decision remains in effect. The Commission may adopt, by order, further procedures that, in its judgment, would serve the purpose of review of the Director's decision.

(e) The Commission may adopt, modify, or set aside the findings, conclusions, conditions, or terms in the Director's decision and will state the basis of its action in writing.

[59 FR 48960, Sept. 23, 1994, as amended at 64 FR 44650, Aug. 17, 1999]

§ 76.65 Inalienability of certificates.

[Top of File]

The certificate granted under the regulations in this part may not be transferred, assigned, or in any manner disposed of, either voluntarily or involuntarily, directly or indirectly, through transfer of control of any certificate to any person unless the Commission, after securing full information, finds that the transfer is in accordance with the provisions of the Act, and consents in writing.

§ 76.66 Expiration and termination of certificates.

[Top of File]

(a) Except as provided in § 76.55, each certificate or approval issued pursuant to this part expires at the end of the day, in the month and year stated in the certificate or approval.

(b) The Corporation shall notify the Commission promptly, in writing under § 76.5, when the Corporation decides to terminate operation at either of the gaseous diffusion plants and other activities authorized under the certificate.

(c) If the Corporation does not submit a renewal application under § 76.36, the Corporation shall, on or before the expiration date specified in the existing certificate, terminate operation of the gaseous diffusion plants.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6670, Feb. 12, 1997]

§ 76.68 Plant changes.

[Top of File]

(a) The Corporation may make changes to the plant or to the plant's operations as described in the safety analysis report without prior Commission approval provided all the provisions of this section are met:

(1) The Corporation shall conduct a written safety analysis which demonstrates that the changes would not result in undue risk to public health and safety, the common defense and security, or to the environment.

(2) The changes must be authorized by responsible management and approved by a safety review committee.

(3) The changes may not decrease effectiveness of the plant's safety, safeguards, and security programs.

(4) The changes may not involve a change in any condition to the certificate of compliance.

(5) The changes may not involve a change to any condition to the approved compliance plan.

(6) The changes may not involve an unreviewed safety question.

(b) To ensure that the approved application remains current with respect to the actual site description and that the plant's programs, plans, policies, and operations are in place, the Corporation shall submit revised pages to the approved application and safety analysis report, marked and dated to indicate each change. The Corporation shall evaluate any as-found conditions that do not agree with the plant's programs, plans, policies, and operations in accordance with paragraph (a) of this section. These revisions must be submitted before April 15 of each calendar year, or at a shorter interval as may be specified in the certificate. If a renewal application for a certificate is filed in accordance with § 76.36 of this part, the revisions shall be incorporated into the application.

(c) The Corporation shall maintain records of changes in the plant and of changes in the programs, plans, policies, procedures and operations described in the approved application, and copies of the safety analyses on which the changes were based. The records of plant changes must be retained until the end of the duration of the lease. The records of changes in programs, plans, policies, procedures, and operations and copies of the safety analysis on which the changes were based must be retained for a period of 2 years.

(d) The Corporation may at any time apply under § 76.45 for amendment of the certificate to cover proposed new or modified activities not permitted by paragraph (a) of this section.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6670, Feb. 12, 1997]

§ 76.70 Post issuance.

[Top of File]

(a) Amendment of certificate terms and conditions. The terms and conditions of a certificate of compliance or an approved compliance plan are subject to modification by reason of amendments to the Act, or by reason of rules, regulations, or orders issued in accordance with the Act.

(b) Revocation, suspension, or amendments for cause. A certificate of compliance or a compliance plan may be revoked, suspended, or amended, in whole or in part for:

(1) Any material false statement in the application or statement of fact required by the Commission in connection with the application;

(2) Conditions revealed by the application, or any report, record, inspection, or other means which would warrant the Commission to refuse to grant a certificate or approve a compliance plan on an original application; and

(3) Violation of, or failure to observe any of, the applicable terms and conditions of the Act, or the certificate of compliance, the compliance plan, or any rule, regulation, or order of the Commission.

(c) Procedures governing amendment, revocation, suspension, or imposing requirements by order.

(1) Except in cases of willfulness or those in which the public health interest, common defense and security, or safety requires otherwise, no certificate of compliance or compliance plan may be amended, suspended, or revoked unless before the institution of proceedings therefore, facts or conduct which may warrant the action must have been called to the attention of the Corporation in writing and the Corporation shall have been accorded an opportunity to demonstrate or achieve compliance with the lawful requirements related to such action.

(2) The Commission may institute a proceeding to modify, suspend, or revoke a certificate or take such other action as may be proper by serving on the Corporation or other person subject to the jurisdiction of the Commission an order that will:

(i) Allege the violations with which the Corporation or other person subject to the Commission's jurisdiction is charged, or the potentially hazardous conditions or other facts deemed to be sufficient ground for the proposed action, and specify the action proposed;

(ii) Provide that the Corporation or other person who is charged must, and other interested persons may, submit a written response to the order within a reasonable period after publication of the order as may be specified in the order;

(iii) Specify the issues for resolution should the order be contested;

(iv) State the effective date of the order; if the Commission finds the public health, common defense and security, or safety, so require or that the violation or conduct causing the violation is willful, the order may provide that the proposed action be immediately effective pending further order and include a statement of reasons for making the proposed action immediately effective;

(v) Provide that the Commission may make a final decision after consideration of the written submissions or may in its discretion adopt by order, upon the Commission's own initiative or at the request of the Corporation or an interested person, further procedures for a hearing of the issues before making a final enforcement decision. These procedures may include requirements for further participation in the proceeding, such as the requirements for intervention under Part 2, subparts C, G or L of this chapter. Submission of written comments by interested persons do not constitute entitlement to further participation in the proceeding. Further procedures will not normally be provided for at the request of an interested person unless the person is adversely affected by the order.

(3) The Corporation or other person to whom the Commission has issued an immediately effective order may, in addition to submitting a

written response, move the Commission to set aside the immediate effectiveness of the order on the ground that the order, including the need for immediate effectiveness, is not based on adequate evidence but on mere suspicion, unfounded allegations, or error. The motion must state with particularity the reasons why the order is not based on adequate evidence and must be accompanied by affidavits or other evidence relied on. The NRC staff shall respond within 5 days of the receipt of the motion.

(d) Notice of violation. (1) In response to an alleged violation of any provision of the Act or NRC regulations or the conditions of a certificate, compliance plan, or an order issued by the Commission, the Commission may serve on the Corporation or other person subject to the jurisdiction of the Commission a written notice of violation. A separate notice may be omitted if an order or demand for information pursuant to this section is issued that otherwise identifies the apparent violation. The notice of violation will concisely state the alleged violation and will require the Corporation or other person subject to it, within twenty (20) days of the date of the notice or other specified time, to submit a written explanation or statement in reply including:

(i) Corrective steps which have been taken by the Corporation or other person and the results achieved;

(ii) Corrective steps which will be taken; and

(iii) The date when full compliance will be achieved.

(2) The notice may require the Corporation or other person subject to the jurisdiction of the Commission to admit or deny the violation and to state the reasons for the violation, if admitted. It may provide that, if an adequate reply is not received within the time specified in the notice, the Commission may issue an order or a demand for information as to why the certificate should not be modified, suspended, or revoked or why such other action as may be proper should not be taken.

(e) Additional information. At any time after the granting of a certificate of compliance or approval of a compliance plan, the Commission may require further statements from the Corporation, signed under oath or affirmation, in order to enable the Commission to determine whether the certificate or approved compliance plan should be modified or revoked.

[69 FR 2281, Jan. 14, 2004]

§ 76.72 Miscellaneous procedural matters.

[Top of File]

(a) The filing of any petitions for review or any responses to these petitions are governed by the procedural requirements set forth in 10 CFR 2.302(a) and (c), 2.304, 2.305, 2.306, and 2.307. Additional guidance regarding the filing and service of petitions for review of the Director's decision and responses to these petitions may be provided in the Director's decision or by order of the Commission.

(b) The Secretary of the Commission has the authority to rule on procedural matters set forth in 10 CFR 2.346.

(c) There are no restrictions on ex parte communications or on the ability of the NRC staff and the Commission to communicate with one another at any stage of the regulatory process, with the exception that the rules on ex parte communications and separation of functions set forth in 10 CFR 2.347 and 2.348 apply to proceedings under 10 CFR Part 2 for imposition of a civil penalty.

(d) The procedures set forth in 10 CFR 2.205, and in 10 CFR part 2, subparts C, G, L and N will be applied in connection with NRC action to impose a civil penalty pursuant to Section 234 of the Atomic Energy Act of 1954, as amended, or Section 206 of the Energy Reorganization Act of 1974 and the implementing regulations in 10 CFR part 21 (Reporting of Defects and Noncompliance), as authorized by section 1312 (e) of the Atomic Energy Act of 1954, as amended.

(e) The procedures set forth in 10 CFR 2.206 apply to a request by any person to institute a proceeding pursuant to § 76.70 to amend, revoke, or suspend a certificate of compliance or approved compliance plan, or for such other action as may be proper.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6670, Feb. 12, 1997; 69 FR 2281, Jan. 14, 2004]

§ 76.74 Computation and extension of time.

[Top of File]

(a) In computing any period of time, the day of the act, event or default after which the designated period of time begins to run is not included. The last day of the period so computed is included unless it is a Saturday, Sunday, or legal holiday at the place where the action or event is to occur, in which event the period runs until the end of the next day which is neither a Saturday, Sunday, nor holiday.

(b) Except as otherwise provided by law, whenever an act is required or allowed to be done at or within a specified time, the time fixed or the period of time prescribed may for good cause be extended or shortened by the Commission.

§ 76.76 Backfitting.

[Top of File]

(a)(1) Backfitting is defined as the modification of, or addition to, systems, structures, or components of a plant; or to the procedures or organization required to operate a plant; any of which may result from a new or amended provision in the Commission rules or the imposition of a regulatory staff position interpreting the Commission rules that is either new or different from a previous NRC staff position.

(2) Except as provided in paragraph (a)(4) of this section, the Commission shall require a systematic and documented analysis pursuant to paragraph (b) of this section for backfits which it seeks to impose.

(3) Except as provided in paragraph (a)(4) of this section, the Commission shall require the backfitting of a plant only when it determines, based on the analysis described in paragraph (b) of this section, that there is a substantial increase in the overall protection of the public health and safety or the common defense and security to be derived from the backfit and that the direct and indirect costs of implementation for that plant are justified in view of this increased protection.

(4) The provisions of paragraphs (a)(2) and (a)(3) of this section are inapplicable and, therefore, backfit analysis is not required and the standards in paragraph (a)(3) of this section do not apply where the Commission or staff, as appropriate, finds and declares, with appropriately documented evaluation for its finding, any of the following:

(i) That a modification is necessary to bring a plant into compliance with a certificate or the rules or orders of the Commission, or into conformance with written commitments by the Corporation; or

(ii) That regulatory action is necessary to ensure that the plant provides adequate protection to the health and safety of the public and is in accord with the common defense and security; or

(iii) That the regulatory action involves defining or redefining what level of protection to the public health and safety or common defense and security should be regarded as adequate.

(5) The Commission shall always require the backfitting of a plant if it determines that the regulatory action is necessary to ensure that the plant provides adequate protection to the health and safety of the public and is in accord with the common defense and security.

(6) The documented evaluation required by paragraph (a)(4) of this section must include a statement of the objectives of and reasons for the modification and the basis for invoking the exception. If immediate effective regulatory action is required, then the documented evaluation may follow, rather than precede, the regulatory action.

(7) If there are two or more ways to achieve compliance with a certificate or the rules or orders of the Commission, or with written Corporation commitments, or there are two or more ways to reach a level of protection which is adequate, then ordinarily the Corporation is free to choose the way which best suits its purposes. However, should it be necessary or appropriate for the Commission to prescribe a specific way to comply with its requirements or to achieve adequate protection, then cost may be a factor in selecting the way, provided that the objective of compliance or adequate protection is met.

(b) In reaching the determination required by paragraph (a)(3) of this section, the Commission will consider how the backfit should be scheduled in light of other ongoing regulatory activities at the plant and, in addition, will consider information available concerning any of the following factors as may be appropriate and any other information relevant and material to the proposed backfit:

(1) Statement of the specific objectives that the proposed backfit is designed to achieve;

(2) General description of the activity that would be required by the Corporation in order to complete the backfit;

(3) Potential change in the risk to the public from the accidental release of radioactive material;

(4) Potential impact on radiological exposure of facility employees;

(5) Installation and continuing costs associated with the backfit, including the cost of plant downtime;

(6) The potential safety impact of changes in plant or operational complexity, including the relationship to proposed and existing regulatory requirements;

(7) The estimated resource burden on the NRC associated with the proposed backfit and the availability of such resources;

(8) The potential impact of differences in plant type, design, or age on the relevancy and practicality of the proposed backfit; and

(9) Whether the proposed backfit is interim or final and, if interim, the justification for imposing the proposed backfit on an interim basis.

(c) No certificate will be withheld during the pendency of backfit analyses required by the Commission's rules.

(d) The Executive Director for Operations shall be responsible for implementation of this section, and all analyses required by this section shall be approved by the Executive Director for Operations or his or her designee.

[56 FR 48960, Sept. 23, 1994, as amended at 62 FR 6671, Fed. 12, 1997]

Subpart D--Safety

[Top of File]

§ 76.81 Authorized use of radioactive material.

Unless otherwise authorized by law, the Corporation shall confine its possession and use of radioactive material to the locations and purposes covered by the certificate and/or approved compliance plan. Except as otherwise provided, the certificate or approved compliance plan issued pursuant to the requirements in this part entitles the Corporation to receive title to, own, acquire, receive, possess, and use radioactive material in accordance with the certificate.

§ 76.83 Transfer of radioactive material.

[Top of File]

(a) The Corporation may not transfer radioactive material except as authorized pursuant to this section.

(b) Except as otherwise provided and subject to the provisions of paragraphs (c) and (d) of this section, the Corporation may transfer radioactive material:

(1) From one component of the Corporation to another;

(2) To the Department;

(3) To the agency in any Agreement State which regulates radioactive materials pursuant to an agreement with the Commission under Section 274 of the Act, if the quantity transferred is not sufficient to form a critical mass;

(4) To any person exempt from the licensing requirements of the Act and requirements in this part, to the extent permitted under the exemption;

(5) To any person in an Agreement State, subject to the jurisdiction of that State, who has been exempted from the licensing requirements and regulations of that State, to the extent permitted under the exemption;

(6) To any person authorized to receive the radioactive material under terms of a specific license or a general license or their equivalents issued by the Commission or an Agreement State;

(7) To any person abroad pursuant to an export license issued under part 110 of this chapter; or

(8) As otherwise authorized by the Commission in writing.

(c) Before transferring radioactive material to any party specified in paragraph (b) of this section, the Corporation shall verify that the transferee is authorized to receive the type, form, and quantity of radioactive material to be transferred.

(d) The following methods for the verification required by paragraph (c) of this section are acceptable:

(1) The Corporation may have in its possession and read a current copy of the transferee's specific license or confirmation of registration. The Corporation shall retain a copy of each license or confirmation for 3 years from the date that it was obtained.

(2) The Corporation may have in its possession a written confirmation by the transferee that the transferee is authorized by license or registration confirmation to receive the type, form, and quantity of special nuclear material to be transferred, specifying the license or registration confirmation number, issuing agency, and expiration date. The Corporation shall retain the written confirmation as a record for 3 years from the date of receipt of the confirmation;

(3) For emergency shipments, the Corporation may accept a certification by the transferee that he or she is authorized by license or registration certification to receive the type, form, and quantity of special nuclear material to be transferred, specifying the license or registration number, issuing agency, and expiration date, provided that the oral confirmation is confirmed in writing within 10 days. The Corporation shall retain the written confirmation of the oral certification for 3 years from the date of receipt of the confirmation;

(4) The Corporation may obtain other sources of information compiled by a reporting service from official records of the Commission or the licensing agency of an Agreement State as to the identity of licensees and the scope and expiration dates of licenses and registrations. The Corporation shall retain the compilation of information as a record for 3 years from the date that it was obtained; or

(5) When none of the methods of verification described in paragraphs (d) (1) to (4) of this section are readily available or when the Corporation desires to verify that information received by one of these methods is correct or up to date, the Corporation may obtain and record confirmation from the Commission or the licensing agency of an Agreement State that the transferee is licensed to receive the special nuclear material. The Corporation shall retain the record of confirmation for 3 years from the date the record is made.

§ 76.85 Assessment of accidents.

[Top of File]

The Corporation shall perform an analysis of potential accidents and consequences to establish the basis for limiting conditions for operation of the plant with respect to the potential for releases of radioactive material. Special attention must be directed to assurance that plant operation will be conducted in a manner to prevent or to mitigate the consequences from a reasonable spectrum of postulated accidents which include internal and external events and natural phenomena in order to ensure adequate protection of the public health and safety. Plant operating history relevant to the assessment should be included. In performing this assessment, the full range of operations should be considered including, but not necessarily limited to, operation at the maximum capacity contemplated. The assessment must be performed using an expected release rate resulting from anticipated operational occurrences and accidents with existing systems and procedures intended to mitigate the release consequences, along with site characteristics, including meteorology, to evaluate the offsite radiological consequences.

§ 76.87 Technical safety requirements.

[Top of File]

(a) The Corporation shall establish technical safety requirements. In establishing the requirements, the Corporation shall consider the analyses and results of the safety analysis report submitted pursuant to § 76.35.

(b) The format for the technical safety requirements must be appropriate for each individual requirement.

(c) Appropriate references to established procedures and/or equipment to address each of the following safety topics must be included in technical safety requirements:

(1) Effects of natural phenomena;

(2) Building and process ventilation and offgas;

(3) Criticality prevention;

(4) Fire prevention;

(5) Radiation protection;

(6) Radioactive waste management;

(7) Maintenance;

(8) Environmental protection;

(9) Packaging and transporting nuclear materials;

(10) Accident analysis;

(11) Chemical safety;

(12) Sharing of facilities, structures, systems and components;

(13) Utilities essential to radiological safety; and

(14) Operations.

(d) Technical safety requirements must include items in the following categories:

(1) Safety limits.

(i) If any safety limit is exceeded, corrective action must be taken as stated in the response procedures associated with the technical safety requirements or the affected part of the process must be shut down unless this action would increase the risk to the health and safety of the public or plant personnel.

(ii) If any safety limit is exceeded, the Corporation shall notify the Commission if required by § 76.120, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence.

(iii) The Corporation shall retain the record of the results of each review until the Commission no longer has certification authority.

(2) Limiting control settings.

(i) Where a limiting control setting is specified for a variable on which a safety limit has been placed, the setting must be so chosen that protective action, either automatic or manual, will correct the abnormal situation before a safety limit is exceeded. If, during operation, the automatic alarm or protective devices do not function as required, appropriate action must be taken to maintain the variables within the limiting control-setting values and to repair promptly the automatic devices or to shut down the affected part of the process.

(ii) If, during operation, an automatic alarm or protective device does not function as required, the Corporation shall notify the Commission if required by 76.120, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence.

(iii) The Corporation shall retain the record of the results of each review until the Commission no longer has certification authority.

(3) Limiting conditions for operation. When a limiting condition for operation of any process step in the system is not met, the Corporation shall shut down that part of the operation or follow any remedial action permitted by the technical safety requirements until the condition can be met.

(i) If a limiting condition for operation of any process step in the system is not met, the Corporation shall notify the Commission if required by § 76.120, review the matter, and record the results of the review, including the cause of the condition and the basis for corrective action taken to preclude recurrence.

(ii) The Corporation shall retain the record of the results of each review until the Commission no longer has certification authority.

(4) Design features. Design features to be included are those systems, components, or structures of the plant which, if altered or modified, would have a significant effect on safety and are not covered in categories described in paragraphs (d) (1), (2), and (3) of this section.

(5) Surveillance requirement.

(6) Administrative controls.

§ 76.89 Criticality accident requirements.

[Top of File]

(a) The Corporation must maintain and operate a criticality monitoring and audible alarm system meeting the requirements of paragraph (b) of this section in all areas of the facility. The Corporation may describe for the approval of the Commission defined areas to be excluded from the monitoring requirement. This submittal must describe the measures that will be used to ensure against criticality, including kinds and quantities of material that will be permitted and measures that will be used to control those kinds and quantities of material.

(b) The system must detect and annunciate a criticality that produces an absorbed dose in soft tissue of 20 rads of combined neutron and gamma radiation at an unshielded distance of 2 meters from the reacting material within 1 minute. Coverage of all monitored areas must be provided by two detectors.

§ 76.91 Emergency planning.

[Top of File]

The Corporation shall establish, maintain, and be prepared to follow a written emergency plan. The emergency plan submitted under § 76.35(f) must include the following information:

(a) Plant description. A brief description of the plant and area near the plant site.

(b) Types of accidents. An identification of each type of radioactive materials accident for which protective actions may be needed.

(c) Classification of accidents. A system for classifying accidents as alerts or site area emergencies.

(d) Detection of accidents. Identification of the means of detecting each type of accident in a timely manner.

(e) Mitigation of consequences. A brief description of the means and equipment for mitigating the consequences of each type of accident, including those provided to protect workers onsite, and a description of the program for maintaining the equipment.

(f) Assessment of releases. A brief description of the methods and equipment to assess releases of radioactive materials.

(g) Responsibilities. A brief description of the responsibilities of all individuals supporting emergency response should an accident occur, including identification of personnel responsible for promptly notifying offsite response organizations and the NRC, as well as a brief description of responsibilities for developing, maintaining, and updating the plan.

(h) Notification and coordination. A commitment to and a brief description of the means to promptly notify offsite response organizations, including the request for offsite assistance and medical assistance for the treatment of contaminated injured onsite workers when appropriate. A control point must be established. The notification and coordination must be planned so that unavailability of some personnel, parts of the plant, and some equipment does not prevent the notification and coordination. The Corporation shall also commit to notify the NRC Operations Center immediately after notification of the appropriate offsite response organizations and not later than 1 hour after the Corporation declares an emergency. These reporting requirements do not supersede or release the Corporation from complying with the requirements under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Public Law 99-499, or other State or Federal reporting requirements.

(i) Information to be communicated. A brief description of the plant status, radioactive releases, and recommended protective actions, if necessary, to be provided to offsite response organizations and to the NRC.

(j) Training. A brief description of the frequency, performance objectives, and plans for the training that the Corporation will provide workers on how to respond to an emergency including any special instructions, briefings, and orientation tours the Corporation would offer to fire, police, medical, and other emergency personnel. The training must familiarize personnel with site-specific emergency procedures. The training must also prepare site personnel for their responsibilities for the accident scenarios postulated as most probable for the specific site, including the use of team training for these accident scenarios.

(k) Safe shutdown. A brief description of the means of restoring the plant to a safe condition after an accident.

(l) Exercises. Provisions for conducting quarterly communications checks with offsite response organizations and biennial onsite exercises to test response to simulated emergencies. Quarterly communications checks with offsite response organizations must include the check and update of all necessary telephone numbers. The Corporation shall invite offsite response organizations to participate in the biennial exercises. Participation of offsite response organizations in biennial exercises, although recommended, is not required. Exercises must use accident scenarios postulated as most probable for the specific site and the accident scenarios must not be made known to most exercise participants. The Corporation shall critique each exercise using individuals that do not have direct implementation responsibility for the plan. Critiques of exercises must evaluate the appropriateness of the plan, emergency procedures, facilities, equipment, training of personnel, and overall effectiveness of the response. Deficiencies found by the critiques must be corrected.

(m) Hazardous chemicals. Confirmation that the Corporation has met its responsibilities under the Emergency Planning and Community Right-to-Know Act of 1986, Title III, Public Law 99-499, if applicable to the Corporation's activities at the proposed place of use of the special nuclear material.

(n) Comment from offsite response organizations. The Corporation shall allow the offsite response organizations that are expected to respond in case of an accident 60 days to comment on the emergency plan before submitting it to NRC. The Corporation shall provide any comments received within the 60 days to the NRC with the emergency plan.

(o) Changes to emergency plan. The Corporation may make changes to the emergency plan without prior Commission approval if the changes do not decrease the effectiveness of the plan. The Corporation shall furnish these changes to the NRC in accordance with § 76.5 and to affected offsite response organizations within 6 months after the change is made.

[59 FR 48960, Sept. 23, 1994, as amended at 64 FR 44650, Aug. 17, 1999]

§ 76.93 Quality assurance.

[Top of File]

The Corporation shall establish, maintain, and execute a quality assurance program satisfying each of the applicable requirements of ASME NQA-1-1989, "Quality Assurance Program Requirements for Nuclear Facilities," or satisfying acceptable alternatives to the applicable requirements. The Corporation shall execute the criteria in a graded approach to an extent that is commensurate with the importance to safety.

76.95 Training.

[Top of File]

A training program must be established, implemented, and maintained for individuals relied upon to operate, maintain, or modify the GDPs in a safe manner. The training program shall be based on a systems approach to training that includes the following:

(a) Systematic analysis of the jobs to be performed.

(b) Learning objectives derived from the analysis which describe desired performance after training.

(c) Training design and implementation based on the learning objectives.

(d) Evaluation of trainee mastery of the objectives during training.

(e) Evaluation and revision of the training based on the performance of trained personnel in the job setting.

Subpart E--Safeguards and Security

[Top of File]

§ 76.111 Physical security, material control and accounting, and protection of certain information.

Nuclear Regulatory Commission regulations that will be used for certification of the Corporation[2] for physical security and material control and accounting are contained in title 10 of the Code of Federal Regulations as described in this subpart. The regulations referenced in this subpart contain requirements for physical security and material control and accounting for formula quantities of strategic special nuclear material (Category I), special nuclear material of moderate strategic significance (Category II), and special nuclear material of low strategic significance (Category III), and for protection of Restricted Data, National Security Information, Safeguards Information, and information designated by the U.S. Department of Energy as Unclassified Controlled Nuclear Information.

[62 FR 6671, Feb. 21, 1997]

[2] For the purpose of this subpart, the terms "licensee" or "license" used in parts 70, 73, and 74 of this chapter, mean, respectively, the Corporation, or the certificate of compliance or approved compliance plan.

§ 76.113 Formula quantities of strategic special nuclear material--Category I.

[Top of File]

(a) The requirements for material control and accounting for formula quantities of strategic special nuclear material (Category I) are contained in §§ 74.11, 74.13, 74.15, 74.17, 74.19, 74.51, 74.53, 74.55, 74.57, 74.59, 74.81, and 74.82 of this chapter.

(b) The requirements for physical security for formula quantities of strategic special nuclear material (Category I) are contained in §§ 70.22 (h), 73.20, 73.40, 73.45, 73.46, 73.70, and 73.71.

(c) The requirements for the protection of Safeguards Information pertaining to formula quantities of strategic special nuclear material (Category I) are contained in §§ 73.21 and 73.22 of this chapter. Information designated by the U.S. Department of Energy (DOE) as Unclassified Controlled Nuclear Information must be protected in accordance with DOE requirements.

(d) The Corporation may neither transport Category I material offsite nor deliver Category I material to a carrier for transport offsite.

[59 FR 48960, Sept. 23, 1994, as amended at 62 FR 6671, Feb. 12, 1997; 67 FR 78149, Dec. 23, 2002; 73 FR 63581, Oct. 24, 2008]

§ 76.115 Special nuclear material of moderate strategic significance--Category II.

[Top of File]

(a) The requirements for material control and accounting for special nuclear material of moderate strategic significance (Category II) are contained in §§ 74.11. 74.13, 74.15, 74.17, 74.19, 74.41, 74.43, 74.45, 74.81, and 74.82 of this chapter.

(b) The requirements for physical security for special nuclear material of moderate strategic significance (Category II) are contained in §§ 73.67, and 73.71 of this chapter.

(c) The Corporation may neither transport Category II material offsite nor deliver Category II material to a carrier for transport offsite.

(d) The requirements for the protection of Safeguards Information pertaining to special nuclear material of moderate strategic significance—Category II are contained in §§ 73.21 and 73.22 of this chapter. Information designated by the U.S. Department of Energy (DOE) as Unclassified Controlled Nuclear Information must be protected in accordance with DOE requirements.

[67 FR 78149, Dec. 23, 2002; 73 FR 63581, Oct. 24, 2008]

§ 76.117 Special nuclear material of low strategic significance--Category III.

[Top of File]

(a) The requirements for material control and accounting for special nuclear material of low strategic significance (Category III) are contained in §§ 74.11, 74.13, 74.15, 74.17, 74.19, 74.33, 74.81, and 74.82 of this chapter. However, inventories of uranium outside of the enrichment processing equipment conducted at least every 370 days are deemed to satisfy the requirements of § 74.19(c).

(b) The requirements for physical security for special nuclear material of low strategic significance (Category III) are contained in §§ 73.67, 73.71, and 73.74 of this chapter.

(c) The requirements for the protection of Safeguards Information pertaining to special nuclear material of low strategic significance—Category III are contained in §§ 73.21 and 73.22 of this chapter. Information designated by the U.S. Department of Energy (DOE) as Unclassified Controlled Nuclear Information must be protected in accordance with DOE requirements.

[67 FR 78149, Dec. 23, 2002; 73 FR 63581, Oct. 24, 2008]

§ 76.119 Security facility approval and safeguarding of National Security Information and Restricted Data.

[Top of File]

The requirements for security facility approval and for safeguarding of classified matter are contained in part 95 of this chapter. For the purpose of this subpart, the term "licensee" or "license" used in part 95 of this chapter means, respectively, the corporation, or the certificate of compliance or approved compliance plan.

Subpart F--Reports and Inspections

[Top of File]

§ 76.120 Reporting requirements.

(a) Immediate report. The Corporation shall notify the NRC Operations Center[3] within 1 hour after discovery of:

(1) A criticality event;

(2) Any loss, other than normal operating loss, of special nuclear material;

(3) Any theft or unlawful diversion of special nuclear material which the Corporation is authorized to possess or any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of special nuclear material; or

(4) An emergency condition that has been declared an alert or site area emergency.

(b) Four-hour report. The Corporation shall notify the NRC Operations Center as soon as possible but not later than 4 hours after discovery of an event[4] that prevents immediate protective actions necessary to avoid releases or exposures to radiation or radioactive materials that could exceed regulatory limits.

(c) Twenty-four hour report. The Corporation shall notify the NRC Operations Center within 24 hours after the discovery of any of the following events involving radioactive material:

(1) An unplanned contamination event that:

(i) Requires access to the contaminated area, by workers or the public, to be restricted for more than 24 hours by imposing additional radiological controls or by prohibiting entry into the area;

(ii) Involves a quantity of material greater than five times the lowest annual limit on intake specified in appendix B to §§ 20.1001 through 20.2402 of 10 CFR part 20 for the material; and

(iii) Causes access to the contaminated area to be restricted for any reason other than to allow isotopes with a half-life of less than 24 hours to decay prior to decontamination.

(2) An event in which equipment is disabled or fails to function as designed when:

(i) The equipment is required by a Technical Safety Requirement to prevent releases, prevent exposures to radiation and radioactive materials exceeding specified limits, mitigate the consequences of an accident, or restore this facility to a preestablished safe condition after an accident;

(ii) The equipment is required by a Technical Safety Requirement to be available and operable and either should have been operating or should have operated on demand; and

(iii) No redundant equipment is available and operable to perform the required safety function.

(3) An event that requires unplanned medical treatment at a medical facility of an individual with radioactive contamination on the individual's clothing or body.

(4) A fire or explosion damaging any radioactive material or any device, container, or equipment containing radioactive material when:

(i) The quantity of material involved is greater than five times the lowest annual limit on intake specified in appendix B to §§ 20.1001 through 20.2402 of 10 CFR part 20 for the material; and

(ii) The damage affects the integrity of the radioactive material or its container.

(d) Preparation and submission of reports. Reports made by the Corporation in response to the requirements of this section must be made as follows:

(1) Operations Center reports. The Corporation shall make reports required by paragraphs (a), (b), and (c) of this section by telephone to the NRC Operations Center. To the extent that the information is available at the time of notification, the information provided in these reports must include:

(i) The caller's name and call back telephone number;

(ii) A description of the event, including date and time;

(iii) The exact location of the event;

(iv) The isotopes, quantities, and chemical and physical form of the material involved;

(v) Any personnel radiation exposure data available; and

(vi) A description of any actions taken in response to the event.

(2) Written report. A report required by paragraph (a), (b) or (c) of this section must be followed by a written report within 30 days of the initial report. Written reports prepared pursuant to other regulations may be submitted to fulfill this requirement if the reports contain all of the necessary information and the appropriate distribution is made. These written reports must be sent to the NRC by an appropriate method listed in § 76.5. The reports must include the following information:

(i) A description of the event, including the probable cause and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

(ii) The exact location of the event;

(iii) A description of isotopes, quantities and chemical and physical form of the material involved;

(iv) The date and time of the event;

(v) The causes, including the direct cause, the contributing cause, and the root cause;

(vi) Corrective actions taken or planned and the results of any evaluations or assessments;

(vii) The extent of exposure of individuals to radiation or to radioactive materials without identification of individuals by name; and

(viii) Lessons learned from the event.

[68 FR 58822, Oct. 10, 2003]

[3] The commercial telephone number for the NRC Operations Center is (301) 816-5100 or (301) 951-0550, FAX (301) 816-5151.

[4] Events may include fires, explosions, radiological releases, etc.

§ 76.121 Inspections.

[Top of File]

(a) The Corporation shall afford to the Commission opportunity to inspect the premises and plants under the Corporation's control where radioactive material is used, produced, or stored.

(b) The Corporation shall make available to the Commission for inspection records kept pertaining to receipt, possession, use, acquisition, import, export, or transfer of radioactive material.

(c)(1) The Corporation shall provide rent-free office space for the exclusive use of Commission inspection personnel upon request by the Director, Office of Nuclear Material Safety and Safeguards, or the NRC Region III Administrator. Heat, air conditioning, light, electrical outlets, and janitorial services must be furnished by the Corporation. The office must be convenient to and have full access to the plant, and

must provide the inspector both visual and acoustic privacy.

(2) The space provided must be adequate to accommodate the NRC resident inspection staff, a part-time secretary, and transient NRC personnel. Space must be generally commensurate with other office facilities at the site. The office space that is provided must be subject to the approval of the Director, Office of Nuclear Material Safety and Safeguards, or the NRC Region III Office. All furniture, supplies, and communication equipment will be furnished by the Commission.

(3) The Corporation shall afford any NRC resident inspector assigned to that site or other NRC inspectors identified by the Director, Office of Nuclear Material Safety and Safeguards, or the NRC Region III Administrator, as likely to inspect the plant, immediate, unfettered access equivalent to access provided regular plant employees, following proper identification and compliance with applicable access control measures for security, radiological protection, and personal safety.

§ 76.123 Tests.

[Top of File]

The Corporation shall perform, or permit the Commission to perform, any tests the Commission deems appropriate or necessary for administration of the requirements in this part. These tests include tests of:

(a) Radioactive material;

(b) Facilities where radioactive material is utilized, produced or stored;

(c) Radiation detection and monitoring instruments; and

(d) Other equipment and devices used in connection with the production, utilization, or storage of radioactive material.

Subpart G--Enforcement

[Top of File]

§ 76.131 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of:

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended;

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under Section 234 of the Atomic Energy Act of 1954, as amended, or under Section 1312(e) of the Atomic Energy Act of 1954, as amended, and Section 206 of the Energy Reorganization Act of 1974, as amended, for violations of:

(1) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, 109, or 1701 of the Atomic Energy Act of 1954, as amended;

(2) Section 206 of the Energy Reorganization Act;

(3) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1) of this section;

(4) Any term, condition, or limitation of any certificate of compliance or approved compliance plan issued under the sections specified in paragraph (b)(1) of this section.

[62 FR 6670, Feb. 12, 1997]

§ 76.133 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under Section 161b or 161i of the Act. For purposes of Section 223, all the regulations in part 76 are issued under Section 161b or 161i except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 76 that are not issued under Section 161b or 161i for the purposes of Section 223 are as follows: §§ 76.1, 76.2, 76.4, 76.5, 76.6, 76.23, 76.33, 76.35, 76.37, 76.39, 76.41, 76.43, 76.45, 76.53, 76.55, 76.60, 76.62, 76.64, 76.70, 76.72, 76.131, and

76.133.

PART 81--STANDARD SPECIFICATIONS FOR THE GRANTING OF PATENT LICENSES

[Top of File]

General Provisions

[Top of File]

§ 81.1 Purpose.

The regulations of this part establish the standard specifications for the issuance of licenses to rights in inventions covered by patents or patent applications vested in the United States of America, as represented by or in the custody of the Commission and other patents in which the Commission has the right to accord or require the grant of licenses.

[40 FR 8793, Mar. 3, 1975]

§ 81.2 Definitions.

[Top of File]

As used in this part:

(a) *Act* means the Atomic Energy Act of 1954 (68 Stat. 619), including any amendments thereto;

(b) *Commission* means the Nuclear Regulatory Commission as established by the Act, or its duly authorized designee. The Assistant General Counsel for Patents is the designee of the Commission under this subpart;

(c) *NRC invention* means an invention covered by a U.S. patent or patent application that is vested in the Government of the United States, as represented by or in the custody of the Commission, or in which the Government of the United States of America, as represented by the Commission, has the right to accord or require the grant of licenses where such invention is designated by the Commission as appropriate for the grant of a nonexclusive or exclusive license; and

(d) *To the point of practical application* means to manufacture in the case of composition, machine or product, to practice in the case of a process, or to operate in the case of a machine, under such conditions as to establish that the invention is being worked and that its benefits are reasonably accessible to the public.

(e) *NRC foreign invention* means an invention covered by a patent, or an application for a patent, issued by a government or authority of a country other than the United States that is vested in the Government of the United States, as represented by the Commission.

[38 FR 7318, Mar. 20, 1973, as amended at 38 FR 8241, Mar. 30, 1973]

§ 81.3 Communications.

[Top of File]

All communications concerning the regulations in this part, including applications for licenses, should be sent to the NRC either by mail addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[53 FR 6139, Mar. 1, 1988, as amended at 53 FR 43422, Oct. 27, 1988; 68 FR 58823; 68 FR 58823, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 81.4 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing and by § 81.53, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 81.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part of the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0121.

(b) The approved information collection requirements contained in this part appear in §§ 81.20, 81.32, and 81.40.

[55 FR 23422, June 8, 1990]

NRC-Owned Inventions--Patents and Applications

[Top of File]

§ 81.10 Authority.

The regulations of this subpart governing the licensing or rights in NRC inventions are issued pursuant to the authority of the Commission under 42 U.S.C. 2186 (sec. 156 of the Act), 42 U.S.C. 2201g (sec. 161g. of the Act), and according to regulations issued by the Administrator of General Services pursuant to the Memorandum and Statement of Government Patent Policy issued by President Nixon on August 23, 1971 (36 FR 16887).

§ 81.11 Policy.

[Top of File]

(a) The inventions covered by the U.S. patents and patent applications vested in the Government of the United States of America, as represented by or in the custody of the Commission, normally will best serve the public interest when they are developed to the point of practical application and made available to the public in the shortest time possible.

(b) The Commission generally prefers to make these inventions available to all interested parties through the granting of nonexclusive licenses. However, the Commission recognizes that to obtain commercial utilization of an invention, it may be necessary to grant an exclusive license for a limited period of time as an incentive for the investment of risk capital to achieve practical application of an invention.

(c) Whenever the Commission deems it appropriate to grant an exclusive license, the license will be negotiated on terms and conditions most favorable to the interests of the public and the Government. In considering the accord of such a license, due weight will be given to assisting small business and minority business enterprises, as well as economically depressed, low income and labor surplus areas within the United States.

(d) All licenses shall be by express written instruments. No license shall be granted or implied in an NRC invention except as provided for in these regulations or in patent rights articles under Commission procurement regulations, pursuant to the Act, or pursuant to any existing or future treaty or agreement between the United States and any foreign government or intergovernmental organization.

(e) No grant of a license under this subpart shall be construed to confer upon any licensee any immunity from the antitrust laws or from liability for patent misuse, and the acquisition and use of rights pursuant to this subpart shall not be immunized from the operation of State or Federal law by reason of the source of the grant.

(f) No grant of a license under this subpart shall be construed to confer any authorization under chapters 4, 5, 6, 7, 8, 10, or any other chapter or section of the Act (42 U.S.C., sec. 2011-2296) for which separate application for a license must be made in accordance with the Act or other Commission regulations.

§ 81.13 Publication of NRC inventions available for licensing.

[Top of File]

(a) The Commission will have published periodically a list of the NRC inventions available for licensing under this subpart in the Federal Register, the U.S. Patent Office Official Gazette, and in one other publication which it is determined will best serve the public interest and, where advisable, in other publications.

(b) Interested persons may obtain copies of such lists by communicating with the Commission, Washington, DC 20555. Copies of U.S. patents may be obtained from the U.S. Patent Office. Copies of U.S. patent application specifications, or microfiche reproductions thereof, may be secured at reasonable cost from the National Technical Information Service (NTIS) or from the U.S. Patent Office with Commission approval.

[38 FR 7318, Mar. 20, 1973, as amended at 40 FR 8793, Mar. 3, 1975]

§ 81.20 Nonexclusive licenses.

[Top of File]

(a) NRC inventions will normally be made available for the grant of nonexclusive licenses to responsible applicants who will practice the invention and make its benefits reasonably accessible to the public.

(1) The nonexclusive license will be revocable, at the option of the Commission, if the licensee does not comply with all the terms and conditions of the license agreement.

(2) The duration of the license shall be for a specified period and/or such additional period as may be provided for in the license agreement.

(3) The license shall require the licensee to bring the invention to the point of practical application within a period specified in the license agreement, or as the period may be extended by the Commission, and then to continue to make the benefits of the invention reasonably accessible to the public.

(4) The license shall be granted for all of the fields of use of the invention, or only such fields of use as may be specified in the license agreement, and throughout the United States of America, its territories and possessions, Puerto Rico, and the District of Columbia or in any lesser geographic portion thereof as may be specified in the license agreement.

(5) The licensee shall be required to submit periodic reports on his efforts to bring the invention to a point of practical application and the extent to which he continues to make the benefits of the invention reasonably accessible to the public. Unless otherwise specified in the license, such periodic reports will be required annually prior to the anniversary date of the grant of the license. The reports shall contain information within the licensee's knowledge, or which the licensee may acquire under normal business practices, pertaining to the commercial use being made of the invention, and other information which the Commission may determine to be pertinent to the licensing activity of the Commission and specified in the license agreement.

(6) Normally a royalty shall not be charged U.S. citizens and U.S. corporations for nonexclusive licenses on NRC inventions.

(7) The license may extend to wholly-owned subsidiaries of the licensee but shall be nonassignable, or otherwise nontransferable, without approval of the Commission.

(8) The Commission may revoke the license (i) for failure of the licensee to bring the invention to the point of practical application or to continue to make the benefits of the invention reasonably accessible to the public, (ii) if the licensee defaults in making any periodic report required by the license, or (iii) if the licensee commits any breach of any covenant or agreement therein contained, or (iv) if the licensee willfully makes, or has made, a false statement of a material fact or omitted a material fact in the license application submitted pursuant to § 81.40(a) or in any report required by the license agreement.

(9) The Commission may restrict the licensee to the particular fields of use and/or geographical areas in which the licensee has brought the invention to the point of practical application and continue to make the benefits of the invention reasonably accessible to the public.

(10) Before revoking or restricting any license granted pursuant to this subpart, the Commission shall mail to the licensee and any sublicensee of record, at the last address filed with the Commission, a written notice of the Commission's intention to revoke or restrict the license, and the licensee and any sublicensee shall be allowed thirty (30) days after the mailing of such notice, or within such period as may be granted by the Commission, to remedy any breach of any covenant or agreement as referred to in paragraph (a)(8)(iii) of this section, or to show cause why the license should not be revoked or restricted.

(11) Subject to the rights reserved to the Government in this section, the licensee shall be granted the nonexclusive rights to make, use, and/or sell the invention in accordance with the terms and conditions specified in the license agreement.

(12) The license may be subject to such other terms and conditions as the Commission may deem in the public interest.

§ 81.30 Limited exclusive licenses.

[Top of File]

(a) An NRC invention may be made available for the grant of a limited exclusive license provided that:

(1) The invention has been published as available for licensing pursuant to § 81.13 for a period of at least six (6) months.

(2) The Commission has determined that (i) the invention may be brought to the point of practical application in certain fields of use or in certain geographical locations by exclusive licensing, (ii) the desired practical application has not been achieved under any nonexclusive license granted on the invention, and (iii) the desired practical application is not likely to be achieved expeditiously in the public interest under a nonexclusive license or as a result of further Government-funded research or development.

(3) Notice of the selection of a prospective licensee to be granted a limited exclusive license of a specified duration and scope shall have been transmitted to the Attorney General of the United States and shall have been published for at least sixty (60) days in the Federal Register with a statement advising of the rights of license applicants or third parties to apply for nonexclusive licenses or bring information

to the attention of the Commission under the next paragraph.

(4) After expiration of the period in paragraph (a)(3) of this section, the Commission has determined (i) that no applicant for a nonexclusive license has brought or will bring the invention to the point of practical application as specified in the prospective exclusive license within a reasonable period under a nonexclusive license, and (ii) that the granting of the license would be in the public interest and not be inconsistent with the Act after consideration of all the facts and any written evidence and argument which third parties may present to the Commission within sixty (60) days of the publication of the notices of the selection of the licensee under paragraph (a)(3) of this section.

(5) The Commission shall record and make available for public inspection, upon request, all decisions and the basis thereof under this section.

§ 81.31 Selection of an exclusive licensee.

[Top of File]

An exclusive licensee will be selected by the Commission on bases consistent with the policy set forth in § 81.11 of this subpart in accordance with the procedures herein, based upon the information supplied to the Commission in a license application under § 81.40. Consideration will be given to: (a) The capabilities of the applicant to further the technical and market development of the invention to bring the same to the point of practical application, (b) the applicant's plan to undertake development of the invention, (c) the projected impact on competition, (d) the benefit to the Government and the public, as well as (e) assistance to small business and minority business enterprises and economically depressed, low income and labor surplus areas, and (f) whether the applicant is a U.S. citizen or corporation.

§ 81.32 Terms of exclusive license grant.

[Top of File]

(a) NRC inventions may be made available for the grant of limited exclusive licenses to responsible applicants who will bring the invention to the point of practical application and make its benefits reasonably accessible to the public.

(1) The license may be granted for all or less than all fields of use of the invention, and throughout the United States of America, its territories and possessions, Puerto Rico, and the District of Columbia, or any lesser geographical portion thereof.

(2) The duration of the license will be negotiated and shall include (i) a period of exclusivity specified in the license, which shall be related to the period necessary to provide a reasonable incentive for the licensee to invest the necessary risk capital to bring the invention to the point of practical application and which shall not exceed 5 years or be extended unless the Commission determines on the basis of a written submission supported by a factual showing that a longer period is reasonably necessary to permit the licensee to enter the market and recoup his investment in bringing the invention to the point of practical application; and (ii) a terminal portion, sufficient to make the invention reasonably available for the granting of nonexclusive licenses under § 81.20, during which the licensee may have a nonexclusive license if the licensee continues to make the invention reasonably accessible to the public.

(3) The license shall require the licensee to bring the invention to the point of practical application within a period specified in the license agreement, or, subject to the approval of the Commission, within a longer period, and then to continue to make the benefits of the invention reasonably accessible to the public.

(4) The license shall require the licensee to expand a specified minimum sum of money and/or to take other specified action, within indicated periods as specified in the license, in an effort to bring the invention to the point of practical application. Reasonable royalties shall be charged by the Commission, as specified in the license agreement, unless the Commission determines that it would not be in the public interest to charge royalties.

(5) The license shall be subject to an irrevocable, royalty-free right of the Government of the United States to practice and have practiced the invention by or on behalf of the Government of the United States and on behalf of any foreign Government or intergovernmental organization pursuant to any existing or future treaty or agreement with the United States.

(6) The license shall reserve to the Commission the right to require the licensee to grant sublicenses to responsible applicants to practice the invention on terms that are reasonable under the circumstances, (i) to the extent that the invention is required for public use by governmental regulations, or (ii) as may be necessary to fulfill health or safety needs, or (iii) if the invention is useful in the production or utilization of special nuclear material or atomic energy and the licensing of such invention is of importance to effectuate the policies and purposes of the Act, (iv) for other public purposes as stipulated in the license agreement. In the event that the licensee and the Commission cannot agree upon reasonable terms for such sublicenses, the terms, including a reasonable royalty, may be fixed pursuant to the procedure set forth in section 157(c) of the Act.

(7) Subject to the right reserved to the Government in paragraphs (a) (5) and (6) of this section, the licensee shall be granted the exclusive right to make, use, and/or sell the invention in accordance with the terms and conditions specified in the license agreement.

(8) The license may extend to wholly owned subsidiaries of the licensee but shall be nonassignable and otherwise nontransferable without approval of the Commission, except assignment may be made, upon notice to the Commission, to successors of that part of the licensee's business to which the invention pertains.

(9) An exclusive licensee may grant sublicenses under his license only with the approval of the Commission. Any sublicense or assignment granted by an exclusive licensee shall be subject to the terms and conditions of the exclusive license, including the rights retained by the

Government thereunder, and a copy of each such sublicense or assignment shall be furnished to the Commission.

(10) The license shall require the licensee to submit periodic reports on his efforts to achieve practical application of the invention and the extent to which he continues to make the benefits of the invention reasonably accessible to the public. Unless otherwise specified in the license, such reports will be required annually on the anniversary date of the grant of the license. The report shall contain information within the licensee's knowledge, or which the licensee may acquire under normal business practices, pertaining to the commercial use being made of the invention, and other information which the Commission may determine to be pertinent to the licensing activity of the Commission as is specified in the license agreement.

(11) The Commission may modify or revoke the license (i) for failure of the licensee to bring the invention to the point of practical application within the period specified in the license agreement or to continue to make the benefits of the invention reasonably accessible to the public; (ii) if the licensee fails to expend the minimum sum of money or to take any other action specified in the license agreement within the periods specified in the license agreement in an effort to bring the invention to the point of practical application; (iii) if the licensee defaults in making any payments or periodic reports required by the license; or (iv) if the licensee commits any breach of any covenant or agreement therein contained; or (v) if the licensee willfully makes, or has made, a false statement of a material fact or willfully omitted a material fact in the license application submitted pursuant to § 81.40 or in any report required by the license agreement.

(12) Before modifying or revoking any license granted pursuant to this subpart for any cause, the Commission shall mail to the licensee and any sublicensee of record at the last address filed with the Commission a written notice of the Commission's intention to modify or revoke the license, and the licensee and any sublicensee shall be allowed thirty (30) days after the mailing of such notice, or within such period as may be granted by the Commission, to remedy any breach of any covenant or agreement referred to in paragraph (a)(11)(iv) of this section or to show cause why the license should not be modified or revoked.

(13) An exclusive licensee shall be granted the right to sue at his own expense any party who infringes the rights set forth in his license and covered by the licensed patent. The licensee may join the Government of the United States, upon consent of the Attorney General, as a party complainant in such suit, but without expense to the Government and the licensee shall pay costs and any final judgment or decree that may be rendered against the Government in such suit. The Government shall have an absolute right to intervene in any such suit at its own expense. The licensee shall be obligated to furnish promptly to the Government, upon request, copies of all pleadings and other papers filed in any such suit and of evidence adduced in proceedings relating to the licensed patent, including, but not limited to, negotiations or settlements and agreements settling claims by a licensee based on the licensed patent, and all other books, documents, papers, and records pertaining to such suit. If, as a result of any such litigation, the patent shall be declared invalid, the licensee shall have the right to surrender his license and be relieved from any further obligation thereunder.

(14) A licensee may surrender his license at any time prior to termination of the license upon notice thereof to the Commission, and upon approval of the Commission, but the licensee shall not be relieved of the obligations thereunder without specific approval of the Commission.

(15) The license may be subject to such other terms and conditions as the Commission may deem in the public interest.

§ 81.35 Notices to public of exclusive licenses.

[Top of File]

The Commission will have published in the Federal Register notices of the granting, revocation, or modification in duration and/or scope, of limited exclusive licenses under these regulations. Such notices shall identify the invention and shall include, directly, or by reference to previous notice(s) in the Federal Register pursuant to § 81.13 or § 81.30(a)(3) the following:

(a) Identification of the licensee.

(b) Duration and scope of the exclusive license.

(c) That such a license is being granted or revoked, or the nature of the modification of the license.

(d) The effective date of the grant, modification, or revocation.

§ 81.40 Contents of a license application.

[Top of File]

(a) *Nonexclusive license application*. An application for a nonexclusive license under an NRC invention should be accompanied by a fee of ten dollars ($10) for processing the application and must include the following information:

(1) Identification of the invention for which the license is desired, including the patent application serial number or the patent number, title, and date, if known, and any other identification of the invention;

(2) Name and address of the person, company, or organization applying for a license and the citizenship or State of incorporation thereof;

(3) Name and address of a representative of applicant to whom correspondence should be sent and any notices served;

(4) Nature and type of applicant's business;

(5) Identification of the source of applicant's information concerning the availability of a license on the invention;

(6) Purpose for which the license is desired, and a brief description of applicant's plan to achieve that purpose;

(7) A statement of the field and the field(s) of use in which applicant intends to practice the invention; and

(8) A statement of the geographical area(s) in which the applicant will practice the invention.

(b) *Exclusive license application*. An application for a limited exclusive license should include, in addition to the information indicated above for a nonexclusive license application, the following information:

(1) Applicant's status, if any, in any one or more of the following categories:

(i) Small business firm;

(ii) Minority business enterprise;

(iii) Location in a surplus labor area;

(iv) Location in a low income area; and

(v) Location in an economically depressed area.

(2) A statement describing the time, expenditure, and other acts which the applicant considers necessary to bring the invention to a point of practical application, and the applicant's offer to invest that time and sum, and to perform such acts, if the license is granted.

(3) A statement of applicant's capability to undertake the development and/or marketing required to bring the invention to the point of practical application.

(4) A statement that contains applicant's best knowledge of the extent to which the invention is being practiced by private industry and the Government; and

(5) Any other facts which the applicant believes to show it to be in the public interest for the Commission to grant an exclusive license rather than a nonexclusive license and that such exclusive license should be granted to the applicant.

§ 81.50 Additional licenses.

[Top of File]

Subject to any outstanding licenses, nothing in this subpart shall preclude the Commission from granting additional nonexclusive and limited exclusive licenses for inventions covered by this subpart when the Commission determines that to do so would provide for an equitable exchange of patent rights. The following exemplify circumstances wherein such licenses may be granted:

(a) In consideration of the settlement of interferences;

(b) In consideration of a release of any claims;

(c) In exchange for or as part of the consideration for a license under adversely held patent(s); or

(d) In consideration for the settlement or resolution of any proceeding under the Act or other statute.

§ 81.51 Appeals.

[Top of File]

An applicant for a license, a licensee, or a third party who has participated under § 81.30(a)(3) shall have the right to appeal in accordance with the appeal procedures of this subpart any decision of the Commission concerning the grant, denial, interpretation, modification, or revocation of a license under this subpart, by filing a notice of appeal with the Commission within thirty (30) days from the date of the mailing of a notice by the Commission of the decision or, if no such notice to the person desiring to appeal, then thirty (30) days from publication in the Federal Register of the facts which show such a decision. The notice of appeal shall specify the portion of the decision from which the appeal is taken, and the reasons why the decision is erroneous. A statement of fact and argument in the form of a brief in support of the appeal may be submitted with the notice of appeal or, if the appellant prefers, may be filed with the Commission within fifteen (15) days after the filing of the notice of appeal. If a statement of fact and argument in the form of a brief in support of the appeal is not submitted with the notice, the appellant shall state in the notice whether such a statement of fact and argument in the form of a brief in support of the appeal will be filed.

§ 81.52 Appeals Board.

[Top of File]

(a) *NRC Invention Licensing Appeal Board*. Upon notice of an appeal in accordance with § 81.51, the Executive Director for Operations of the Nuclear Regulatory Commission will designate within thirty (30) days an Invention Licensing Appeal Board (hereinafter, Board) to decide such an appeal.

(b) *Composition of the Board*. The Invention Licensing Appeal Board shall consist of three members having equal voting power, one of whom will be designated as Chairman.

(c) *Notice of designation of the Board*. The Executive Director for Operations of the Nuclear Regulatory Commission will advise the appellant of the designation of the Board, its composition, and Chairman.

[40 FR 8793, Mar. 3, 1975]

§ 81.53 Review by the Board.

[Top of File]

(a) The Board shall determine the propriety of any decision concerning the grant, denial, interpretation, modification, or revocation of a license according to the policy and criteria of these regulations, including § 81.11, on the record and evidence submitted by an appellant and the Commission to the Board.

(b) A hearing may be requested by the Commission or an appellant within fifteen (15) days after the notice set forth under § 81.52(c). An appellant and the Commission shall be given a minimum of fifteen (15) days' notice of the time and place of a hearing. The Commission and the appellant shall have an opportunity to make oral arguments before the Board.

(c) The Board shall make findings of fact and reach a conclusion with respect to the propriety of the decision of the Commission, which conclusion shall constitute the final action of the Commission.

PART 95--FACILITY SECURITY CLEARANCE AND SAFEGUARDING OF NATIONAL SECURITY INFORMATION AND RESTRICTED DATA

[Top of File]

General Provisions

[Top of File]

§ 95.1 Purpose.

The regulations in this part establish procedures for obtaining facility security clearance and for safeguarding Secret and Confidential National Security Information and Restricted Data received or developed in conjunction with activities licensed, certified or regulated by the Commission. This part does not apply to Top Secret information because Top Secret information may not be forwarded to licensees, certificate holders, or others within the scope of an NRC license or certificate.

[62 FR 17690, Apr. 11, 1997, as amended at 68 FR 41222, July 11, 2003]

§ 95.3 Scope.

[Top of File]

The regulations in this part apply to licensees, certificate holders and others who may require access to classified National Security Information and/or Restricted Data and/or Formerly Restricted Data (FRD) that is used, processed, stored, reproduced, transmitted, transported, or handled in connection with a license or certificate or an application for a license or certificate, or other activities as the Commission may determine.

[62 FR 17690, Apr. 11, 1997; 70 FR 32227, June 2, 2005]

§ 95.5 Definitions.

[Top of File]

Access authorization means an administrative determination that an individual (including a consultant) who is employed by or an applicant for employment with the NRC, NRC contractors, agents, licensees and certificate holders, or other person designated by the Executive Director for Operations, is eligible for a security clearance for access to classified information.

Act means the Atomic Energy Act of 1954 (68 Stat. 919), as amended.

Classified mail address means a mail address established for each facility approved by the NRC, to which all classified information for the facility is to be sent.

Classified matter means documents or material containing classified information.

Classified National Security Information means information that has been determined pursuant to E.O. 12958, as amended, or any predecessor order to require protection against unauthorized disclosure and that is so designated.

Classified shipping address means an address established for a facility, approved by the NRC to which classified material that cannot be transmitted as normal mail is to be sent.

Closed area means an area that meets the requirements of the CSA, for the purpose of safeguarding classified material that, because of its size, nature, or operational necessity, cannot be adequately protected by the normal safeguards or stored during nonworking hours in approved containers.

Cognizant Security Agency (CSA) means agencies of the Executive Branch that have been authorized by E.O. 12829 to establish an industrial security program for the purpose of safeguarding classified information under the jurisdiction of those agencies when disclosed or released to U.S. industry. These agencies are the Department of Defense, the Department of Energy, the Central Intelligence Agency, and the Nuclear Regulatory Commission. A facility has a single CSA which exercises primary authority for the protection of classified information at the facility. The CSA for the facility provides security representation for other government agencies with security interests at the facility. The Secretary of Defense has been designated as Executive Agent for the National Industrial Security Program.

Combination lock means a three position, manipulation resistant, dial type lock bearing an Underwriters' Laboratories, Inc. certification that it is a Group 1 or Group IR unit.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Facility (Security) Clearance (FCL) means an administrative determination that, from a security viewpoint, a facility is eligible for access to classified information of a certain category (and all lower categories).

Foreign ownership, control, or influence (FOCI) means a foreign interest has the power, direct or indirect, whether or not exercised, and whether or not exercisable through the ownership of a U.S. company's securities, by contractual arrangements or other means, to direct or decide matters affecting the management or operations of that company in a manner which may result in unauthorized access to classified information or may affect adversely the performance of classified contracts.

Infraction means any knowing, willful, or negligent action contrary to the requirements of E.O. 12958, as amended, or its implementing directives, that does not comprise a "violation," as defined in this section.

Intrusion alarm means a tamper-indicating electrical, electro-mechanical, electro-optical, electronic or similar device which will detect unauthorized intrusion by an individual into a building, protected area, security area, vital area, or material access area, and alert guards or watchmen by means of actuated visible and audible signals.

License means a license issued under 10 CFR parts 50, 52, 54, 60, 63, 70, or 72.

Material means chemical substance without regard to form; fabricated or processed item; or assembly, machinery or equipment.

Matter means documents or material.

National security means the national defense or foreign relations of the United States.

Need-to-know means a determination made by an authorized holder of classified information that a prospective recipient requires access to specific classified information in order to perform or assist in a lawful and authorized governmental function under the cognizance of the Commission.

NRC "L" access authorization means an access authorization granted by the Commission normally based on a national agency check with law and credit investigation (NACLC) or an access national agency check and inquiries investigation (ANACI)) conducted by the Office of Personnel Management.

NRC "Q" access authorization means an access authorization granted by the Commission normally based on a single scope background investigation conducted by the Office of Personnel Management, the Federal Bureau of Investigation, or other U.S. Government agency that conducts personnel security investigations.

Person means (1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission or the Department of Energy (DOE), except that the DOE shall be considered a person to the extent that its facilities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 and sections 104, 105 and 202 of the Uranium Mill Tailings Radiation Control Act of 1978, any State or any political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent or agency of the foregoing.

Protective personnel means guards or watchmen as defined in 10 CFR part 73 or other persons designated responsibility for the protection of classified matter.

Restricted area means a controlled access area established to safeguard classified material, that because of its size or nature, cannot be adequately protected during working hours by the usual safeguards, but that is capable of being stored during non-working hours in an approved repository or secured by other methods approved by the CSA.

Restricted data means all data concerning design, manufacture or utilization of atomic weapons, the production of special nuclear material, or the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 142 of the Act.

Security area means a physically defined space containing classified matter and subject to physical protection and personnel access controls.

Security container includes any of the following repositories:

(1) A security filing cabinet--one that bears a Test Certification Label on the side of the locking drawer, inside wall adjacent to the locking drawer, or interior door plate, or is marked, "General Services Administration Approved Security Container" on the exterior of the top drawer or door.

(2) A safe--burglar-resistive cabinet or chest which bears a label of the Underwriters' Laboratories, Inc., certifying the unit to be a TL–15, TL–30, or TRTL–30, and has a body fabricated of not less than 1 inch of steel and a door fabricated of not less than 1½ inches of steel exclusive of the combination lock and bolt work; or bears a Test Certification Label on the inside of the door, or is marked ''General Services Administration Approved Security Container'' and has a body of steel at least ½ inch thick, and a combination locked steel door at least 1 inch thick, exclusive of bolt work and locking devices; and an automatic unit locking mechanism.

(3) A vault--a windowless enclosure constructed with walls, floor, roof, and door(s) that will delay penetration sufficient to enable the arrival of emergency response forces capable of preventing theft, diversion, damage, or compromise of classified information or matter, when

delay time is assessed in conjunction with detection and communication subsystems of the physical protection system.

(4) A vault-type room--a room that has a combination lock door and is protected by an intrusion alarm system that alarms upon the unauthorized penetration of a person anywhere into the room.

(5) Other repositories that would provide comparable physical protection in the judgment of the Division of Facilities and Security.

Security facility--any facility which has been approved by NRC for using, processing, storing, reproducing, transmitting or handling classified matter.

Security reviews means aperiodic security reviews of cleared facilities conducted to ensure that safeguards employed by licensees and others are adequate for the protection of classified information.

Supplemental protection means additional security procedures such as intrusion detection systems, security guards, and access control systems.

Violation means any knowing, willful, or negligent action that could reasonably be expected to result in an unauthorized disclosure of classified
information or any knowing, willful, or negligent action to classify or continue the classification of information contrary to the requirements of E.O. 12958, as amended, or its implementing directives.

[45 FR 14483, Mar. 5, 1980, as amended at 46 FR 58284, Dec. 1, 1981; 47 FR 38683, Sept. 2, 1982; 48 FR 24320, June 1, 1983; 50 FR 36984, Sept. 11, 1985; 55 FR 11575, Mar. 29, 1990; 55 FR 14379, Apr. 17, 1990; 59 FR 48974, Sept. 23, 1994; 62 FR 17691, Apr. 11, 1997; 64 FR 15649, Apr. 1, 1999; 70 FR 32227, June 2, 2005; 72 FR 49562, Aug. 28, 2007]

§ 95.7 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 95.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0047.

(b) The approved information collection requirements contained in this part appear in §§ 95.11, 95.15, 95.17, 95.18, 95.21, 95.25, 95.33, 95.34, 95.36, 95.37, 95.39, 95.41, 95.43, 95.45, 95.47, 95.53, and 95.57.

[62 FR 52190, Oct. 6, 1997, as amended at 64 FR 15650, Apr. 1, 1999]

§ 95.9 Communications.

[Top of File]

Except where otherwise specified, all communications and reports concerning the regulations in this part should be submitted as follows:

(a) By mail addressed to: ATTN: Document Control Desk, Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, U.S Nuclear Regulatory Commission, Washington, DC 20555-0001;

(b) By hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or

(c) Where practicable, by electronic submission, for example, Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

(d) Classified communications shall be transmitted in accordance with § 95.39 of this chapter to the NRC Headquarters' classified mailing address listed in appendix A to part 73 of this chapter or delivered by hand in accordance with § 95.39 of this chapter to the NRC Headquarters' street address listed in appendix A to part 73 of this chapter.

[64 FR 15650, Apr. 1, 1999, as amended at 68 FR 41222, July 11, 2003; 68 FR 58823, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 95.11 Specific exemptions.

[Top of File]

The NRC may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of the regulations of this part, that are--

(a) Authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security; or

(b) Coincidental with one or more of the following:

(1) An application of the regulation in the particular circumstances conflicts with other rules or requirements of the NRC;

(2) An application of the regulation in the particular circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule;

(3) When compliance would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated;

(4) When the exemption would result in benefit to the common defense and security that compensates for any decrease in security that may result from the grant of the exemption;

(5) When the exemption would provide only temporary relief from the applicable regulation and the licensee or applicant has made good faith efforts to comply with the regulation;

(6) When there is any other material circumstance not considered when the regulation was adopted for which it would be in the public interest to grant an exemption. If such a condition is relied on exclusively for satisfying paragraph (b) of this section, the exemption may not be granted until the Executive Director for Operations has consulted with the Commission.

[64 FR 15650, Apr. 1, 1999]

§ 95.13 Maintenance of records.

[Top of File]

(a) Each licensee, certificate holder or other person granted facility clearance under this part shall maintain records as prescribed within the part. These records are subject to review and inspection by CSA representatives during security reviews.

(b) Each record required by this part must be legible throughout the retention period specified by each Commission regulation. The record may be the original or a reproduced copy or a microform provided that the copy or microform is authenticated by authorized personnel and that the microform is capable of producing a clear copy throughout the required retention period. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, or specifications must include all pertinent information such as stamps, initials, and signatures. The licensee, certificate holder, or other person shall maintain adequate safeguards against tampering with and loss of records.

[53 FR 19263, May 27, 1988, as amended at 62 FR 17691, Apr. 11, 1997; 72 FR 49562, Aug. 28, 2007]

Physical Security

[Top of File]

§ 95.15 Approval for processing licensees and others for facility clearance.

(a) A licensee, certificate holder, or other person who has a need to use, process, store, reproduce, transmit, transport, or handle NRC classified information at any location in connection with Commission-related activities shall promptly request an NRC facility clearance. This specifically includes situations where a licensee, certificate holder, or other person needs a contractor or consultant to have access to NRC classified information. Also included are others who require access to classified information in connection with NRC regulated activities but do not require use, storage, or possession of classified information outside of NRC facilities. However, it is not necessary for a licensee, certificate holder, or other person to request an NRC facility clearance for access to another agency's classified information at that agency's facilities or to store that agency's classified information at their facility, provided no NRC classified information is involved and they meet the security requirements of the other agency. If NRC classified information is involved, the requirements of § 95.17 apply.

(b) The request must include the name of the facility, the location of the facility and an identification of any facility clearance issued by another government agency. If there is no existing facility clearance, the request must include a security Standard Practice Procedures Plan that outlines the facility's proposed security procedures and controls for the protection of classified information, a floor plan of the area in which the matter is to be used, processed, stored, reproduced, transmitted, transported or handled; and Foreign Ownership, Control or Influence information.

(c) NRC will promptly inform applicants of the acceptability of the request for further processing and will notify the licensee or other person of their decision in writing.

[45 FR 14483, Mar. 5, 1980, as amended at 48 FR 24321, June 1, 1983; 50 FR 36984, Sept. 11, 1985; 59 FR 48974, Sept. 23, 1994; 62 FR 17691, Apr. 11, 1997; 64 FR 15650, Apr. 1, 1999]

§ 95.17 Processing facility clearance.

[Top of File]

(a) Following the receipt of an acceptable request for facility clearance, the NRC will either accept an existing facility clearance granted by a current CSA and authorize possession of license or certificate related classified information, or process the facility for a facility clearance. Processing will include--

(1) A determination based on review and approval of a Standard Practice Procedures Plan that granting of the Facility Clearance would not be inconsistent with the national interest, including a finding that the facility is not under foreign ownership, control, or influence to such a degree that a determination could not be made. An NRC finding of foreign ownership, control, or influence is based on factors concerning the foreign intelligence threat, risk of unauthorized technology transfer, type and sensitivity of the information that requires protection, the extent of foreign influence, record of compliance with pertinent laws, and the nature of international security and information exchange agreements. The licensee, certificate holder, or other person must advise the NRC within 30 days of any significant events or changes that may affect its status concerning foreign ownership, control, or influence (e.g., changes in ownership; changes that affect the company's answers to original FOCI questions; indebtedness; and changes in the required form that identifies owners, officers, directors, and executive personnel).

(2) An acceptable security review conducted by the NRC;

(3) Submitting key management personnel for personnel clearances (PCLs); and

(4) Appointing a U.S. citizen employee as the facility security officer.

(b) An interim Facility Clearance may be granted by the CSA on a temporary basis pending completion of the full investigative requirements.

[62 FR 17692, Apr. 11, 1997, as amended at 64 FR 15650, Apr. 1, 1999]

§ 95.18 Key personnel.

[Top of File]

The senior management official and the Facility Security Officer must always be cleared to a level commensurate with the Facility Clearance. Other key management officials, as determined by the CSA, must be granted an access authorization or be excluded from classified access. When formal exclusion action is required, the organization's board of directors or similar executive body shall affirm the following, as appropriate.

(a) Officers, directors, partners, regents, or trustees (designated by name) that are excluded may not require, may not have, and can be effectively excluded from access to all classified information disclosed to the organization. These individuals also may not occupy positions that would enable them to adversely affect the organization's policies or practices in the performance of activities involving classified information. This action will be made a matter of record by the organization's executive body. A copy of the resolution must be furnished to the CSA.

(b) Officers, directors, partners, regents, or trustees (designated by name) that are excluded may not require, may not have, and can be effectively denied access to higher-level classified information (specify which higher level(s)). These individuals may not occupy positions that would enable them to adversely affect the organization's policies or practices in the protection of classified information. This action will be made a matter of record by the organization's executive body. A copy of the resolution must be furnished to the CSA.

[62 FR 17692, Apr. 11, 1997]

§ 95.19 Changes to security practices and procedures.

[Top of File]

(a) Except as specified in paragraph (b) of this section, each licensee, certificate holder, or other person shall obtain prior CSA approval for any proposed change to the name, location, security procedures and controls, or floor plan of the approved facility. A written description of

the proposed change must be furnished to the CSA and the NRC Regional Administrator of the cognizant Regional Office listed in appendix A to part 73 of this chapter, and, if the NRC is not the CSA, also to the Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response; the communications to NRC personnel should be by an appropriate method listed in § 95.9. These substantive changes to the Standard Practice Procedures Plan that affect the security of the facility must be submitted to the NRC Division of Nuclear Security, or CSA, at least 30 days prior to the change so that they may be evaluated. The CSA shall promptly respond in writing to all such proposals. Some examples of substantive changes requiring prior CSA approval include--

(1) A change in the approved facility's classified mail address; or

(2) A temporary or permanent change in the location of the approved facility (e.g., moving or relocating NRC's classified interest from one room or building to another). Approved changes will be reflected in a revised Standard Practice Procedures Plan submission within 30 days of approval. Page changes rather than a complete rewrite of the plan may be submitted.

(b) A licensee, certificate holder, or other person may effect a minor, nonsubstantive change to an approved Standard Practice Procedures Plan for the safeguarding of classified information without receiving prior CSA approval. These minor changes that do not affect the security of the facility may be submitted to the addressees noted in paragraph (a) of this section within 30 days of the change. Page changes rather than a complete rewrite of the plan may be submitted. Some examples of minor, nonsubstantive changes to the Standard Practice Procedures Plan include—

(1) The designation/appointment of a new facility security officer; or

(2) A revision to a protective personnel patrol routine, provided the new routine continues to meet the minimum requirements of this part.

(c) A licensee, certificate holder, or other person must update its NRC facility clearance every five years either by submitting a complete Standard Practice Procedures Plan or a certification that the existing plan is fully current to the Division of Nuclear Security.

[64 FR 15650, Apr. 1, 1999, as amended at 68 FR 41222, July 11, 2003; 68 FR 58823, Oct. 10, 2003; 72 FR 49562, Aug. 28, 2007]

§ 95.20 Grant, denial or termination of facility clearance.

[Top of File]

The Division of Nuclear Security shall provide notification in writing (or orally with written confirmation) to the licensee, certificate holder, or other person of the Commission’s grant, acceptance of another agency’s facility clearance, denial, or termination of facility clearance. This information must also be furnished to representatives of the NRC, NRC
contractors, licensees, certificate holders, or other person, or other Federal agencies having a need to transmit classified information to the licensees or other person.

[64 FR 15651, Apr. 1, 1999, as amended at 68 FR 41222, July 11, 2003; 72 FR 49562, Aug. 28, 2007]

§ 95.21 Withdrawal of requests for facility security clearance.

[Top of File]

When a request for facility clearance is to be withdrawn or canceled, the requester shall notify the NRC Division of Nuclear Security in the most expeditious manner so that processing for this approval may be terminated. The notification must identify the full name of the individual requesting discontinuance, his or her position with the facility, and the full identification of the facility. The requestor shall confirm the telephone notification promptly in writing.

[64 FR 15651, Apr. 1, 1999, as amended at 68 FR 41222, July 11, 2003]

§ 95.23 Termination of facility clearance.

[Top of File]

(a) Facility clearance will be terminated when--

(1) There is no longer a need to use, process, store, reproduce, transmit, transport or handle classified matter at the facility; or

(2) The Commission makes a determination that continued facility clearance is not in the interest of national security.

(b) When facility clearance is terminated, the licensee, certificate holder, or other person will be notified in writing of the determination and the procedures outlined in § 95.53 apply.

[62 FR 17692, Apr. 11, 1997; 72 FR 49562, Aug. 28, 2007]

§ 95.25 Protection of National Security Information and Restricted Data in storage.

(a) Secret matter, while unattended or not in actual use, must be stored in--

(1) A safe, steel file cabinet, or safe-type steel file container that has an automatic unit locking mechanism. All such receptacles will be accorded supplemental protection during non-working hours; or

(2) Any steel file cabinet that has four sides and a top and bottom (all permanently attached by welding, rivets, or peened bolts so the contents cannot be removed without leaving visible evidence of entry) and is secured by a rigid metal lock bar and an approved key operated or combination padlock. The keepers of the rigid metal lock bar must be secured to the cabinet by welding, rivets, or bolts, so they cannot be removed and replaced without leaving evidence of the entry. The drawers of the container must be held securely so their contents cannot be removed without forcing open the drawer. This type of cabinet will be accorded supplemental protection during non-working hours.

(b) Confidential matter while unattended or not in use must be stored in the same manner as SECRET matter except that no supplemental protection is required.

(c) Classified lock combinations.

(1) A minimum number of authorized persons may know the combinations to authorized storage containers. Security containers, vaults, cabinets, and other authorized storage containers must be kept locked when not under the direct supervision of an authorized person entrusted with the contents.

(2) Combinations must be changed by a person authorized access to the contents of the container, by the Facility Security Officer, or his or her designee.

(d) Records of combinations. If a record is made of a combination, the record must be marked with the highest classification of material authorized for storage in the container. Superseded combinations must be destroyed.

(e) *Selections of combinations*. Each combination must be randomly selected and require the use of at least three different numbers. In selecting combinations, multiples, simple arithmetical ascending or descending series, telephone numbers, social security numbers, car license numbers, and calendar dates such as birthdates and anniversaries, shall be avoided.

(f) Combinations will be changed only by persons authorized access to Secret or Confidential National Security Information and/or Restricted Data depending upon the matter authorized to be stored in the security container.

(g) Posted information. Containers may not bear external markings indicating the level of classified matter authorized for storage. A record of the names of persons having knowledge of the combination must be posted inside the container.

(h) End of day security checks.

(1) Facilities that store classified matter shall establish a system of security checks at the close of each working day to ensure that all classified matter and security repositories have been appropriately secured.

(2) Facilities operating with multiple work shifts shall perform the security checks at the end of the last working shift in which classified matter had been removed from storage for use. The checks are not required during continuous 24-hour operations.

(i) Unattended security container found opened. If an unattended security container housing classified matter is found unlocked, the custodian or an alternate must be notified immediately. Also, the container must be secured by protective personnel. An effort must be made to determine if the contents were compromised not later than the next day.

(j) Supervision of keys and padlocks. Use of key-operated padlocks are subject to the following requirements:

(1) A key and lock custodian shall be appointed to ensure proper custody and handling of keys and locks used for protection of classified matter;

(2) A key and lock control register must be maintained to identify keys for each lock and their current location and custody;

(3) Keys and locks must be audited each month;

(4) Keys must be inventoried with each change of custody;

(5) Keys must not be removed from the premises;

(6) Keys and spare locks must be protected equivalent to the level of classified matter involved;

(7) Locks must be changed or rotated at least every 12 months, and must be replaced after loss or compromise of their operable keys; and

(8) Master keys may not be made.

[45 FR 14483, Mar. 5, 1980, as amended at 47 FR 9196, Mar. 4, 1982; 50 FR 36985, Sept. 11, 1985; 53 FR 19263, May 27, 1988; 59 FR 48975, Sept. 23, 1994; 62 FR 17693, Apr. 11, 1997; 64 FR 15651, Apr. 1, 1999]

§ 95.27 Protection while in use.

[Top of File]

While in use, classified matter must be under the direct control of an authorized individual to preclude physical, audio, and visual access by persons who do not have the prescribed access authorization or other written CSA disclosure authorization (see § 95.36 for additional information concerning disclosure authorizations).

[64 FR 15651, Apr. 1, 1999]

§ 95.29 Establishment of Restricted or Closed areas.

[Top of File]

(a) If, because of its nature, sensitivity or importance, classified matter cannot otherwise be effectively controlled in accordance with the provisions of §§ 95.25 and 95.27, a Restricted or Closed area must be established to protect this matter.

(b) The following measures apply to Restricted Areas:

(1) Restricted areas must be separated from adjacent areas by a physical barrier designed to prevent unauthorized access (physical, audio, and visual) into these areas.

(2) Controls must be established to prevent unauthorized access to and removal of classified matter.

(3) Access to classified matter must be limited to persons who possess appropriate access authorization or other written CSA disclosure authorization and who require access in the performance of their official duties or regulatory obligations.

(4) Persons without appropriate access authorization for the area visited must be escorted by an appropriate CSA access authorized person at all times while within Restricted or Closed Areas.

(5) Each individual authorized to enter a Restricted or Closed Area must be issued a distinctive form of identification (e.g., badge) when the number of employees assigned to the area exceeds thirty per shift.

(6) During nonworking hours, admittance must be controlled by protective personnel. Protective personnel shall conduct patrols during nonworking hours at least every 8 hours and more frequently if necessary to maintain a commensurate level of protection. Entrances must be continuously monitored by protective personnel or by an approved alarm system.

(c) Due to the size and nature of the classified material, or operational necessity, it may be necessary to construct Closed Areas for storage because GSA-approved containers or vaults are unsuitable or impractical. Closed Areas must be approved by the CSA. The following measures apply to Closed Areas:

(1) Access to Closed Areas must be controlled to preclude unauthorized access. This may be accomplished through the use of a cleared employee or by a CSA approved access control device or system.

(2) Access must be limited to authorized persons who have an appropriate security clearance and a need-to-know for the classified matter within the area. Persons without the appropriate level of clearance and/or need-to-know must be escorted at all times by an authorized person where inadvertent or unauthorized exposure to classified information cannot otherwise be effectively prevented.

(3) The Closed Area must be accorded supplemental protection during non-working hours. During these hours, admittance to the area must be controlled by locked entrances and exits secured by either an approved built-in combination lock or an approved combination or key-operated padlock. However, doors secured from the inside with a panic bolt (for example, actuated by a panic bar), a dead bolt, a rigid wood or metal bar, or other means approved by the CSA, do not require additional locking devices.

(4) Open shelf or bin storage of classified matter in Closed Areas requires CSA approval. Only areas protected by an approved intrusion detection system will qualify for approval.

[62 FR 17693, Apr. 11, 1997, as amended at 64 FR 15652, Apr. 1, 1999]

§ 95.31 Protective personnel.

[Top of File]

Whenever protective personnel are used to protect classified information they shall:

(a) Possess an "L" access authorization (or CSA equivalent) if the licensee, certificate holder, or other person possesses information classified Confidential National Security Information, Confidential Restricted Data or Secret National Security Information.

(b) Possess a "Q" access authorization (or CSA equivalent) if the licensee, certificate holder, or other person possesses Secret Restricted Data related to nuclear weapons design, manufacturing and vulnerability information; and certain particularly sensitive Naval Nuclear Propulsion Program information (e.g., fuel manufacturing technology) and the protective personnel require access as part of their regular duties.

[62 FR 17694, Apr. 11, 1997; 72 FR 49562, Aug. 28, 2007]

§ 95.33 Security education.

[Top of File]

All cleared employees must be provided with security training and briefings commensurate with their involvement with classified information. The facility may obtain defensive security, threat awareness, and other education and training information and material from their CSA or other sources.

(a) Facility Security Officer Training. Licensees and others are responsible for ensuring that the Facility Security Officer, and others performing security duties, complete security training deemed appropriate by the CSA. Training requirements must be based on the facility's involvement with classified information and may include a Facility Security Officer orientation course and, for Facility Security Officers at facilities with safeguarding capability, a Facility Security Officer Program Management Course. Training, if required, should be completed within 1 year of appointment to the position of Facility Security Officer.

(b) Government-Provided Briefings. The CSA is responsible for providing initial security briefings to the Facility Security Officer, and for ensuring that other briefings required for special categories of information are provided.

(c) Temporary Help Suppliers. A temporary help supplier, or other contractor who employs cleared individuals solely for dispatch elsewhere, is responsible for ensuring that required briefings are provided to their cleared personnel. The temporary help supplier or the using licensee's, certificate holder's, or other person's facility may conduct these briefings.

(d) Classified Information Nondisclosure Agreement (SF09312). The SF09312 is an agreement between the United States and an individual who is cleared for access to classified information. An employee issued an initial access authorization must, in accordance with the requirements of § 25.23 of this chapter, execute an SF09312 before being granted access to classified information. The Facility Security Officer shall forward the executed SF09312 to the CSA for retention. If the employee refuses to execute the SF09312, the licensee or other facility shall deny the employee access to classified information and submit a report to the CSA. The SF09312 must be signed and dated by the employee and witnessed. The employee's and witness' signatures must bear the same date.

(e) Initial Security Briefings. Before being granted access to classified information, an employee shall receive an initial security briefing that includes the following topics:

(1) A Threat Awareness Briefing.

(2) A Defensive Security Briefing.

(3) An overview of the security classification system.

(4) Employee reporting obligations and requirements.

(5) Security procedures and duties applicable to the employee's job.

(f) Refresher Briefings. The licensee or other facility shall conduct refresher briefings for all cleared employees every 3 years. As a minimum, the refresher briefing must reinforce the information provided during the initial briefing and inform employees of appropriate changes in security regulations. This requirement may be satisfied by use of audio/video materials and/or by issuing written materials.

(g) Debriefings. Licensee and other facilities shall debrief cleared employees at the time of termination of employment (discharge, resignation, or retirement); when an employee's access authorization is terminated, suspended, or revoked; and upon termination of the Facility Clearance.

(h) Records reflecting an individual's initial and refresher security orientations and security termination must be maintained for three years after termination of the individual's access authorization.

[62 FR 17694, Apr. 11, 1997, as amended at 64 FR 15652, Apr. 1, 1999; 72 FR 49563, Aug. 28, 2007]

§ 95.34 Control of visitors.

[Top of File]

(a) *Uncleared visitors.* Licensees, certificate holders, or other persons subject to this part shall take measures to preclude access to classified information by uncleared visitors.

(b) *Foreign visitors.* Licensees, certificate holders, or other persons subject to this part shall take measures as may be necessary to preclude access to classified information by foreign visitors. The licensee, certificate holder, or other person shall retain records of visits for 5 years beyond the date of the visit.

[64 FR 15652, Apr. 1, 1999; 72 FR 49563, Aug. 28, 2007]

Control of Information

[Top of File]

§ 95.35 Access to matter classified as National Security Information and Restricted Data.

(a) Except as the Commission may authorize, no licensee, certificate holder or other person subject to the regulations in this part may receive or may permit any other licensee, certificate holder, or other person to have access to matter revealing Secret or Confidential National Security Information or Restricted Data unless the individual has:

(1)(i) A "Q" access authorization which permits access to matter classified as Secret and Confidential Restricted Data or Secret and Confidential National Security Information which includes intelligence information, CRYPTO (i.e., cryptographic information) or other classified communications security (COMSEC) information, or

(ii) An "L" access authorization which permits access to matter classified as Confidential Restricted Data and Secret and Confidential National Security Information other than that noted in paragraph (a)(1)(i) of this section except that access to certain Confidential COMSEC information is permitted as authorized by a National Communications Security Committee waiver dated February 14, 1984.

(2) An established "need-to-know" for the matter (See Definitions, § 95.5).

(3) NRC-approved storage facilities if classified documents or material are to be transmitted to the licensee, certificate holder, or other person.

(b) Matter classified as National Security Information or Restricted Data shall not be released by a licensee or other person subject to part 95 to any personnel other than properly access authorized Commission licensee employees, or other individuals authorized access by the Commission.

(c) Access to matter which is National Security Information at NRC-licensed facilities or NRC-certified facilities by authorized representatives of IAEA is permitted in accordance with § 95.36.

[59 FR 48975, Sept. 23, 1994; 72 FR 49563, Aug. 28, 2007]

§ 95.36 Access by representatives of the International Atomic Energy Agency or by participants in other international agreements.

[Top of File]

(a) Based upon written disclosure authorization from the NRC Office of Nuclear Material Safety and Safeguards that an individual is an authorized representative of the International Atomic Energy Agency (IAEA) or other international organization and that the individual is authorized to make visits under an established agreement with the United States Government, an applicant, licensee, certificate holder, or other person subject to this part shall permit the individual (upon presentation of the credentials specified in § 75.8(c) of this chapter and any other credentials identified in the disclosure authorization) to have access to matter classified as National Security Information that is relevant to the conduct of a visit or inspection. A disclosure authorization under this section does not authorize a licensee, certificate holder, or other person subject to this part to provide access to Restricted Data.

(b) For purposes of this section, classified National Security Information is relevant to the conduct of a visit or inspection if—

(1) In the case of a visit, this information is needed to verify information according to § 75.8 of this chapter; or

(2) In the case of an inspection, an inspector is entitled to have access to the information under § 75.8 of this chapter.

(c) In accordance with the specific disclosure authorization provided by the Division of Nuclear Security, licensees, certificate holders, or other persons subject to this part are authorized to release (i.e., transfer possession of) copies of documents that contain classified National Security Information directly to IAEA inspectors and other representatives officially designated to request and receive classified National Security Information documents. These documents must be marked specifically for release to IAEA or other international organizations in accordance with instructions contained

in the NRC's disclosure authorization letter. Licensees, certificate holders, and other persons subject to this part may also forward these documents through the NRC to the international organization's headquarters in accordance with the NRC disclosure authorization. Licensees, certificate holders, and other persons may not reproduce documents containing classified National Security Information except as provided in § 95.43.

(d) Records regarding these visits and inspections must be maintained for 5 years beyond the date of the visit or inspection. These records must specifically identify each document released to an authorized representative and indicate the date of the release. These records must also identify (in such detail as the Division of Nuclear Security, by letter, may require) the categories of documents that the authorized representative has had access and the date of this access. A licensee, certificate holder, or other person subject to this part shall also retain Division of Nuclear Security disclosure authorizations for 5 years beyond the date of any visit or inspection when access to classified information was permitted.

(e) Licensees, certificate holders, or other persons subject to this part shall take such measures as may be necessary to preclude access to classified matter by participants of other international agreements unless specifically provided for under the terms of a specific agreement.

[62 FR 17694, Apr. 11, 1997, as amended at 64 FR 15652, Apr. 1, 1999. Amended at 68 FR 41222, July 11, 2003; 72 FR 49563, Aug. 28, 2007; 73 FR 78614, Dec. 23, 2008]

§ 95.37 Classification and preparation of documents.

[Top of File]

(a) *Classification*. Classified information generated or possessed by a licensee, certificate holder, or other person must be appropriately marked. Classified material which is not conducive to markings (e.g., equipment) may be exempt from this requirement. These exemptions are subject to the approval of the CSA on a case-by-case basis. If a person or facility generates or possesses information that is believed to be classified based on guidance provided by the NRC or by derivation from classified documents, but which no authorized classifier has determined to be classified, the information must be protected and marked with the appropriate classification markings pending review and signature of an NRC authorized classifier. This information shall be protected as classified information pending final determination.

(b) *Classification consistent with content*. Each document containing classified information shall be classified Secret or Confidential according to its content. NRC licensees, certificate holders, or other persons subject to the requirements of 10 CFR part 95 may not make original classification decisions.

(c) Markings required on face of documents.

(1) For derivative classification of classified National Security Information:

(i) Derivative classifications of classified National Security Information must contain the identity of the source document or the classification guide, including the agency and office of origin, on the "Derived From" line and its classification date. If more than one source is cited, the "Derived From" line should indicate "Multiple Sources." The derivative classifier shall maintain the identification of each source with the file or record copy of the derivatively classified document.

(ii) Declassification instructions. When marking derivatively classified documents, the "DECLASSIFY ON" line must carry forward the declassification instructions as reflected in the original document. If multiple sources are used, the instructions will carry forward the longest duration.

(iii) An example of the marking stamp is as follows:

Derived From _____
(Source/Date)

Reason _____

Declassify On: _____
(Date/Event/Exemption)

Classifier: _____
(Name/Title/Number)

(2) For Restricted Data documents:

(i) Identity of the classifier. The identity of the classifier must be shown by completion of the "Derivative Classifier" line. The "Derivative Classifier" line must show the name of the person classifying the document and the basis for the classification. Dates for downgrading or declassification do not apply.

(ii) Classification designation (e.g., Secret, Confidential) and Restricted Data. NOTE: No "Declassification" instructions will be placed on documents containing Restricted Data.

(d) Placement of markings. The highest classification marking assigned to a document must be placed in a conspicuous fashion in letters at the top and bottom of the outside of the front covers and title pages, if any, and first and last pages on which text appears, on both bound and unbound documents, and on the outside of back covers of bound documents. The balance of the pages must be marked at the top and bottom with:

(1) The overall classification marking assigned to the document;

(2) The highest classification marking required by content of the page; or

(3) The marking UNCLASSIFIED if they have no classified content.

(e) Additional markings.

(1) If the document contains any form of Restricted Data, it must bear the appropriate marking on the first page of text, on the front cover and title page, if any. For example: "This document contains Restricted Data as defined in the Atomic Energy Act of 1954. Unauthorized disclosure subject to Administrative and Criminal Sanctions."

(2) Limitation on reproduction or dissemination. If the originator or classifier determines that reproduction or further dissemination of a document should be restricted, the following additional wording may be placed on the face of the document:

Reproduction or Further Dissemination Requires Approval of

_____

If any portion of this additional marking does not apply, it should be crossed out.

(f) Portion markings. In addition to the information required on the face of the document, each classified document is required, by marking or other means, to indicate clearly which portions are classified (e.g., paragraphs or pages) and which portions are not classified. The symbols (S) for Secret, (C) for Confidential, (U) for Unclassified, or (RD) for Restricted Data may be used immediately preceding or following the text to which it applies, except that the designation must follow titles or subjects. (Portion marking of paragraphs is not required for documents containing Restricted Data.) If this type of portion marking is not practicable, the document must contain a description sufficient to identify the classified information and the unclassified information.

Example

Pages 1-3 Secret

Pages 4-19 Unclassified

Pages 20-26 Secret

Pages 27-32 Confidential

(g) Transmittal document. If a document transmitting classified information contains no classified information or the classification level of the transmittal document is not as high as the highest classification level of its enclosures, then the document must be marked at the top and bottom with a classification at least as high as its highest classified enclosure. The classification may be higher if the enclosures, when combined, warrant a higher classification than any individual enclosure. When the contents of the transmittal document warrants a lower classification than the highest classified enclosure(s) or combination of enclosures or requires no classification, a stamp or marking such as the following must also be used on the transmittal document:

UPON REMOVAL OF ATTACHMENTS THIS DOCUMENT IS:

(Classification level of transmittal document standing alone or the word "UNCLASSIFIED" if the transmittal document contains no classified information.)

(h) *Classification challenges*. Licensees, certificate holders, or other persons in authorized possession of classified National Security Information who in good faith believe that the information's classification status (i.e., that the document), is classified at either too high a level for its content (overclassification) or too low for its content (underclassification) are expected to challenge its classification status. Licensees, certificate holders, or other persons who wish to challenge a classification status shall—

(1) Refer the document or information to the originator or to an authorized NRC classifier for review. The authorized classifier shall review the document and render a written classification decision to the holder of the information.

(2) In the event of a question regarding classification review, the holder of the information or the authorized classifier shall consult the NRC Division of Facilities and Security, Information Security Branch, for assistance.

(3) Licensees, certificate holders, or other persons who challenge classification decisions have the right to appeal the classification decision

to the Interagency Security Classification Appeals Panel.

(4) Licensees, certificate holders, or other persons seeking to challenge the classification of information will not be the subject of retribution.

(i) Files, folders or group of documents. Files, folders, binders, or groups of physically connected documents must be marked at least as high as the highest classified document which they contain.

(j) Drafts and working papers. Drafts of documents and working papers which contain, or which are believed to contain, classified information must be marked as classified information.

(k) Classification guidance. Licensees, certificate holders, or other persons subject to this part shall classify and mark classified matter as National Security Information or Restricted Data, as appropriate, in accordance with classification guidance provided by the NRC as part of the facility clearance process.

[62 FR 17695, Apr. 11, 1997, as amended at 64 FR 15652, Apr. 1, 1999; 68 FR 41222, July 11, 2003; 72 FR 49563, Aug. 28, 2007]

§ 95.39 External transmission of documents and material.

[Top of File]

(a) *Restrictions*. Documents and material containing classified information received or originated in connection with an NRC license, certificate, or standard design approval or standard design certification under part 52 of this chapter must be transmitted only to CSA approved security facilities.

(b) Preparation of documents. Documents containing classified information must be prepared in accordance with the following when transmitted outside an individual installation.

(1) The documents must be enclosed in two sealed opaque envelopes or wrappers.

(2) The inner envelope or wrapper must contain the addressee's classified mail address and the name of the intended recipient. The appropriate classification must be placed on both sides of the envelope (top and bottom) and the additional markings, as appropriate, referred to in § 95.37(e) must be placed on the side bearing the address.

(3) The outer envelope or wrapper must contain the addressee's classified mailing address. The outer envelope or wrapper may not contain any classification, additional marking or other notation that indicate that the enclosed document contains classified information. The Classified Mailing Address shall be uniquely designated for the receipt of classified information. The classified shipping address for the receipt of material (e.g., equipment) should be different from the classified mailing address for the receipt of classified documents.

(4) A receipt that contains an unclassified description of the document, the document number, if any, date of the document, classification, the date of transfer, the recipient and the person transferring the document must be enclosed within the inner envelope containing the document and be signed by the recipient and returned to the sender whenever the custody of a Secret document is transferred. This receipt process is at the option of the sender for Confidential information.

(c) Methods of transportation.

(1) Secret matter may be transported only by one of the following methods within and directly between the U.S., Puerto Rico, or a U.S. possession or trust territory:

(i) U.S. Postal Service Express Mail and U.S. Postal Service Registered Mail.

Note: The "Waiver of Signature and Indemnity" block on the U.S. Postal Service Express Mail Label 1109B may not be executed and the use of external (street side) express mail collection boxes is prohibited.

(ii) A cleared "Commercial Carrier."

(iii) A cleared commercial messenger service engaged in the intracity/local area delivery (same day delivery only) of classified material.

(iv) A commercial delivery company, approved by the CSA, that provides nationwide, overnight service with computer tracing and reporting features. These companies need not be security cleared.

(v) Other methods as directed, in writing, by the CSA.

(2) Confidential matter may be transported by one of the methods set forth in paragraph (c)(1) of this section, by U.S. express or certified mail. Express or certified mail may be used in transmission of Confidential documents to Puerto Rico or any United States territory or possession.

(d) Telecommunication of classified information. Classified information may not be telecommunicated unless the telecommunication system has been approved by the CSA. Licensees, certificate holders or other persons who may require a secure telecommunication system shall

submit a telecommunication plan as part of their request for facility clearance, as outlined in § 95.15, or as an amendment to their existing Standard Practice Procedures Plan for the protection of classified information.

(e) Security of classified information in transit. Classified matter that, because of its nature, cannot be transported in accordance with § 95.39(c), may only be transported in accordance with procedures approved by the CSA. Procedures for transporting classified matter are based on a satisfactory transportation plan submitted as part of the licensee's, certificate holder, or other person's request for facility clearance or submitted as an amendment to its existing Standard Practice Procedures Plan.

[62 FR 17696, Apr. 11, 1997, as amended at 64 FR 15652, Apr. 1, 1999; 72 FR 49564, Aug. 28, 2007]

§ 95.41 External receipt and dispatch records.

[Top of File]

Each licensee, certificate holder or other person possessing classified information shall maintain a record that reflects:

(a) The date of the material;

(b) The date of receipt or dispatch;

(c) The classification;

(d) An unclassified description of the material; and

(e) The identity of the sender from which the material was received or recipient to which the material was dispatched. Receipt and dispatch records must be retained for 2 years.

[62 FR 17696, Apr. 11, 1997]

§ 95.43 Authority to reproduce.

[Top of File]

(a) Each licensee, certificate holder, or other person possessing classified information shall establish a reproduction control system to ensure that reproduction of classified material is held to the minimum consistent with operational requirements. Classified reproduction must be accomplished by authorized employees knowledgeable of the procedures for classified reproduction. The use of technology that prevents, discourages, or detects the unauthorized reproduction of classified documents is encouraged.

(b) Unless restricted by the CSA, Secret and Confidential documents may be reproduced. Reproduced copies of classified documents are subject to the same protection as the original documents.

(c) All reproductions of classified material must be conspicuously marked with the same classification markings as the material being reproduced. Copies of classified material must be reviewed after the reproduction process to ensure that these markings are visible.

[62 FR 17697, Apr. 11, 1997; 72 FR 49564, Aug. 28, 2007]

§ 95.45 Changes in classification.

[Top of File]

(a) Documents containing classified National Security Information must be downgraded or declassified as authorized by the NRC classification guides or as determined by the NRC. Requests for downgrading or declassifying any NRC classified information should be forwarded to the NRC's Division of Nuclear Security, Nuclear Security and Incident Response, using an appropriate method listed in § 95.9. Requests for downgrading or declassifying of Restricted Data will be forwarded to the NRC Division of Facilities and Security for coordination with the Department of Energy.

(b) If a change of classification or declassification is approved, the previous classification marking must be canceled and the following statement, properly completed, must be placed on the first page of the document:

Classification canceled (or changed to)

_____

(Insert appropriate classification)

By authority of

_____

(Person authorizing change in classification)

By

_____

(Signature of person making change and date thereof)

(c) New markings reflecting the current classification status of the document will be applied in accordance with the requirements of § 95.37.

(d) Any licensee, certificate holder, or other person making a change in classification or receiving notice of such a change shall forward notice of the change in classification to holders of all copies as shown on their records.

[62 FR 17697, Apr. 11, 1997, as amended at 64 FR 15653, Apr. 1, 1999. Amended at 68 FR 41222, July 11, 2003; 68 FR 58823, Oct. 10, 2003; 72 FR 49564, Aug. 28, 2007]

§ 95.47 Destruction of matter containing classified information.

[Top of File]

Documents containing classified information may be destroyed by burning, pulping, or another method that ensures complete destruction of the information that they contain. The method of destruction must preclude recognition or reconstruction of the classified information. Any doubts on methods should be referred to the CSA.

[64 FR 15653, Apr. 1, 1999]

§ 95.49 Security of automatic data processing (ADP) systems.

[Top of File]

Classified data or information may not be processed or produced on an ADP system unless the system and procedures to protect the classified data or information have been approved by the CSA. Approval of the ADP system and procedures is based on a satisfactory ADP security proposal submitted as part of the licensee's, certificate holder's, or other person's request for facility clearance outlined in § 95.15 or submitted as an amendment to its existing Standard Practice Procedures Plan for the protection of classified information.

[62 FR 17697, Apr. 11, 1997; 72 FR 49564, Aug. 28, 2007]

§ 95.51 Retrieval of classified matter following suspension or revocation of access authorization.

[Top of File]

In any case where the access authorization of an individual is suspended or revoked in accordance with the procedures set forth in part 25 of this chapter, or other relevant CSA procedures, the licensee, certificate holder, or other person shall, upon due notice from the Commission of such suspension or revocation, retrieve all classified information possessed by the individual and take the action necessary to preclude that individual having further access to the information.

[62 FR 17697, Apr. 11, 1997; 72 FR 49564, Aug. 28, 2007]

§ 95.53 Termination of facility clearance.

[Top of File]

(a) If the need to use, process, store, reproduce, transmit, transport, or handle classified matter no longer exists, the facility clearance will be terminated. The licensee, certificate holder, or other person for the facility may deliver all documents and matter containing classified information to the Commission, or to a person authorized to receive them, or must destroy all classified documents and matter. In either case, the licensee, certificate holder, or other person for the facility shall submit a certification of nonpossession of classified information to the NRC Division of Nuclear Security
within 30 days of the termination of the facility clearance.

(b) In any instance where a facility clearance has been terminated based on a determination of the CSA that further possession of classified matter by the facility would not be in the interest of the national security, the licensee, certificate holder, or other person for the facility shall, upon notice from the CSA, dispose of classified documents in a manner specified by the CSA.

[64 FR 15653, Apr. 1, 1999 as amended at 68 FR 41222, July 11, 2003; 72 FR 49564, Aug. 28, 2007]

§ 95.55 Continued applicability of the regulations in this part.

[Top of File]

The suspension, revocation or other termination of access authorization or the termination of facility clearance does not relieve any person from compliance with the regulations in this part.

[62 FR 17698, Apr. 11, 1997]

§ 95.57 Reports.

[Top of File]

Each licensee, certificate holder, or other person having a facility clearance shall report to the CSA and the Regional Administrator of the appropriate NRC Regional Office listed in 10 CFR part 73, appendix A:

(a) Any alleged or suspected violation of the Atomic Energy Act, Espionage Act, or other Federal statutes related to classified information (e. g., deliberate disclosure of classified information to persons not authorized to receive it, theft of classified information). Incidents such as this must be reported within 1 hour of the event followed by written confirmation within 30 days of the incident; and

(b) Any infractions, losses, compromises, or possible compromise of classified information or classified documents not falling within paragraph (a) of this section. Incidents such as these must be entered into a written log. A copy of the log must be provided to the NRC on a monthly basis. Details of security infractions including corrective action taken must be available to the CSA upon request.

(c) In addition, NRC requires records for all classification actions (documents classified, declassified, or downgraded) to be submitted to the NRC Division of Nuclear Security. These may be submitted either on an "as completed" basis or monthly. The information may be submitted either electronically by an on-line system (NRC prefers the use of a dial-in automated system connected to the Division of Nuclear Security) or by paper copy using NRC Form 790.

[64 FR 15653, Apr. 1, 1999 as amended at 68 FR 41222, July 11, 2003; 72 FR 49564, Aug. 28, 2007]

§ 95.59 Inspections.

[Top of File]

The Commission shall make inspections and reviews of the premises, activities, records and procedures of any licensee, certificate holder, or other person subject to the regulations in this part as the Commission and CSA deem necessary to effect the purposes of the Act, E.O. 12958 and/or NRC rules.

[62 FR 17698, Apr. 11, 1997; 70 FR 32228, June 2, 2005; 72 FR 49564, Aug. 28, 2007]

Violations

[Top of File]

§ 95.61 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under Section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55080, Nov. 24, 1992]

§ 95.63 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 95 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 95 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 95.1, 95.3, 95.5, 95.7, 95.8, 95.9, 95.11, 95.17, 95.19, 95.21, 95.23, 95.55, 95.59, 95.61, and 95.63.

[57 FR 55080, Nov. 24, 1992]

PART 100--REACTOR SITE CRITERIA

[Top of File]

§ 100.1 Purpose.

[Top of File]

(a) The purpose of this part is to establish approval requirements for proposed sites for stationary power and testing reactors subject to part 50 or part 52 of this chapter.

(b) There exists a substantial base of knowledge regarding power reactor, design, construction, and operation. This base reflects that the primary factors that determine public health and safety are the reactor design, construction and operation.

(c) Siting factors and criteria are important in assuring that radiological doses from normal operation and postulated accidents will be acceptably low, that natural phenomena and potential man-made hazards will be appropriately accounted for in the design of the plant, that site characteristics are such that adequate security measures to protect the plant can be developed, and that physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans are identified.

(d) This approach incorporates the appropriate standards and criteria for approval of stationary power and testing reactor sites. The Commission intends to carry out a traditional defense-in-depth approach with regard to reactor siting to ensure public safety. Siting away from densely populated centers has been and will continue to be an important factor in evaluating applications for site approval.

[61 FR 65175, Dec. 11, 1996]

§ 100.2 Scope.

[Top of File]

The siting requirements contained in this part apply to applications for site approval for the purpose of constructing and operating stationary power and testing reactors pursuant to the provisions of part 50 or part 52 of this chapter.

[61 FR 65175, Dec. 11, 1996]

§ 100.3 Definitions.

[Top of File]

As used in this part:

Combined license means a combined construction permit and operating license with conditions for a nuclear power facility issued pursuant to subpart C of part 52 of this chapter.

Early Site Permit means a Commission approval, issued pursuant to subpart A of part 52 of this chapter, for a site or sites for one or more nuclear power facilities.

Exclusion area means that area surrounding the reactor, in which the reactor licensee has the authority to determine all activities including exclusion or removal of personnel and property from the area. This area may be traversed by a highway, railroad, or waterway, provided these are not so close to the facility as to interfere with normal operations of the facility and provided appropriate and effective arrangements are made to control traffic on the highway, railroad, or waterway, in case of emergency, to protect the public health and safety. Residence within the exclusion area shall normally be prohibited. In any event, residents shall be subject to ready removal in case of necessity. Activities unrelated to operation of the reactor may be permitted in an exclusion area under appropriate limitations, provided that no significant hazards to the public health and safety will result.

Low population zone means the area immediately surrounding the exclusion area which contains residents, the total number and density of which are such that there is a reasonable probability that appropriate protective measures could be taken in their behalf in the event of a serious accident. These guides do not specify a permissible population density or total population within this zone because the situation may vary from case to case. Whether a specific number of people can, for example, be evacuated from a specific area, or instructed to take shelter, on a timely basis will depend on many factors such as location, number and size of highways, scope and extent of advance planning, and actual distribution of residents within the area.

Population center distance means the distance from the reactor to the nearest boundary of a densely populated center containing more than about 25,000 residents.

Power reactor means a nuclear reactor of a type described in § 50.21(b) or § 50.22 of this chapter designed to produce electrical or heat energy.

Response spectrum is a plot of the maximum responses (acceleration, velocity, or displacement) of idealized single-degree-of-freedom oscillators as a function of the natural frequencies of the oscillators for a given damping value. The response spectrum is calculated for a specified vibratory motion input at the oscillators' supports.

Safe Shutdown Earthquake Ground Motion is the vibratory ground motion for which certain structures, systems, and components must be designed pursuant to appendix S to part 50 of this chapter to remain functional.

Surface deformation is distortion of geologic strata at or near the ground surface by the processes of folding or faulting as a result of various earth forces. Tectonic surface deformation is associated with earthquake processes.

Testing reactor means a *testing facility* as defined in § 50.2 of this chapter.

[61 FR 65175, Dec. 11, 1996]

§ 100.4 Communications.

[Top of File]

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent by mail addressed to: ATTN: Document Control Desk, Director, Office of Nuclear Reactor Regulation or Director, Office of New Reactors, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/eie.html*, by calling (301) 415–6030, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information. Copies should be sent to the appropriate Regional Office and Resident Inspector.

[61 FR 65176, Dec. 11, 1996 as amended at 68 FR 58823, Oct, 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 73 FR 5726, Jan. 31, 2008]

§ 100.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part of the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0093.

(b) The approved information collection requirements contained in this part appear in §§ 100.21, 100.23 and appendix A to this part.

[61 FR 65176, Dec. 11, 1996 as amended at 62 FR 52190, Oct. 6, 1997; 67 FR 67101, Nov. 4, 2002]

Subpart A--Evaluation Factors for Stationary Power Reactor Site Applications Before January 10, 1997 and for Testing Reactors

[Top of File]

§ 100.10 Factors to be considered when evaluating sites.

Factors considered in the evaluation of sites include those relating both to the proposed reactor design and the characteristics peculiar to the site. It is expected that reactors will reflect through their design, construction and operation an extremely low probability for accidents that could result in release of significant quantities of radioactive fission products. In addition, the site location and the engineered features included as safeguards against the hazardous consequences of an accident, should one occur, should insure a low risk of public exposure. In particular, the Commission will take the following factors into consideration in determining the acceptability of a site for a power or testing reactor:

(a) Characteristics of reactor design and proposed operation including:

(1) Intended use of the reactor including the proposed maximum power level and the nature and inventory of contained radioactive materials;

(2) The extent to which generally accepted engineering standards are applied to the design of the reactor;

(3) The extent to which the reactor incorporates unique or unusual features having a significant bearing on the probability or consequences

of accidental release of radioactive materials;

(4) The safety features that are to be engineered into the facility and those barriers that must be breached as a result of an accident before a release of radioactive material to the environment can occur.

(b) Population density and use characteristics of the site environs, including the exclusion area, low population zone, and population center distance.

(c) Physical characteristics of the site, including seismology, meteorology, geology, and hydrology.

(1) Appendix A, "Seismic and Geologic Siting Criteria for Nuclear Power Plants," describes the nature of investigations required to obtain the geologic and seismic data necessary to determine site suitability and to provide reasonable assurance that a nuclear power plant can be constructed and operated at a proposed site without undue risk to the health and safety of the public. It describes procedures for determining the quantitative vibratory ground motion design basis at a site due to earthquakes and describes information needed to determine whether and to what extent a nuclear power plant need be designed to withstand the effects of surface faulting.

(2) Meteorological conditions at the site and in the surrounding area should be considered.

(3) Geological and hydrological characteristics of the proposed site may have a bearing on the consequences of an escape of radioactive material from the facility. Special precautions should be planned if a reactor is to be located at a site where a significant quantity of radioactive effluent might accidentally flow into nearby streams or rivers or might find ready access to underground water tables.

(d) Where unfavorable physical characteristics of the site exist, the proposed site may nevertheless be found to be acceptable if the design of the facility includes appropriate and adequate compensating engineering safeguards.

[27 FR 3509, Apr. 12, 1962, as amended at 38 FR 31281, Nov. 13, 1973]

100.11 Determination of exclusion area, low population zone, and population center distance.

[Top of File]

(a) As an aid in evaluating a proposed site, an applicant should assume a fission produce release[1] from the core, the expected demonstrable leak rate from the containment and the meteorological conditions pertinent to his site to derive an exclusion area, a low population zone and population center distance. For the purpose of this analysis, which shall set forth the basis for the numerical values used, the applicant should determine the following:

(1) An exclusion area of such size that an individual located at any point on its boundary for two hours immediately following onset of the postulated fission product release would not receive a total radiation dose to the whole body in excess of 25 rem[2] or a total radiation dose in excess of 300 rem[2] to the thyroid from iodine exposure.

(2) A low population zone of such size that an individual located at any point on its outer boundary who is exposed to the radioactive cloud resulting from the postulated fission product release (during the entire period of its passage) would not receive a total radiation dose to the whole body in excess of 25 rem or a total radiation dose in excess of 300 rem to the thyroid from iodine exposure.

(3) A population center distance of at least one and one-third times the distance from the reactor to the outer boundary of the low population zone. In applying this guide, the boundary of the population center shall be determined upon consideration of population distribution. Political boundaries are not controlling in the application of this guide. Where very large cities are involved, a greater distance may be necessary because of total integrated population dose consideration.

(b) For sites for multiple reactor facilities consideration should be given to the following:

(1) If the reactors are independent to the extent that an accident in one reactor would not initiate an accident in another, the size of the exclusion area, low population zone and population center distance shall be fulfilled with respect to each reactor individually. The envelopes of the plan overlay of the areas so calculated shall then be taken as their respective boundaries.

(2) If the reactors are interconnected to the extent that an accident in one reactor could affect the safety of operation of any other, the size of the exclusion area, low population zone and populaton center distance shall be based upon the assumption that all interconnected reactors emit their postulated fission product releases simultaneously. This requirement may be reduced in relation to the degree of coupling between reactors, the probability of concomitant accidents and the probability that an individual would not be exposed to the radiation effects from simultaneous releases. The applicant would be expected to justify to the satisfaction of the Commission the basis for such a reduction in the source term.

(3) The applicant is expected to show that the simultaneous operation of multiple reactors at a site will not result in total radioactive effluent releases beyond the allowable limits of applicable regulations.

Note: For further guidance in developing the exclusion area, the low population zone, and the population center distance, reference is made to Technical Information Document 14844, dated March 23, 1962, which contains a procedural method and a sample calculation that result in distances roughly reflecting current siting practices of the Commission. The calculations described in Technical Information Document

14844 may be used as a point of departure for consideration of particular site requirements which may result from evaluation of the characteristics of a particular reactor, its purpose and method of operation.

[27 FR 3509, Apr. 12, 1962, as amended at 31 FR 4670, Mar. 19, 1966; 38 FR 1273, Jan. 11, 1973; 40 FR 8793, Mar. 3, 1975; 40 FR 26527, June 24, 1975; 53 FR 43422, Oct. 27, 1988; 64 FR 48955, Sept. 9, 1999; 67 FR 67101, Nov. 4, 2002]

[1] The fission product release assumed for these calculations should be based upon a major accident, hypothesized for purposes of site analysis or postulated from considerations of possible accidental events, that would result in potential hazards not exceeded by those from any accident considered credible. Such accidents have generally been assumed to result in substantial meltdown of the core with subsequent release of appreciable quantities of fission products.

[2] The whole body dose of 25 rem referred to above corresponds numerically to the once in a lifetime accidental or emergency dose for radiation workers which, according to NCRP recommendations may be disregarded in the determination of their radiation exposure status (see NBS Handbook 69 dated June 5, 1959). However, neither its use nor that of the 300 rem value for thyroid exposure as set forth in these site criteria guides are intended to imply that these numbers constitute acceptable limits for emergency doses to the public under accident conditions. Rather, this 25 rem whole body value and the 300 rem thyroid value have been set forth in these guides as reference values, which can be used in the evaluation of reactor sites with respect to potential reactor accidents of exceedingly low probability of occurrence, and low risk of public exposure to radiation.

Subpart B--Evaluation Factors for Stationary Power Reactor Site Applications on or After January 10, 1997

[Top of File]

Source: 61 FR 65176, Dec. 11, 1996, unless otherwise noted.

§ 100.20 Factors to be considered when evaluating sites.

The Commission will take the following factors into consideration in determining the acceptability of a site for a stationary power reactor:

(a) Population density and use characteristics of the site environs, including the exclusion area, the population distribution, and site-related characteristics must be evaluated to determine whether individual as well as societal risk of potential plant accidents is low, and that physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans are identified.

(b) The nature and proximity of man-related hazards (e.g., airports, dams, transportation routes, military and chemical facilities) must be evaluated to establish site parameters for use in determining whether a plant design can accommodate commonly occurring hazards, and whether the risk of other hazards is very low.

(c) Physical characteristics of the site, including seismology, meteorology, geology, and hydrology.

(1) Section 100.23, "Geologic and seismic siting factors," describes the criteria and nature of investigations required to obtain the geologic and seismic data necessary to determine the suitability of the proposed site and the plant design bases.

(2) Meteorological characteristics of the site that are necessary for safety analysis or that may have an impact upon plant design (such as maximum probable wind speed and precipitation) must be identified and characterized.

(3) Factors important to hydrological radionuclide transport (such as soil, sediment, and rock characteristics, adsorption and retention coefficients, ground water velocity, and distances to the nearest surface body of water) must be obtained from on-site measurements. The maximum probable flood along with the potential for seismically induced floods discussed in § 100.23 (d)(3) must be estimated using historical data.

§ 100.21 Non-seismic siting criteria.

[Top of File]

Applications for site approval for commercial power reactors shall demonstrate that the proposed site meets the following criteria:

(a) Every site must have an exclusion area and a low population zone, as defined in § 100.3;

(b) The population center distance, as defined in § 100.3, must be at least one and one-third times the distance from the reactor to the outer boundary of the low population zone. In applying this guide, the boundary of the population center shall be determined upon consideration of population distribution. Political boundaries are not controlling in the application of this guide;

(c) Site atmospheric dispersion characteristics must be evaluated and dispersion parameters established such that:

(1) Radiological effluent release limits associated with normal operation from the type of facility proposed to be located at the site can be

met for any individual located offsite; and

(2) Radiological dose consequences of postulated accidents shall meet the criteria set forth in § 50.34(a)(1) of this chapter for the type of facility proposed to be located at the site;

(d) The physical characteristics of the site, including meteorology, geology, seismology, and hydrology must be evaluated and site parameters established such that potential threats from such physical characteristics will pose no undue risk to the type of facility proposed to be located at the site;

(e) Potential hazards associated with nearby transportation routes, industrial and military facilities must be evaluated and site parameters established such that potential hazards from such routes and facilities will pose no undue risk to the type of facility proposed to be located at the site;

(f) Site characteristics must be such that adequate security plans and measures can be developed;

(g) Physical characteristics unique to the proposed site that could pose a significant impediment to the development of emergency plans must be identified;

(h) Reactor sites should be located away from very densely populated centers. Areas of low population density are, generally, preferred. However, in determining the acceptability of a particular site located away from a very densely populated center but not in an area of low density, consideration will be given to safety, environmental, economic, or other factors, which may result in the site being found acceptable[3].

[3] Examples of these factors include, but are not limited to, such factors as the higher population density site having superior seismic characteristics, better access to skilled labor for construction, better rail and highway access, shorter transmission line requirements, or less environmental impact on undeveloped areas, wetlands or endangered species, etc. Some of these factors are included in, or impact, the other criteria included in this section.

§ 100.23 Geologic and seismic siting criteria.

[Top of File]

This section sets forth the principal geologic and seismic considerations that guide the Commission in its evaluation of the suitability of a proposed site and adequacy of the design bases established in consideration of the geologic and seismic characteristics of the proposed site, such that, there is a reasonable assurance that a nuclear power plant can be constructed and operated at the proposed site without undue risk to the health and safety of the public. Applications to engineering design are contained in appendix S to part 50 of this chapter.

(a) *Applicability*. The requirements in paragraphs (c) and (d) of this section apply to applicants for an early site permit or combined license pursuant to Part 52 of this chapter, or a construction permit or operating license for a nuclear power plant pursuant to Part 50 of this chapter on or after January 10, 1997. However, for either an operating license applicant or holder whose construction permit was issued prior to January 10, 1997, the seismic and geologic siting criteria in Appendix A to Part 100 of this chapter continues to apply.

(b) *Commencement of construction*. The investigations required in paragraph (c) of this section are not considered "construction" as defined in 10 CFR 50.10(a).

(c) *Geological, seismological, and engineering characteristics*. The geological, seismological, and engineering characteristics of a site and its environs must be investigated in sufficient scope and detail to permit an adequate evaluation of the proposed site, to provide sufficient information to support evaluations performed to arrive at estimates of the Safe Shutdown Earthquake Ground Motion, and to permit adequate engineering solutions to actual or potential geologic and seismic effects at the proposed site. The size of the region to be investigated and the type of data pertinent to the investigations must be determined based on the nature of the region surrounding the proposed site. Data on the vibratory ground motion, tectonic surface deformation, nontectonic deformation, earthquake recurrence rates, fault geometry and slip rates, site foundation material, and seismically induced floods and water waves must be obtained by reviewing pertinent literature and carrying out field investigations. However, each applicant shall investigate all geologic and seismic factors (for example, volcanic activity) that may affect the design and operation of the proposed nuclear power plant irrespective of whether such factors are explicitly included in this section.

(d) *Geologic and seismic siting factors*. The geologic and seismic siting factors considered for design must include a determination of the Safe Shutdown Earthquake Ground Motion for the site, the potential for surface tectonic and nontectonic deformations, the design bases for seismically induced floods and water waves, and other design conditions as stated in paragraph (d)(4) of this section.

(1) Determination of the Safe Shutdown Earthquake Ground Motion. The Safe Shutdown Earthquake Ground Motion for the site is characterized by both horizontal and vertical free-field ground motion response spectra at the free ground surface. The Safe Shutdown Earthquake Ground Motion for the site is determined considering the results of the investigations required by paragraph (c) of this section. Uncertainties are inherent in such estimates. These uncertainties must be addressed through an appropriate analysis, such as a probabilistic seismic hazard analysis or suitable sensitivity analyses. Paragraph IV(a)(1) of appendix S to part 50 of this chapter defines the minimum Safe Shutdown Earthquake Ground Motion for design.

(2) Determination of the potential for surface tectonic and nontectonic deformations. Sufficient geological, seismological, and geophysical data must be provided to clearly establish whether there is a potential for surface deformation.

(3) Determination of design bases for seismically induced floods and water waves. The size of seismically induced floods and water waves that could affect a site from either locally or distantly generated seismic activity must be determined.

(4) Determination of siting factors for other design conditions. Siting factors for other design conditions that must be evaluated include soil and rock stability, liquefaction potential, natural and artificial slope stability, cooling water supply, and remote safety-related structure siting. Each applicant shall evaluate all siting factors and potential causes of failure, such as, the physical properties of the materials underlying the site, ground disruption, and the effects of vibratory ground motion that may affect the design and operation of the proposed nuclear power plant.

[72 FR 57447, Oct. 9, 2007]

Appendix A to Part 100--SEISMIC AND GEOLOGIC SITING CRITERIA FOR NUCLEAR POWER PLANTS

[Top of File]

I. Purpose

General Design Criterion 2 of Appendix A to part 50 of this chapter requires that nuclear power plant structures, systems, and components important to safety be designed to withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. It is the purpose of these criteria to set forth the principal seismic and geologic considerations which guide the Commission in its evaluation of the suitability of proposed sites for nuclear power plants and the suitability of the plant design bases established in consideration of the seismic and geologic characteristics of the proposed sites.

These criteria are based on the limited geophysical and geological information available to date concerning faults and earthquake occurrence and effect. They will be revised as necessary when more complete information becomes available.

II. Scope

These criteria, which apply to nuclear power plants, describe the nature of the investigations required to obtain the geologic and seismic data necessary to determine site suitability and provide reasonable assurance that a nuclear power plant can be constructed and operated at a proposed site without undue risk to the health and safety of the public. They describe procedures for determining the quantitative vibratory ground motion design basis at a site due to earthquakes and describe information needed to determine whether and to what extent a nuclear power plant need be designed to withstand the effects of surface faulting. Other geologic and seismic factors required to be taken into account in the siting and design of nuclear power plants are identified.

The investigations described in this appendix are within the scope of investigations permitted by § 50.10(c)(1) of this chapter.

Each applicant for a construction permit shall investigate all seismic and geologic factors that may affect the design and operation of the proposed nuclear power plant irrespective of whether such factors are explicitly included in these criteria. Additional investigations and/or more conservative determinations than those included in these criteria may be required for sites located in areas having complex geology or in areas of high seismicity. If an applicant believes that the particular seismology and geology of a site indicate that some of these criteria, or portions thereof, need not be satisfied, the specific sections of these criteria should be identified in the license application, and supporting data to justify clearly such departures should be presented.

These criteria do not address investigations of volcanic phenomena required for sites located in areas of volcanic activity. Investigations of the volcanic aspects of such sites will be determined on a case-by-case basis.

III. Definitions

As used in these criteria:

(a) The *magnitude* of an earthquake is a measure of the size of an earthquake and is related to the energy released in the form of seismic waves. *Magnitude* means the numerical value on a Richter scale.

(b) The *intensity* of an earthquake is a measure of its effects on man, on man-built structures, and on the earth's surface at a particular location. Intensity means the numerical value on the Modified Mercalli scale.

(c) The *Safe Shutdown Earthquake*[1] is that earthquake which is based upon an evaluation of the maximum earthquake potential considering the regional and local geology and seismology and specific characteristics of local subsurface material. It is that earthquake which produces the maximum vibratory ground motion for which certain structures, systems, and components are designed to remain functional. These structures, systems, and components are those necessary to assure:

(1) The integrity of the reactor coolant pressure boundary,

(2) The capability to shut down the reactor and maintain it in a safe shutdown condition, or

(3) The capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of this part.

(d) The *Operating Basis Earthquake* is that earthquake which, considering the regional and local geology and seismology and specific characteristics of local subsurface material, could reasonably be expected to affect the plant site during the operating life of the plant; it is that earthquake which produces the vibratory ground motion for which those features of the nuclear power plant necessary for continued operation without undue risk to the health and safety of the public are designed to remain functional.

(e) A *fault* is a tectonic structure along which differential slippage of the adjacent earth materials has occurred parallel to the fracture plane. It is distinct from other types of ground disruptions such as landslides, fissures, and craters. A fault may have gouge or breccia between its two walls and includes any associated monoclinal flexure or other similar geologic structural feature.

(f) *Surface faulting* is differential ground displacement at or near the surface caused directly by fault movement and is distinct from nontectonic types of ground disruptions, such as landslides, fissures, and craters.

(g) A *capable fault* is a fault which has exhibited one or more of the following characteristics:

(1) Movement at or near the ground surface at least once within the past 35,000 years or movement of a recurring nature within the past 500,000 years.

(2) Macro-seismicity instrumentally determined with records of sufficient precision to demonstrate a direct relationship with the fault.

(3) A structural relationship to a capable fault according to characteristics (1) or (2) of this paragraph such that movement on one could be reasonably expected to be accompanied by movement on the other.

In some cases, the geologic evidence of past activity at or near the ground surface along a particular fault may be obscured at a particular site. This might occur, for example, at a site having a deep overburden. For these cases, evidence may exist elsewhere along the fault from which an evaluation of its characteristics in the vicinity of the site can be reasonably based. Such evidence shall be used in determining whether the fault is a capable fault within this definition.

Notwithstanding the foregoing paragraphs III(g) (1), (2) and (3), structural association of a fault with geologic structural features which are geologically old (at least pre-Quaternary) such as many of those found in the Eastern region of the United States shall, in the absence of conflicting evidence, demonstrate that the fault is not a capable fault within this definition.

(h) A *tectonic province* is a region of the North American continent characterized by a relative consistency of the geologic structural features contained therein.

(i) A *tectonic structure* is a large scale dislocation or distortion within the earth's crust. Its extent is measured in miles.

(j) A *zone requiring detailed faulting investigation* is a zone within which a nuclear power reactor may not be located unless a detailed investigation of the regional and local geologic and seismic characteristics of the site demonstrates that the need to design for surface faulting has been properly determined.

(k) The *control width* of a fault is the maximum width of the zone containing mapped fault traces, including all faults which can be reasonably inferred to have experienced differential movement during Quaternary times and which join or can reasonably be inferred to join the main fault trace, measured within 10 miles along the fault's trend in both directions from the point of nearest approach to the site. (See Figure 1 of this appendix.)

(l) A *response spectrum* is a plot of the maximum responses (acceleration, velocity or displacement) of a family of idealized single-degree-of-freedom damped oscillators against natural frequencies (or periods) of the oscillators to a specified vibratory motion input at their supports.

IV. Required Investigations

The geologic, seismic and engineering characteristics of a site and its environs shall be investigated in sufficient scope and detail to provide reasonable assurance that they are sufficiently well understood to permit an adequate evaluation of the proposed site, and to provide sufficient information to support the determinations required by these criteria and to permit adequate engineering solutions to actual or potential geologic and seismic effects at the proposed site. The size of the region to be investigated and the type of data pertinent to the investigations shall be determined by the nature of the region surrounding the proposed site. The investigations shall be carried out by a review of the pertinent literature and field investigations and shall include the steps outlined in paragraphs (a) through (c) of this section.

(a) *Required Investigation for Vibratory Ground Motion*. The purpose of the investigations required by this paragraph is to obtain information needed to describe the vibratory ground motion produced by the Safe Shutdown Earthquake. All of the steps in paragraphs (a)(5) through (a)(8) of this section need not be carried out if the Safe Shutdown Earthquake can be clearly established by investigations and determinations of a lesser scope. The investigations required by this paragraph provide an adequate basis for selection of an Operating Basis Earthquake. The investigations shall include the following:

(1) Determination of the lithologic, stratigraphic, hydrologic, and structural geologic conditions of the site and the region surrounding the site, including its geologic history;

(2) Identification and evaluation of tectonic structures underlying the site and the region surrounding the site, whether buried or expressed at the surface. The evaluation should consider the possible effects caused by man's activities such as withdrawal of fluid from or addition of

fluid to the subsurface, extraction of minerals, or the loading effects of dams or reservoirs;

(3) Evaluation of physical evidence concerning the behavior during prior earthquakes of the surficial geologic materials and the substrata underlying the site from the lithologic, stratigraphic, and structural geologic studies;

(4) Determination of the static and dynamic engineering properties of the materials underlying the site. Included should be properties needed to determine the behavior of the underlying material during earthquakes and the characteristics of the underlying material in transmitting earthquake-induced motions to the foundations of the plant, such as seismic wave velocities, density, water content, porosity, and strength;

(5) Listing of all historically reported earthquakes which have affected or which could reasonably be expected to have affected the site, including the date of occurrence and the following measured or estimated data: magnitude or highest intensity, and a plot of the epicenter or location of highest intensity. Where historically reported earthquakes could have caused a maximum ground acceleration of at least one-tenth the acceleration of gravity (0.1g) at the foundations of the proposed nuclear power plant structures, the acceleration or intensity and duration of ground shaking at these foundations shall also be estimated. Since earthquakes have been reported in terms of various parameters such as magnitude, intensity at a given location, and effect on ground, structures, and people at a specific location, some of these data may have to be estimated by use of appropriate empirical relationships. The comparative characteristics of the material underlying the epicentral location or region of highest intensity and of the material underlying the site in transmitting earthquake vibratory motion shall be considered;

(6) Correlation of epicenters or locations of highest intensity of historically reported earthquakes, where possible, with tectonic structures any part of which is located within 200 miles of the site. Epicenters or locations of highest intensity which cannot be reasonably correlated with tectonic structures shall be identified with tectonic provinces any part of which is located within 200 miles of the site;

(7) For faults, any part of which is within 200 miles[2] of the site and which may be of significance in establishing the Safe Shutdown Earthquake, determination of whether these faults are to be considered as capable faults.[3],[4] This determination is required in order to permit appropriate consideration of the geologic history of such faults in establishing the Safe Shutdown Earthquake. For guidance in determining which faults may be of significance in determining the Safe Shutdown Earthquake, table 1 of this appendix presents the minimum length of fault to be considered versus distance from site. Capable faults of lesser length than those indicated in table 1 and faults which are not capable faults need not be considered in determining the Safe Shutdown Earthquake, except where unusual circumstances indicate such consideration is appropriate;

Table 1

Distance from the site (miles):	Minimum length[1]
0 to 20	1
Greater than 20 to 50	5
Greater than 50 to 100	10
Greater than 100 to 150	20
Greater than 150 to 200	40

1. Minimum length of fault (miles) which shall be considered in establishing Safe Shutdown Earthquake.

(8) For capable faults, any part of which is within 200 miles[2] of the site and which may be of significance in establishing the Safe Shutdown Earthquake, determination of:

(i) The length of the fault;

(ii) The relationship of the fault to regional tectonic structures; and

(iii) The nature, amount, and geologic history of displacements along the fault, including particularly the estimated amount of the maximum Quaternary displacement related to any one earthquake along the fault.

(b) *Required Investigation for Surface Faulting*. The purpose of the investigations required by this paragraph is to obtain information to determine whether and to what extent the nuclear power plant need be designed for surface faulting. If the design basis for surface faulting can be clearly established by investigations of a lesser scope, not all of the steps in paragraphs (b)(4) through (b)(7) of this section need be carried out. The investigations shall include the following:

(1) Determination of the lithologic, stratigraphic, hydrologic, and structural geologic conditions of the site and the area surrounding the site, including its geologic history;

(2) Evaluation of tectonic structures underlying the site, whether buried or expressed at the surface, with regard to their potential for causing surface displacement at or near the site. The evaluation shall consider the possible effects caused by man's activities such as withdrawal of fluid from or addition of fluid to the subsurface, extraction of minerals, or the loading effects of dams or reservoirs;

(3) Determination of geologic evidence of fault offset at or near the ground surface at or near the site;

(4) For faults greater than 1000 feet long, any part of which is within 5 miles[5] of the site, determination of whether these faults are to be

considered as capable faults;[6,7]

(5) Listing of all historically reported earthquakes which can reasonably be associated with capable faults greater than 1000 feet long, any part of which is within 5 miles[5] of the site, including the date of occurrence and the following measured or estimated data: magnitude or highest intensity, and a plot of the epicenter or region of highest intensity;

(6) Correlation of epicenters or locations of highest intensity of historically reported earthquakes with capable faults greater than 1000 feet long, any part of which is located within 5 miles[5] of the site;

(7) For capable faults greater than 1000 feet long, any part of which is within 5 miles[5] of the site, determination of:

(i) The length of the fault;

(ii) The relationship of the fault to regional tectonic structures;

(iii) The nature, amount, and geologic history of displacements along the fault, including particularly the estimated amount of the maximum Quaternary displacement related to any one earthquake along the fault; and

(iv) The outer limits of the fault established by mapping Quaternary fault traces for 10 miles along its trend in both directions from the point of its nearest approach to the site.

(c) *Required Investigation for Seismically Induced Floods and Water Waves*. (1) For coastal sites, the investigations shall include the determination of:

(i) Information regarding distantly and locally generated waves or tsunami which have affected or could have affected the site. Available evidence regarding the runup and drawdown associated with historic tsunami in the same coastal region as the site shall also be included;

(ii) Local features of coastal topography which might tend to modify tsunami runup or drawdown. Appropriate available evidence regarding historic local modifications in tsunami runup or drawndown at coastal locations having topography similar to that of the site shall also be obtained; and

(iii) Appropriate geologic and seismic evidence to provide information for establishing the design basis for seismically induced floods or water waves from a local offshore earthquake, from local offshore effects of an onshore earthquake, or from coastal subsidence. This evidence shall be determined, to the extent practical, by a procedure similar to that required in paragraphs (a) and (b) of this section. The probable slip characteristics of offshore faults shall also be considered as well as the potential for offshore slides in submarine material.

(2) For sites located near lakes and rivers, investigations similar to those required in paragraph (c)(1) of this section shall be carried out, as appropriate, to determine the potential for the nuclear power plant to be exposed to seismically induced floods and water waves as, for example, from the failure during an earthquake of an upstream dam or from slides of earth or debris into a nearby lake.

V. Seismic and Geologic Design Bases

(a) *Determination of Design Basis for Vibratory Ground Motion*. The design of each nuclear power plant shall take into account the potential effects of vibratory ground motion caused by earthquakes. The design basis for the maximum vibratory ground motion and the expected vibratory ground motion should be determined through evaluation of the seismology, geology, and the seismic and geologic history of the site and the surrounding region. The most severe earthquakes associated with tectonic structures or tectonic provinces in the region surrounding the site should be identified, considering those historically reported earthquakes that can be associated with these structures or provinces and other relevant factors. If faults in the region surrounding the site are capable faults, the most severe earthquakes associated with these faults should be determined by also considering their geologic history. The vibratory ground motion at the site should be then determined by assuming that the epicenters or locations of highest intensity of the earthquakes are situated at the point on the tectonic structures or tectonic provinces nearest to the site. The earthquake which could cause the maximum vibratory ground motion at the site should be designated the Safe Shutdown Earthquake. The specific procedures for determining the design basis for vibratory ground motion are given in the following paragraphs.

(1) *Determination of Safe Shutdown Earthquake*. The Safe Shutdown Earthquake shall be identified through evaluation of seismic and geologic information developed pursuant to the requirements of paragraph IV(a), as follows:

(i) The historic earthquakes of greatest magnitude or intensity which have been correlated with tectonic structures pursuant to the requirements of paragraph (a)(6) of section IV shall be determined. In addition, for capable faults, the information required by paragraph (a)(8) of section IV shall also be taken into account in determining the earthquakes of greatest magnitude related to the faults. The magnitude or intensity of earthquakes based on geologic evidence may be larger than that of the maximum earthquakes historically recorded. The accelerations at the site shall be determined assuming that the epicenters of the earthquakes of greatest magnitude or the locations of highest intensity related to the tectonic structures are situated at the point on the structures closest to the site;

(ii) Where epicenters or locations of highest intensity of historically reported earthquakes cannot be reasonably related to tectonic structures but are identified pursuant to the requirements of paragraph (a)(6) of section IV with tectonic provinces in which the site is located, the accelerations at the site shall be determined assuming that these earthquakes occur at the site;

(iii) Where epicenters or locations of the highest intensity of historically reported earthquakes cannot be reasonably related to tectonic structures but are identified pursuant to the requirements of paragraph (a)(6) of section IV with tectonic provinces in which the site is not located, the accelerations at the site shall be determined assuming that the epicenters or locations of highest intensity of these earthquakes are at the closest point to the site on the boundary of the tectonic province;

(iv) The earthquake producing the maximum vibratory acceleration at the site, as determined from paragraph (a)(1)(i) through (iii) of this section shall be designated the Safe Shutdown Earthquake for vibratory ground motion, except as noted in paragraph (a)(1)(v) of this section. The characteristics of the Safe Shutdown Earthquake shall be derived from more than one earthquake determined from paragraph (a)(1)(i) through (iii) of this section, where necessary to assure that the maximum vibratory acceleration at the site throughout the frequency range of interest is included. In the case where a causative fault is near the site, the effect of proximity of an earthquake on the spectral characteristics of the Safe Shutdown Earthquake shall be taken into account. The procedures in paragraphs (a)(1)(i) through (a)(1)(iii) of this section shall be applied in a conservative manner. The determinations carried out in accordance with paragraphs (a)(1)(ii) and (a)(1)(iii) shall assure that the safe shutdown earthquake intensity is, as a minimum, equal to the maximum historic earthquake intensity experienced within the tectonic province in which the site is located. In the event that geological and seismological data warrant, the Safe Shutdown Earthquake shall be larger than that derived by use of the procedures set forth in section IV and V of the appendix. The maximum vibratory accelerations of the Safe Shutdown Earthquake at each of the various foundation locations of the nuclear power plant structures at a given site shall be determined taking into account the characteristics of the underlying soil material in transmitting the earthquake-induced motions, obtained pursuant to paragraphs (a)(1), (3), and (4) of section IV. The Safe Shutdown Earthquake shall be defined by response spectra corresponding to the maximum vibratory accelerations as outlined in paragraph (a) of section VI; and

(v) Where the maximum vibratory accelerations of the Safe Shutdown Earthquake at the foundations of the nuclear power plant structures are determined to be less than one-tenth the acceleration of gravity (0.1 g) as a result of the steps required in paragraphs (a)(1)(i) through (iv) of this section, it shall be assumed that the maximum vibratory accelerations of the Safe Shutdown Earthquake at these foundations are at least 0.1 g.

(2) *Determination of Operating Basis Earthquake*. The Operating Basis Earthquake shall be specified by the applicant after considering the seismology and geology of the region surrounding the site. If vibratory ground motion exceeding that of the Operating Basis Earthquake occurs, shutdown of the nuclear power plant will be required. Prior to resuming operations, the licensee will be required to demonstrate to the Commission that no functional damage has occurred to those features necessary for continued operation without undue risk to the health and safety of the public.

The maximum vibratory ground acceleration of the Operating Basis Earthquake shall be at least one-half the maximum vibratory ground acceleration of the Safe Shutdown Earthquake.

(b) *Determination of Need to Design for Surface Faulting*. In order to determine whether a nuclear power plant is required to be designed to withstand the effects of surface faulting, the location of the nuclear power plant with respect to capable faults shall be considered. The area over which each of these faults has caused surface faulting in the past is identified by mapping its fault traces in the vicinity of the site. The fault traces are mapped along the trend of the fault for 10 miles in both directions from the point of its nearest approach to the nuclear power plant because, for example, traces may be obscured along portions of the fault. The maximum width of the mapped fault traces, called the control width, is then determined from this map. Because surface faulting has sometimes occurred beyond the limit of mapped fault traces or where fault traces have not been previously recognized, the control width of the fault is increased by a factor which is dependent upon the largest potential earthquake related to the fault. This larger width delineates a zone, called the zone requiring detailed faulting investigation, in which the possibility of surface faulting is to be determined. The following paragraphs outline the specific procedures for determining the zone requiring detailed faulting investigation for a capable fault.

(1) *Determination of Zone Requiring Detailed Faulting Investigation*. The zone requiring detailed faulting investigation for a capable fault which was investigated pursuant to the requirement of paragraph (b)(7) of section IV shall be determined through use of the following table:

Magnitude of earthquake	Width of zone requiring detailed faulting investigation (see fig. 1)
Less than 5.5	1 x control width.
5.5-6.4	2 x control width.
6.5-7.5	3 x control width.
Greater than 7.5	4 x control width.

The largest magnitude earthquake related to the fault shall be used in table 2. This earthquake shall be determined from the information developed pursuant to the requirements of paragraph (b) of Section IV for the fault, taking into account the information required by paragraph (b)(7) of section IV. The control width used in table 2 is determined by mapping the outer limits of the fault traces from information developed pursuant to paragraph (b)(7)(iv) of section IV. The control width shall be used in table 2 unless the characteristics of the fault are obscured for a significant portion of the 10 miles on either side of the point of nearest approach to the nuclear power plant. In this event, the use in table 2 of the width of mapped fault traces more than 10 miles from the point of nearest approach to the nuclear power plant may be appropriate.

The zone requiring detailed faulting investigation, as determined from table 2, shall be used for the fault except where:

(i) The zone requiring detailed faulting investigation from table 2 is less than one-half mile in width. In this case the zone shall be at least one-half mile in width; or

(ii) Definitive evidence concerning the regional and local characteristics of the fault justifies use of a different value. For example, thrust or bedding-plane faults may require an increase in width of the zone to account for the projected dip of the fault plane; or

(iii) More detailed three-dimensional information, such as that obtained from precise investigative techniques, may justify the use of a narrower zone. Possible examples of such techniques are the use of accurate records from closely spaced drill holes or from closely spaced, high-resolution offshore geophysical surveys.

In delineating the zone requiring detailed faulting investigation for a fault, the center of the zone shall coincide with the center of the fault at the point of nearest approach of the fault to the nuclear power plant as illustrated in figure 1.

(c) *Determination of Design Bases for Seismically Induced Floods and Water Waves*. The size of seismically induced floods and water waves which could affect a site from either locally or distantly generated seismic activity shall be determined, taking into consideration the results of the investigation required by paragraph (c) of section IV. Local topographic characteristics which might tend to modify the possible runup and drawdown at the site shall be considered. Adverse tide conditions shall also be taken into account in determining the effect of the floods and waves on the site. The characteristics of the earthquake to be used in evaluating the offshore effects of local earthquakes shall be determined by a procedure similar to that used to determine the characteristics of the Safe Shutdown Earthquake in paragraph V(a).

(d) *Determination of Other Design Conditions*--(1) *Soil Stability*. Vibratory ground motion associated with the Safe Shutdown Earthquake can cause soil instability due to ground disruption such as fissuring, differential consolidation, liquefaction, and cratering which is not directly related to surface faulting. The following geologic features which could affect the foundations of the proposed nuclear power plant structures shall be evaluated, taking into account the information concerning the physical properties of materials underlying the site developed pursuant to paragraphs (a)(1), (3), and (4) of section IV and the effects of the Safe Shutdown Earthquake:

(i) Areas of actual or potential surface or subsurface subsidence, uplift, or collapse resulting from:

(a) Natural features such as tectonic depressions and cavernous or karst terrains, particularly those underlain by calcareous or other soluble deposits;

(b) Man's activities such as withdrawal of fluid from or addition of fluid to the subsurface, extraction of minerals, or the loading effects of dams or reservoirs; and

(c) Regional deformation.

(ii) Deformational zones such as shears, joints, fractures, folds, or combinations of these features.

(iii) Zones of alteration or irregular weathering profiles and zones of structural weakness composed of crushed or disturbed materials.

(iv) Unrelieved residual stresses in bedrock.

(v) Rocks or soils that might be unstable because of their mineralogy, lack of consolidation, water content, or potentially undesirable response to seismic or other events. Seismic response characteristics to be considered shall include liquefaction, thixotropy, differential consolidation, cratering, and fissuring.

(2) *Slope stability*. Stability of all slopes, both natural and artificial, the failure of which could adversely affect the nuclear power plant, shall be considered. An assessment shall be made of the potential effects of erosion or deposition and of combinations of erosion or deposition with seismic activity, taking into account information concerning the physical property of the materials underlying the site developed pursuant to paragraph (a)(1), (3), and (4) of section IV and the effects of the Safe Shutdown Earthquake.

(3) *Cooling water supply*. Assurance of adequate cooling water supply for emergency and long-term shutdown decay heat removal shall be considered in the design of the nuclear power plant, taking in to account information concerning the physical properties of the materials underlying the site developed pursuant to paragraphs (a)(1), (3), and (4) of section IV and the effects of the Safe Shutdown Earthquake and the design basis for surface faulting. Consideration of river blockage or diversion or other failures which may block the flow of cooling water, coastal uplift or subsidence, or tsunami runup and drawdown, and failure of dams and intake structures shall be included in the evaluation, where appropriate.

(4) *Distant structures*. Those structures which are not located in the immediate vicinity of the site but which are safety related shall be designed to withstand the effect of the Safe Shutdown Earthquake and the design basis for surface faulting determined on a comparable basis to that of the nuclear power plant, taking into account the material underlying the structures and the different location with respect to that of the site.

VI. Application to Engineering Design

(a) *Vibratory ground motion*--(1) *Safe Shutdown Earthquake*. The vibratory ground motion produced by the Safe Shutdown Earthquake shall be defined by response spectra corresponding to the maximum vibratory accelerations at the elevations of the foundations of the nuclear power plant structures determine pursuant to paragraph (a)(1) of section V. The response spectra shall relate the response of the foundations of the nuclear power plant structures to the vibratory ground motion, considering such foundations to be single-degree-of-freedom damped oscillators and neglecting soil-structure interaction effects. In view of the limited data available on vibratory ground motions of strong earthquakes, it usually will be appropriate that the response spectra be smoothed design spectra developed from a series of response spectra related to the vibratory motions caused by more than one earthquake.

The nuclear power plant shall be designed so that, if the Safe Shutdown Earthquake occurs, certain structures, systems, and components will remain functional. These structures, systems, and components are those necessary to assure (i) the integrity of the reactor coolant pressure boundary, (ii) the capability to shut down the reactor and maintain it in a safe condition, or (iii) the capability to prevent or

mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of this part. In addition to seismic loads, including aftershocks, applicable concurrent functional and accident-induced loads shall be taken into account in the design of these safety-related structures, systems, and components. The design of the nuclear power plant shall also take into account the possible effects of the Safe Shutdown Earthquake on the facility foundations by ground disruption, such as fissuring, differential consolidation, cratering, liquefaction, and landsliding, as required in paragraph (d) of section V.

The engineering method used to insure that the required safety functions are maintained during and after the vibratory ground motion associated with the Safe Shutdown Earthquake shall involve the use of either a suitable dynamic analysis or a suitable qualification test to demonstrate that structures, systems and components can withstand the seismic and other concurrent loads, except where it can be demonstrated that the use of an equivalent static load method provides adequate conservatism.

The analysis or test shall take into account soil-structure interaction effects and the expected duration of vibratory motion. It is permissible to design for strain limits in excess of yield strain in some of these safety-related structures, systems, and components during the Safe Shutdown Earthquake and under the postulated concurrent conditions, provided that the necessary safety functions are maintained.

(2) *Operating Basis Earthquake*. The Operating Basis Earthquake shall be defined by response spectra. All structures, systems, and components of the nuclear power plant necessary for continued operation without undue risk to the health and safety of the public shall be designed to remain functional and within applicable stress and deformation limits when subjected to the effects of the vibratory motion of the Operating Basis Earthquake in combination with normal operating loads. The engineering method used to insure that these structures, systems, and components are capable of withstanding the effects of the Operating Basis Earthquake shall involve the use of either a suitable dynamic analysis or a suitable qualification test to demonstrate that the structures, systems and components can withstand the seismic and other concurrent loads, except where it can be demonstrated that the use of an equivalent static load method provides adequate conservatism. The analysis or test shall take into account soil-structure interaction effects and the expected duration of vibratory motion.

(3) *Required Seismic instrumentation*. Suitable instrumentation shall be provided so that the seismic response of nuclear power plant features important to safety can be determined promptly to permit comparison of such response with that used as the design basis. Such a comparison is needed to decide whether the plant can continue to be operated safely and to permit such timely action as may be appropriate.

These criteria do not address the need for instrumentation that would automatically shut down a nuclear power plant when an earthquake occurs which exceeds a predetermined intensity. The need for such instrumentation is under consideration.

(b) *Surface Faulting*. (1) If the nuclear power plant is to be located within the zone requiring detailed faulting investigation, a detailed investigation of the regional and local geologic and seismic characteristics of the site shall be carried out to determine the need to take into account surface faulting in the design of the nuclear power plant. Where it is determined that surface faulting need not be taken into account, sufficient data to clearly justify the determination shall be presented in the license application.

(2) Where it is determined that surface faulting must be taken into account, the applicant shall, in establishing the design basis for surface faulting on a site take into account evidence concerning the regional and local geologic and seismic characteristics of the site and from any other relevant data.

(3) The design basis for surface faulting shall be taken into account in the design of the nuclear power plant by providing reasonable assurance that in the event of such displacement during faulting certain structures, systems, and components will remain functional. These structures, systems, and components are those necessary to assure (i) the integrity of the reactor coolant pressure boundary, (ii) the capability to shut down the reactor and maintain it in a safe shutdown condition, or (iii) the capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of this part. In addition to seismic loads, including aftershocks, applicable concurrent functional and accident-induced loads shall be taken into account in the design of such safety features. The design provisions shall be based on an assumption that the design basis for surface faulting can occur in any direction and azimuth and under any part of the nuclear power plant unless evidence indicates this assumption is not appropriate, and shall take into account the estimated rate at which the surface faulting may occur.

(c) *Seismically Induced Floods and Water Waves and Other Design Conditions*. The design basis for seismically induced floods and water waves from either locally or distantly generated seismic activity and other design conditions determined pursuant to paragraphs (c) and (d) of section V, shall be taken into account in the design of the nuclear power plant so as to prevent undue risk to the health and safety of the public.

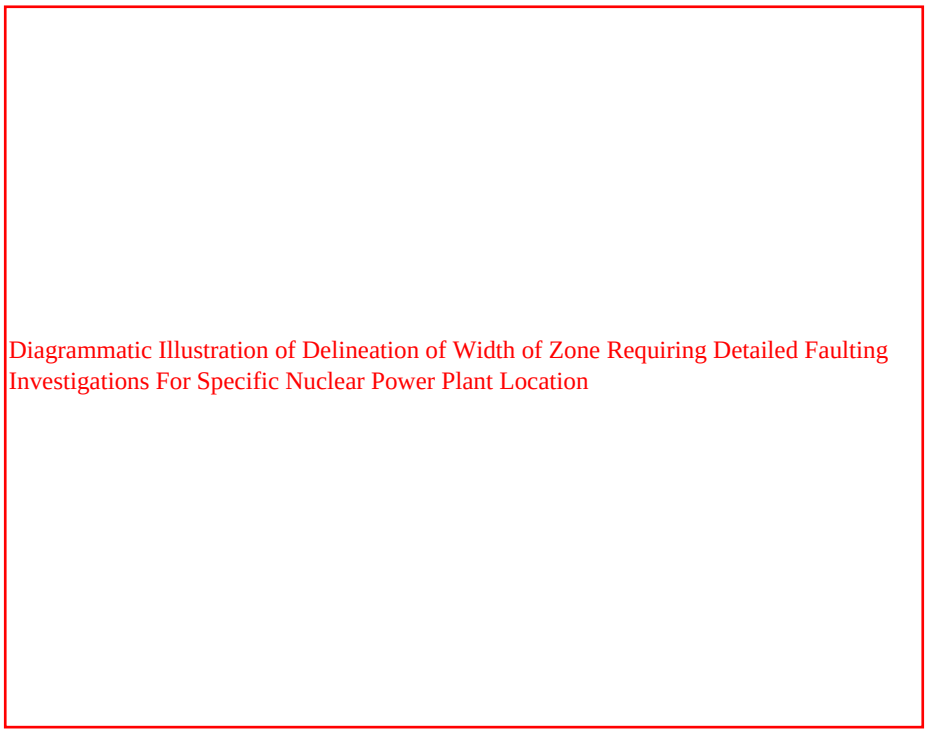


Figure 1--Diagrammatic Illustration of Delineation of Width of Zone Requiring Detailed Faulting Investigations For Specific Nuclear Power Plant Location.

(Sec. 201, Pub. L. 93-438, 88 Stat. 1243 (42 U.S.C. 5841))

[38 FR 31281, Nov. 13, 1973, as amended at 38 FR 32575, Nov. 27, 1973; 42 FR 2052, Jan. 10, 1977]

[1] The Safe Shutdown Earthquake defines that earthquake which has commonly been referred to as the Design Basis Earthquake.

[2] If the Safe Shutdown Earthquake can be associated with a fault closer than 200 miles to the site, the procedures of paragraphs (a)(7) and (a)(8) of this section need not be carried out for successively more remote faults.

[3] In the absence of absolute dating, evidence of recency of movement may be obtained by applying relative dating technique to ruptured, offset, warped or otherwise structurally disturbed surface or near surface materials or geomorphic features.

[4] The applicant shall evaluate whether or not a fault is a capable fault with respect to the characteristics outlined in paragraphs III(g)(1), (2), and (3) by conducting a reasonable investigation using suitable geologic and geophysical techniques.

[5] If the design basis for surface faulting can be determined from a fault closer than 5 miles to the site, the procedures of paragraphs (b)(4) through (b)(7) of this section need not be carried out for successively more remote faults.

[6] In the absence of absolute dating, evidence of recency of movement may be obtained by applying relative dating techniques to ruptured, offset, warped or otherwise structurally disturbed surface of near-surface materials or geomorphic features.

[7] The applicant shall evaluate whether or not a fault is a capable fault with respect to the characteristics outlined in paragraphs III(g)(1), (2), and (3) by conducting a reasonable investigation using suitable geological and geophysical techniques.

PART 110--EXPORT AND IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 110.1 Purpose and scope.

(a) The regulations in this part prescribe licensing, enforcement, and rulemaking procedures and criteria, under the Atomic Energy Act, for the export of nuclear equipment and material, as set out in §§ 110.8 and 110.9, and the import of nuclear equipment and material, as set out in § 110.9a. This part also gives notice to all persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 110.7b.

(b) The regulations in this part apply to all persons in the United States except: (1) The Departments of Defense and Energy for activities authorized by sections 54, 64, 82, and 91 of the Atomic Energy Act, except when the Department of Energy seeks an export license under section 111 of the Atomic Energy Act;

(2) Persons who export or import U.S. Munitions List nuclear items, such as uranium depleted in the isotope-235 and incorporated in defense articles. These persons are subject to the controls of the Department of State pursuant to 22 CFR 120-130 "International Traffic in Arms Regulations" (ITAR), under the Arms Export Control Act, as authorized by section 110 of the International Security and Development Cooperation Act of 1980;

(3) Persons who export uranium depleted in the isotope-235 and incorporated in commodities solely to take advantage of high density or pyrophoric characteristics. These persons are subject to the controls of the Department of Commerce under the Export Administration Act, as authorized by section 110 of the International Security and Development Cooperation Act of 1980;

(4) Persons who export nuclear referral list commodities. These persons are subject to the licensing authority of the Department of Commerce pursuant to 15 CFR part 799, such as bulk zirconium, rotor and bellows equipment, maraging steel, nuclear reactor related equipment, including process control systems and simulators; and

(5) Persons who import deuterium, nuclear grade graphite, or nuclear equipment other than production or utilization facilities. A uranium enrichment facility is not a production facility.

(6) Shipments which are only passing through the U.S. (in bond shipments) do not require an NRC import or export license; however, they must comply with the Department of Transportation/ IAEA packaging, and state transportation requirements.

[49 FR 47197, Dec. 3, 1984; 49 FR 49841, Dec. 24, 1984, as amended at 55 FR 34519, Aug. 23, 1990; 56 FR 40692, Aug. 15, 1991; 58 FR 13001, Mar. 9, 1993; 61 FR 35602, July 8, 1996; 63 FR 1900, Jan. 13, 1998; 65 FR 70289, Nov. 22, 2000]

§ 110.2 Definitions.

[Top of File]

As used in this part,

Accelerator-produced radioactive material means any material made radioactive by a particle accelerator.

Agreement for cooperation means any agreement with another nation or group of nations concluded under section 123 of the Atomic Energy Act, as amended.

Atomic Energy Act means the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011).

Byproduct material means

(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or utilizing special nuclear material;

(2) The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore (see 10 CFR 20.1003);

(3)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that has been made radioactive by use of a particle accelerator and is produced, extracted, or converted after extraction, before, on, or after August 8, 2005 for use for a commercial, medical, or research activity; and

(4) Any discrete source of naturally occurring radioactive material, other than source material, that--

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005 is extracted or converted after extraction for use in a commercial, medical, or research activity.

Classified information means National Security Information classified under Executive Order 12356.

Commission means the United States Nuclear Regulatory Commission or its duly authorized representatives.

Common defense and security means the common defense and security of the United States.

Conversion facility means any facility for the transformation from one uranium chemical species to another, including: conversion of uranium ore concentrates to UO3, conversion of UO3 to UO2, conversion of uranium oxides to UF4 or UF6, conversion of UF4 to UF6, conversion of UF6 to UF4, conversion of UF4 to uranium metal, and conversion of uranium fluorides to UO2.

Depleted uranium means uranium having a percentage of uranium-235 less than the naturally occurring distribution of U-235 found in natural uranium (less than 0.711 weight percent U-235). It is obtained from spent (used) fuel elements or as byproduct tails or residues from uranium isotope separation.

Discrete source means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

Deuterium means deuterium and any deuterium compound, including heavy water, in which the ratio of deuterium atoms to hydrogen atoms exceeds 1:5000.

Disposal means permanent isolation of radioactive material from the surrounding environment.

Dual-use means equipment and materials that may be used in nuclear or non-nuclear applications.

Effective kilograms of special nuclear material means:

(1) For plutonium and uranium-233, their weight in kilograms;

(2) For uranium enriched 1 percent or greater in the isotope U-235, its element weight in kilograms multiplied by the square of its enrichment expressed as a decimal weight fraction; and

(3) For uranium enriched below 1 percent in the isotope U-235, its element weight in kilograms multiplied by 0.0001.

Embargoed means that no nuclear material or equipment can be exported to certain countries under an NRC general license because there is a U.S. trade embargo in effect.

Exceptional circumstances means, with respect to exports from the United States of radioactive material listed in Table 1 of Appendix P of this part:

(1) Cases of considerable health or medical need as acknowledged by the U.S. Government and the government of the importing country;

(2) Cases where there is an imminent radiological hazard or security threat presented by one or more radioactive sources; and

(3) Cases in which the exporting facility or U.S. Government maintains control of the radioactive material throughout the period the material is outside of the U.S. and removes the material at the conclusion of this period.

Executive Branch means the Departments of State, Energy, Defense and Commerce and the Arms Control and Disarmament Agency.

Export means to physically transfer nuclear equipment or material to a person or an international organization in a foreign country, except DOE distributions as authorized in Section 111 of the Atomic Energy Act or Section 110 of the International Security and Development Cooperation Act of 1980.

General license means an export or import license effective without the filing of a specific application with the Commission or the issuance of licensing documents to a particular person.

Heels means small quantities of natural, depleted or low-enriched uranium (to a maximum of 20 percent), in the form of UF6 left in emptied

transport cylinders being returned to suppliers after delivery of the product.

High-enriched uranium means uranium enriched to 20 percent or greater in the isotope uranium-235.

IAEA means the International Atomic Energy Agency.

Import means import into the United States.

Incidental radioactive material means any radioactive material not otherwise subject to specific licensing under this part that is contained in or a contaminant of any non-radioactive material that:

(1) For purposes unrelated to the regulations in this part, is exported or imported for recycling or resource recovery of the non-radioactive component; and

(2) Will not be processed for separation of the radioactive component before the recycling or resource recovery occurs or as part of the resource recovery process.

The term does not include material that contains or is contaminated with "hazardous waste" as defined in section 1004(5) of the Solid Waste Disposal Act, 42 U.S.C. 6903(5).

Individual shipment means a shipment consisting of one lot of freight tendered to a carrier by one consignor at one place at one time for delivery to one consignee on one bill of lading. This lot may consist of:

(1) Only one item or

(2) A number of containers all listed on the same set of shipping documents. This one lot of freight or "distinct" shipment can be transported on the same carrier with other distinct shipments containing the same items as long as each shipment is covered by separate sets of shipping documents.

The phrase *introduced into a hearing* means the introduction or incorporation of testimony or documentary matter into the record of a hearing.

License means a general or specific export or import license issued pursuant to this part.

Licensee means a person authorized by a specific or a general license to export or import nuclear equipment or material pursuant to this part.

Low-enriched uranium means uranium enriched below 20 percent in the isotope uranium-235.

Management means storage, packaging, or treatment of radioactive waste.

Medical isotope, for the purposes of § 110.42(a)(10), includes Molybdenum 99, Iodine 131, Xenon 133, and other radioactive materials used to produce a radiopharmaceutical for diagnostic, therapeutic procedures or for research and development

Natural uranium means uranium as found in nature, containing about 0.711 percent of Uranium 235, 99.283 percent of uranium-238, and a trace (0.006 percent) of uranium-234.

NPT means the Treaty on the Non-Proliferation of Nuclear Weapons (TIAS 6839).

Non-nuclear weapon State means any State not a nuclear weapon State as defined in the Treaty on the Non-Proliferation of Nuclear Weapons. Nuclear weapon State means any State which has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to January 1, 1967.

Non-Proliferation Act means the Nuclear Non-Proliferation Act of 1978 (Pub. L. 95-242).

NRC Public Document Room means the facility at One White Flint North, 11555 Rockville Pike (first floor), Rockville Maryland, where certain public records of the NRC that were made available for public inspection in paper or microfiche prior to the implementation of the NRC Agencywide Documents Access and Management System, commonly referred to as ADAMS, will remain available for public inspection. It is also the place where NRC makes computer terminals available to access the Publicly Available Records System (PARS) component of ADAMS on the NRC Web site, http://www.nrc.gov, and where copies can be viewed or ordered for a fee as set forth in § 9.35 of this chapter. The facility is staffed with reference librarians to assist the public in identifying and locating documents and in using the NRC Web site and ADAMS. The NRC Public Document Room is open from 7:45 am to 4:15 pm, Monday through Friday, except on Federal holidays. Reference service and access to documents may also be requested by telephone (301-315-4737 or 800-397-4209) between 8:30 am and 4:15 pm, or by e-mail (PDR@nrc.gov), facsimile (301-415-3548), or letter (NRC Public Document Room, One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852-2738).

NRC records means any documentary material made by, in the possession of, or under the control of the Commission under Federal law or in connection with the transaction of public business as evidence of any of the Commission's activities.

NRC Web site, http://www.nrc.gov, is the Internet uniform resource locator name for the Internet address of the Web site where NRC will ordinarily make available its public records for inspection.

Nuclear grade graphite for nuclear end use means graphite having a purity level better than (i.e., less than) 5 parts per million boron equivalent, as measured according to ASTM standard C1233-98 and intended for use in a nuclear reactor. (Nuclear grade graphite for non-nuclear end use is regulated by the Department of Commerce.)

Nuclear reactor means an apparatus, other than an atomic weapon or nuclear explosive device, designed or used to sustain nuclear fission in a self-supporting chain reaction.

Nuclear reactor internals means the major structures within a reactor vessel that have one or more functions such as supporting the core, maintaining fuel alignment, directing primary coolant flow, providing radiation shields for the reactor vessel, and guiding in-core instrumentation.

Nuclear Referral List (NRL) means the nuclear-related, dual-use commodities on the Commerce Control List that are subject to the nuclear non-proliferation export licensing controls of the Department of Commerce. They are contained in 15 CFR part 774 of the Department of Commerce's Export Administration Regulations and are designated by the symbol (NP) as the reason for control.

Obligations means the commitments entered into by the U.S. Government under Atomic Energy Act (AEA) section 123 agreements for cooperation in the peaceful uses of atomic energy. Imports and exports of material or equipment pursuant to such agreements are subject to these commitments, which in some cases involve an exchange of information on imports, exports, retransfers with foreign governments, peaceful end-use assurances, and other conditions placed on the transfer of the material or equipment. The U.S. Government informs the licensee of obligations attached to material or equipment being imported into the U.S. and approves changes to those obligations.

Packaging means one or more receptacles and wrappers and their contents, excluding any special nuclear material, source material or byproduct material, but including absorbent material, spacing structures, thermal insulation, radiation shielding, devices for cooling and for absorbing mechanical shock, external fittings, neutron moderators, nonfissile neutron absorbers and other supplementary equipment.

Participant means a person, identified in a hearing notice or other Commission order, who takes part in a hearing conducted by the Commission under this part, including any person to whom the Commission grants a hearing or leave to intervene in an export or import licensing hearing, either as a matter of right or as a matter of discretion.

Particle accelerator means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 megaelectron volt. For purposes of this definition, "accelerator" is an equivalent term.

Person means any individual, corporation, partnership, firm, association, trust, estate, institution, group, Government agency other than the Commission or, with respect to imports, the Department of Energy; any State or political entity within a State; any foreign government or political entity of such government; and any authorized representative of the foregoing.

Physical security means measures to reasonably ensure that source or special nuclear material will only be used for authorized purposes and to prevent theft or sabotage.

Production facility means any nuclear reactor or plant specially designed or used to produce special nuclear material through the irradiation of source material or special nuclear material, the chemical reprocessing of irradiated source or special nuclear material, or the separation of isotopes, other than a uranium enrichment facility.

Public health and safety means the public health and safety of the United States.

Radioactive material means source, byproduct, or special nuclear material.

Radioactive waste means any waste that contains or is contaminated with source, byproduct, or special nuclear material, including any such waste that contains or is contaminated with "hazardous waste" as defined in section 1004(5) of the Solid Waste Disposal Act, 42 U.S.C. 6903(5), but such term does not include radioactive material that is--

(1) Contained in a sealed source, or device containing a sealed source, that is being returned to any manufacturer qualified to receive and possess the sealed source or the device containing a sealed source;

(2) A contaminant on service equipment (including service tools) used in nuclear facilities, if the service equipment is being shipped for use in another nuclear facility and not for waste management purposes or disposal; or

(3) Generated or used in a United States Government waste research and development testing program under international arrangements.

Radiopharmaceutical, for the purposes of § 110.42(a)(10), means a radioactive isotope that contains byproduct material combined with chemical or biological material and is designed to accumulate temporarily in a part of the body for therapeutic purposes or for enabling the production of a useful image for use in a diagnosis of a medical condition.

Recipient Country, for the purposes of § 110.42(a)(10), means Canada, Belgium, France, Germany, and the Netherlands.

Restricted destinations means countries that are not parties to the NPT or are listed for reasons recommended by the executive branch.

Retransfer means the transport from one foreign country to another of nuclear equipment or nuclear material previously exported from the United States, or of special nuclear material produced through the use of source material or special nuclear material previously exported from the United States.

Sealed source means any special nuclear material or byproduct material encased in a capsule designed to prevent leakage or escape of that nuclear material.

Secretary means the Secretary of the Commission.

Source material means:

(1) Natural or depleted uranium, or thorium, other than special nuclear material; or

(2) Ores that contain by weight 0.05 percent or more of uranium, thorium or depleted uranium.

Special nuclear material means plutonium, uranium-233 or uranium enriched above 0.711 percent by weight in the isotope uranium-235.

Specific activity means the radioactivity of a radionuclide per unit mass of that nuclide, expressed in the SI unit of Terabequerels per gram (TBq/g). Values of specific activity are found in Appendix A to part 71 of this chapter.

Specific license means an export or import license issued to a named person upon an application filed pursuant to this part.

Storage means the temporary holding of radioactive material.

Target means material subjected to irradiation in an accelerator or nuclear reactor to induce a reaction or produce nuclear material.

Transfer means the transfer of possession from one person to another person.

Transport means the physical movement of material from one location to another.

Treatment means any method, technique, or process, including storage for radioactive decay, designed to change the physical, chemical or biological characteristics or composition of any radioactive material.

Tritium means not only tritium but also includes compounds and mixtures containing tritium in which the ratio of tritium to hydrogen by atoms exceeds one part in 1,000.

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

Uranium enrichment facility means:

(1) Any facility used for separating the isotopes of uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for such equipment or device, capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

Utilization facility means:

(1) Any nuclear reactor, other than one that is a production facility and

(2) Any of the following major components of a nuclear reactor:

(i) Reactor pressure vessel (designed to contain the core of a nuclear reactor);

(ii) Reactor primary coolant pump;

(iii) "On-line" reactor fuel charging and discharging machine; and

(iv) Complete reactor control rod system.

(3) A utilization facility does not include the steam turbine generator portion of a nuclear power plant.

[43 FR 21691, May 19, 1978, as amended at 45 FR 18906, Mar. 24, 1980; 49 FR 47197, Dec. 3, 1984; 49 FR 49841, Dec. 24, 1984; 51 FR 27826, Aug. 4, 1986; 53 FR 43422, Oct. 27, 1988; 56 FR 24684, May 31, 1991; 57 FR 18393, Apr. 30, 1992; 58 FR 13002, Mar. 9, 1993;

58 FR 57963, Oct. 28, 1993; 59 FR 48997, Sept. 26, 1994; 60 FR 37562, July 21, 1995; 61 FR 35602, July 8, 1996; 64 FR 48955, Sept. 9, 1999; 65 FR 70289, Nov. 22, 2000; 67 FR 67101, Nov. 4, 2002; 67 FR 70835, Nov. 27, 2002; 70 FR 37991, July 1, 2005; 70 FR 41939, July 21, 2005; 71 FR 20339, Apr. 20, 2006; 72 FR 55934 Oct. 1, 2007]

§ 110.3 Interpretations.

[Top of File]

Except as authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part other than a written interpretation by the Commission's General Counsel is binding upon the Commission.

§ 110.4 Communications.

[Top of File]

Except where otherwise specified in this part, all communications and reports concerning the regulations in this part should be addressed to the Deputy Director of the NRC's Office of International Programs, either by telephone to (301) 415-2344; by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[58 FR 13002, Mar. 9, 1993, as amended at 59 FR 48997, Sept. 26, 1994; 62 FR 59277, Nov. 3, 1997; 65 FR 70290, Nov. 22, 2000; 68 FR 58824, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 110.5 Licensing requirements.

[Top of File]

Except as provided under subpart B of this part, no person may export any nuclear equipment or material listed in § 110.8 and § 110.9, or import any nuclear equipment or material listed in § 110.9a, unless authorized by a general or specific license issued under this part.

[56 FR 24684, May 31, 1991, as amended at 58 FR 13002, Mar. 9, 1993]

§ 110.6 Retransfers.

[Top of File]

(a) Retransfer of any nuclear equipment or material listed in §§ 110.8 and 110.9, including special nuclear material produced through the use of U.S.-origin source material or special nuclear material, requires authorization by the Department of Energy, unless, the export to the new destination is authorized under a special or general license or an exemption from licensing requirements. Under certain agreements for cooperation, Department of Energy authorization also is required for the retransfer of special nuclear material produced through the use of non-U.S.-supplied nuclear material in U.S.-supplied utilization facilities. Department of Energy authorization is also required for the retransfer of obligated nuclear equipment and material (see definition of "obligated" in § 110.2).

(b) Requests for authority to retransfer are processed by the Department of Energy, Office of Arms Control and Nonproliferation Technology Support, Washington, DC 20585.

[49 FR 47197, Dec. 3, 1984, as amended at 55 FR 34519, Aug. 23, 1990; 58 FR 13002, Mar. 9, 1993; 65 FR 70290, Nov. 22, 2000]

§ 110.7 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control numbers 3150-0036.

(b) The approved information collection requirements contained in this part appear in §§ 110.7a, 110.23, 110.26, 110.27, 110.32, 110.50, 110.52, and 110.53.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In §§ 110.19, 110.20, 110.21, 110.22, 110.23, 110.31, 110.32, and 110.51, NRC Form 7 is approved under control number 3150-0027.

(2) [Reserved]

[62 FR 52190, Oct. 6, 1997, as amended at 65 FR 70290, Nov. 22, 2000; 67 FR 67101, Nov. 4, 2002; 71 FR 19104, Apr. 13, 2006; 71 FR 35995, June 23, 2006]

§ 110.7a Completeness and accuracy of information.

[Top of File]

(a) Information provided to the Commission by an applicant for a license or by a licensee or information required by statute or by the Commission's regulations, orders, or license conditions to be maintained by the applicant or the licensee shall be complete and accurate in all material respects.

(b) Each applicant or licensee shall notify the Commission of information identified by the applicant or licensee as having for the regulated activity a significant implication for public health and safety or common defense and security. An applicant or licensee violates this paragraph only if the applicant or licensee fails to notify the Commission of information that the applicant or licensee has identified as having a significant implication for public health and safety or common defense and security. Notification shall be provided to the Administrator of the appropriate Regional Office within two working days of identifying the information. This requirement is not applicable to information which is already required to be provided to the Commission by other reporting or updating requirements.

[52 FR 49374, Dec. 31, 1987]

§ 110.7b Deliberate misconduct.

[Top of File]

(a) Any licensee, applicant for a license, employee of a licensee or applicant; or any contractor (including a supplier or consultant), subcontractor, employee of a contractor or subcontractor of any licensee or applicant for a license, who knowingly provides to any licensee, applicant, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's or applicant's activities in this part, may not:

(1) Engage in deliberate misconduct that causes or would have caused, if not detected, a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation of any license issued by the Commission; or

(2) Deliberately submit to the NRC, a licensee, an applicant, or a licensee's or applicant's contractor or subcontractor, information that the person submitting the information knows to be incomplete or inaccurate in some respect material to the NRC.

(b) A person who violates paragraph (a)(1) or (a)(2) of this section may be subject to enforcement action in accordance with the procedures in 10 CFR part 2, subpart B.

(c) For the purposes of paragraph (a)(1) of this section, deliberate misconduct by a person means an intentional act or omission that the person knows:

(1) Would cause a licensee or applicant to be in violation of any rule, regulation, or order; or any term, condition, or limitation, of any license issued by the Commission; or

(2) Constitutes a violation of a requirement, procedure, instruction, contract, purchase order, or policy of a licensee, applicant, contractor, or subcontractor.

[63 FR 1900, Jan. 13, 1998]

§ 110.8 List of nuclear facilities and equipment under NRC export licensing authority.

[Top of File]

(a) Nuclear reactors and especially designed or prepared equipment and components for nuclear reactors. (See Appendix A to this part.)

(b) Plants for the separation of isotopes of uranium (source material or special nuclear material) including gas centrifuge plants, gaseous diffusion plants, aerodynamic enrichment plants, chemical exchange or ion exchange enrichment plants, laser based enrichment plants, plasma separation enrichment plants, electromagnetic enrichment plants, and especially designed or prepared equipment, other than analytical instruments, for the separation of isotopes of uranium. (See appendices to this part for lists of: gas centrifuge equipment--Appendix B; gaseous diffusion equipment--Appendix C; aerodynamic enrichment equipment--Appendix D; chemical exchange or ion exchange enrichment equipment--Appendix E; laser based enrichment equipment--Appendix F; plasma separation enrichment equipment--Appendix G; and electromagnetic enrichment equipment--Appendix H.)

(c) Plants for the separation of the isotopes of lithium and especially designed or prepared assemblies and components for these plants. (See Appendix N to this part)

(d) Plants for the reprocessing of irradiated nuclear reactor fuel elements and especially designed or prepared assemblies and components for these plants. (See Appendix I to this part.)

(e) Plants for the fabrication of nuclear reactor fuel elements and especially designed or prepared assemblies and components for these plants. (See Appendix O to this part.)

(f) Plants for the conversion of uranium and plutonium and especially designed or prepared assemblies and components for these plants. (See Appendix J to this part.)

(g) Plants for the production, separation, or purification of heavy water, deuterium, and deuterium compounds and especially designed or prepared assemblies and components for these plants. (See Appendix K to this part.)

(h) Plants for the production of special nuclear material using accelerator-driven subcritical assembly systems capable of continuous operation above 5 MWe thermal.

(i) Other nuclear-related commodities are under the export licensing authority of the Department of Commerce.

[61 FR 35602, July 8, 1996, as amended at 65 FR 70290, Nov. 22, 2000]

§ 110.9 List of Nuclear Material under NRC export licensing authority.

[Top of File]

(a) Special Nuclear Material.

(b) Source Material.

(c) Byproduct Material.

(d) Deuterium.

(e) Nuclear grade graphite for nuclear end use.

[55 FR 30450, July 26, 1990, 70 FR 41939, July 21, 2005]

§ 110.9a List of nuclear equipment and material under NRC import licensing authority.

[Top of File]

(a) Production and utilization facilities.

(b) Special nuclear material.

(c) Source material.

(d) Byproduct material.

[49 FR 47198, Dec. 3, 1984. Redesignated at 55 FR 30450, July 26, 1990, and amended at 57 FR 18393, Apr. 30, 1992; 58 FR 13003, Mar. 9, 1993]

Subpart B--Exemptions

[Top of File]

§ 110.10 General.

(a) In response to a request or on its own initiative, the Commission may grant an exemption from the regulations in this part, if it determines that the exemption:

(1) Is authorized by law;

(2) Is not inimical to the common defense and security; and

(3) Does not constitute an unreasonable risk to the public health and safety.

(b) An exemption from statutory licensing requirements, as authorized by sections 57d, 62, and 81 of the Atomic Energy Act, will be granted only after coordination with the Executive Branch.

(c) The granting of an exemption does not relieve any person from complying with the regulations of other Government agencies applicable to exports or imports under their authority.

[49 FR 47198, Dec. 3, 1984, as amended at 58 FR 13003, Mar. 9, 1993; 65 FR 70290, Nov. 22, 2000]

§ 110.11 Export of IAEA safeguards samples.

[Top of File]

A person is exempt from the requirements for a license to export special nuclear material set forth in sections 53 and 54d. of the Atomic Energy Act and from the regulations in this Part to the extent that the person exports special nuclear material in IAEA safeguards samples, if the samples are exported under § 75.8 of this chapter, or a comparable Department of Energy order, and are in quantities not exceeding a combined total of 100 grams of contained plutonium, U–233, and U–235 per facility per year. This exemption does not relieve any person from complying with Parts 71 or 73 of this chapter or any Commission order under section 201(a) of the Energy Reorganization Act of 1974 (42 U.S.C. 5841(a)).

[49 FR 47198, Dec. 3, 1984; 73 FR 78615, Dec. 23, 2008]

Subpart C--Licenses

[Top of File]

Source: 49 FR 47198, Dec. 3, 1984, unless otherwise noted.

§ 110.19 Types of licenses.

(a) Licenses for the export and import of nuclear equipment and material in this part consist of two types: General licenses and Specific licenses. Except as provided in paragraph (b) of this section, a general license is effective without the filing of an application with the Commission or the issuance of licensing documents to a particular person. A specific license is issued to a named person and is effective upon approval by the Commission of an application filed pursuant to the regulations in this part and issuance of licensing documents to the applicant. Issuance of a specific or general license under this part does not relieve a person from complying with applicable regulations of the Environmental Protection Agency for any export or import that contains or is contaminated with hazardous waste.

(b) A person using a general license under this part as authority to export incidental radioactive material that is contained in or a contaminant of a shipment that exceeds 100 kilograms in total weight shall file a completed NRC Form 7 before the export takes place.

[60 FR 37563, July 21, 1995]

§ 110.20 General license information.

[Top of File]

(a) A person may use an NRC general license as authority to export or import nuclear equipment or material (including incidental radioactive material), if the nuclear equipment or material to be exported or imported is covered by the NRC general licenses described in §§ 110.21 through 110.30.

(1) A person using a general license under this part as authority to export incidental radioactive material that is contained in or a contaminant of a shipment that exceeds 100 kilograms in total weight shall file a completed NRC Form 7 before the export takes place.

(2) If an export or import is not covered by the NRC general licenses described in §§ 110.21 through 110.30, a person must file an application with the Commission for a specific license in accordance with §§ 110.31 through 110.32.

(b) In response to a petition or on its own initiative, the Commission may issue a general license for export or import if it determines that any exports or imports made under the general license will not be inimical to the common defense and security or constitute an unreasonable risk to the public health and safety and otherwise meet applicable statutory requirements. A general license is issued as a regulation after a rulemaking proceeding under subpart K of this part. Issuance of a general license is coordinated with the Executive Branch.

(c) A general license does not relieve a person from complying with the regulations of other Government agencies applicable to exports or imports under their authority.

(d) A general license for export may not be used if the exporter knows, or has reason to believe, that the material will be used in any activity related to isotope separation, chemical reprocessing, heavy water production or the fabrication of nuclear fuel containing plutonium, unless these activities are generically authorized under an appropriate agreement for cooperation.

(e) A person who uses an NRC general license as the authority to export or import may cite on the shipping documents the section of this part which authorizes the described export or import under general license, as a means of expediting U.S. Customs Service's processing of the shipment.

(f) As specified in §§ 110.21 through 110.26, 110.28, 110.29, and 110.30 only certain countries are eligible recipients of equipment or material under NRC general licenses to export. The Commission will closely monitor these countries and may at any time remove a country from a general license in response to significant adverse developments in the country involved. A key factor in this regard is the nonproliferation credentials of the importing country.

[49 FR 47198, Dec. 3, 1984, as amended at 58 FR 13003, Mar. 9, 1993; 59 FR 48997, Sept. 26, 1994; 60 FR 37563, July 21, 1995]

§ 110.21 General license for the export of special nuclear material.

[Top of File]

(a) Except as provided in paragraph (d) of this section, a general license is issued to any person to export the following to any country not listed in § 110.28:

(1) Low-enriched uranium as residual contamination (17.5 parts per million or less) in any item or substance.

(2) Plutonium containing 80 percent or more by weight of plutonium-238 in cardiac pacemakers.

(3) Special nuclear material, other than Pu-236 and Pu-238, in sensing components in instruments, if no more than 3 grams of enriched uranium or 0.1 gram of Pu or U-233 are contained in each sensing component.

(4) Pu-236 and Pu-238 when contained in a device, or a source for use in a device, in quantities of less than 3.7×10^{-3} TBq (100 millicuries). of alpha activity (189 micrograms Pu-236, 5.88 milligrams Pu-238) per device or source.

(b) Except as provided in paragraph (d) of this section, a general license is issued to any person to export the following to any country not listed in § 110.28 or § 110.29:

(1) Special nuclear material, other than Pu-236 and Pu-238, in individual shipments of 0.001 effective kilogram or less (e.g., 1.0 gram of plutonium, U-233 or U-235, or 10 kilograms of 1 percent enriched uranium), not to exceed 0.1 effective kilogram per year to any one country.

(2) Special nuclear material in fuel elements as replacements for damaged or defective unirradiated fuel elements previously exported under a specific license, subject to the same terms as the original export license and the condition that the replaced fuel elements must be returned to the United States within a reasonable time period.

(3) Uranium, enriched to less than 20 percent in U-235, in the form of UF6 heels in cylinders being returned to suppliers in EURATOM.

(c) Except as provided in paragraph (d) of this section, a general license is issued to any person to export Pu-236 or Pu-238 to any country listed in § 110.30 in individual shipments of 1 gram or less, not to exceed 100 grams per year to any one country.

(d) The general licenses in paragraphs (a), (b), and (c) of this section do not authorize the export of special nuclear material in radioactive waste.

(e) Persons using the general licenses in paragraphs (a), (b), and (c) of this section as authority to export special nuclear material as incidental radioactive material shall file a completed NRC Form 7 before the export takes place if the total weight of the shipment exceeds 100 kilograms.

[49 FR 47198, Dec. 3, 1984, as amended at 58 FR 13003, Mar. 9, 1993; 59 FR 48997, Sept. 26, 1994; 60 FR 37563, July 21, 1995; 65 FR 70290, Nov. 22, 2000; 70 FR 37991, July 1, 2005; 70 FR 46066, Aug. 9, 2005]

§ 110.22 General license for the export of source material.

[Top of File]

(a) Except as provided in paragraph (e) of this section, a general license is issued to any person to export the following to any country not listed in § 110.28:

(1) Uranium or thorium, other than U-230, U-232, Th-227, and Th-228, in any substance in concentrations of less than 0.05 percent by weight.

(2) Thorium, other than Th-227 and Th-228, in incandescent gas mantles or in alloys in concentrations of 5 percent or less.

(3) Th-227, Th-228, U-230, and U-232 when contained in a device, or a source for use in a device, in quantities of less than 3.7 x 10^{-3} TBq (100 millicuries) of alpha activity (3.12 micrograms Th-227, 122 micrograms Th-228, 3.7 micrograms U-230, 4.7 milligrams U-232) per device or source.

(b) Except as provided in paragraph (e) of this section, a general license is issued to any person to export uranium or thorium, other than U-230, U-232, Th-227, or Th-228, in individual shipments of 10 kilograms or less to any country not listed in § 110.28 or § 110.29, not to exceed 1,000 kilograms per year to any one country or 500 kilograms per year to any one country when the uranium or thorium is of Canadian origin.

(c) A general license is issued to any person to export uranium, enriched to less than 20 percent in U-235, in the form of UF6 heels in cylinders being returned to suppliers in EURATOM.

(d) Except as provided in paragraph (e) of this section, a general license is issued to any person to export uranium or thorium, other than U-230, U-232, Th-227, or Th-228, in individual shipments of 1 kilogram or less to any country listed in § 110.29, not to exceed 100 kilograms per year to any one country.

(e) Except as provided in paragraph (e) of this section, a general license is issued to any person to export U-230, U-232, Th-227, or Th-228 in individual shipments of 10 kilograms or less to any country listed in § 110.30, not to exceed 1,000 kilograms per year to any one country or 500 kilograms per year to any one country when the uranium or thorium is of Canadian origin.

(f) Paragraphs (a), (b), (c), and (d) of this section do not authorize the export under general license of source material in radioactive waste.

(g) Persons using the general licenses in paragraphs (a), (b), (c), and (d) of this section as authority to export source material as incidental radioactive material shall file a completed NRC Form 7 before the export takes place if the total weight of the shipment exceeds 100 kilograms.

[49 FR 47198, Dec. 3, 1984, as amended at 58 FR 13003, Mar. 9, 1993; 59 FR 48997, Sept. 26, 1994; 60 FR 37563, July 21, 1995; 61 FR 35602, July 8, 1996; 65 FR 70290, Nov. 22, 2000; 70 FR 37991, July 1, 2005; 70 FR 46066, Aug. 9, 2005]

§ 110.23 General license for the export of byproduct material.

[Top of File]

(a) A general license is issued to any person to export byproduct material (see appendix L to this part) except that:

(1) This section does not authorize the export of byproduct material to any embargoed country listed in § 110.28, or byproduct material in radioactive waste, or tritium for recovery or recycle purposes.

(2) Actinium-225 and -227, americium-241 and -242m, californium- 248, -249, -250, -251, -252, -253, and -254, curium-240, -241, -242, - 243, -244, -245, -246 and -247, einsteinium-252, -253, -254 and -255, fermium-257, gadolinium-148, mendelevium-258, neptunium-235 and -237, polonium-210, and radium-223 must be contained in a device, or a source for use in a device, in quantities of less than 3.7 x 10^{-3} TBq (100 millicuries) of alpha activity per device or source, unless the export is to a country listed in § 110.30. Individual shipments must be less than the TBq values specified in Category 2 of Table 1 of Appendix P to this Part. Exports of americium and neptunium are subject to the reporting requirements listed in paragraph (b) of this section.

3) For americium-241, exports must not exceed 0.6 TBq (16 curies) per device or 60 TBq (1,600 curies) to any one country listed in § 110.29, and must be contained in industrial process control equipment or petroleum exploration equipment in quantities of less than 0.6 TBq (16 curies) per device and per shipment, not to exceed 60 TBq (1,600 curies) per year to any one country. Individual shipments to all countries other than those listed in § § 110.28 and 110.29 must be less than 0.6 TBq (16 curies) per shipment, consistent with Appendix P to this part.

(4) For neptunium-235 and -237, exports must not exceed individual shipments of one gram, not to exceed 10 grams per year to any one country.

(5) For polonium-210, the material must be contained in static eliminators and may not exceed 3.7 TBq (100 curies) per individual shipment.

(6) For tritium in any dispersed form, except for recovery or recycle purposes (e.g., luminescent light sources and paint, accelerator targets, calibration standards, labeled compounds), exports must not exceed the quantity of 0.37 TBq (10 curies (1.03 milligrams)) or less per item, not to exceed 37 TBq (1,000 curies (103 milligrams)) per shipment or 370 TBq (10,000 curies (1.03 grams)) per year to any one country. Exports of tritium to the countries listed in § 110.30 must not exceed the quantity of 1.48 TBq (40 curies (4.12 milligrams)) or less per item, not to exceed 37 TBq (1,000 curies (103 milligrams)) per shipment or 370 TBq (10,000 curies (1.03 grams)) per year to any, one country, and exports of tritium in luminescent safety devices installed in aircraft must not exceed a quantity of 1.48 TBq (40 curies (4.12 milligrams)) or less per light source.

(b) Persons making exports under the general license established by paragraph (a) of this section shall submit by February 1 of each year

one copy of a report of all americium and neptunium shipments during the previous calendar year. The report must include:

(1) A description of the material, including quantity;

(2) Approximate shipment dates; and

(3) A list of recipient countries, end users, and intended use keyed to the items shipped.

(c) Persons using a general license issued under paragraph (a) of this section as authority to export byproduct material as incidental radioactive material shall file a completed NRC Form 7 before the export takes place if the total weight of the shipment exceeds 100 kilograms.

[65 FR 70290, Nov. 22, 2000; 70 FR 37991, July 1, 2005; 70 FR 46066, Aug. 9, 2005]

§ 110.24 General license for the export of deuterium.

[Top of File]

(a) A general license is issued to any person to export deuterium in individual shipments of 10 kilograms or less (50 kilograms of heavy water) to any country not listed in § 110.28 or § 110.29. No person may export more than 200 kilograms (1000 kilograms of heavy water) per year to any one country.

(b) A general license is issued to any person to export deuterium in individual shipments of 1 kilogram or less (5 kilograms of heavy water) to any country listed in § 110.29. No person may export more than 5 kilograms (25 kilograms of heavy water) per year to any one country.

[49 FR 47198, Dec. 3, 1984, as amended at 58 FR 13003, Mar. 9, 1993]

§ 110.25 General license for the export of nuclear grade graphite.

[Top of File]

(a) A general license is issued to any person to export bulk nonfabricated nuclear grade graphite in individual shipments of 100 kilograms or less to any country not listed in § 110.28. No person may export more than 2,000 kilograms per year to any one country.

(b) Unless licensed by the Department of Commerce, a general license is issued to any person to export nuclear grade graphite in fabricated, nonnuclear-related commercial products to any country not listed in § 110.28, except that graphite electrodes weighing more than 1 kilogram per electrode may not be exported to any country listed in § 110.29 under this general license. (Fabricated products are products in final manufactured form except for detailed machining and other final steps necessary for the intended end use of the product.)

[49 FR 47198, Dec. 3, 1984; 49 FR 49841, Dec. 24, 1984; 58 FR 13003, Mar. 9, 1993]

§ 110.26 General license for the export of nuclear reactor components.

[Top of File]

(a) A general license is issued to any person to export to the following countries any nuclear reactor component described in paragraphs (5) through (9) of appendix A to this part if--

(1) The component is of U.S. origin,

(2) The component will be used in a light or heavy water-moderated power or research reactor in those countries, or

(3) The component is in semifabricated form and will be undergoing final fabrication or repair in those countries for subsequent return to the United States for use in a nuclear power or research reactor in the United States:

Austria	Latvia
Belgium	Lithuania
Bulgaria	Luxembourg
Canada	Netherlands
Czech Republic	New Zealand
Denmark	Phillipines
Finland	Portugal
France	Republic of Korea

Germany	Romania
Greece	Spain
Indonesia	Sweden
Ireland	Switzerland
Italy	Taiwan
Japan	United Kingdom

(b) This general license does not authorize the export of components, infinal or semi-fabricated form, for research reactors capable of continuous operation above 5 MWe thermal.

(c) This general license does not authorize the export of essentially complete reactors through piecemeal exports of facility components. When individual exports of components would amount in the aggregate to export of an essentially complete nuclear reactor, a facility export license is required.

(d) Persons making exports under the general license established by paragraph (a) of this section shall submit by February 1 of each year one copy of a report of all components shipped during the previous calendar year. This report must include:

(1) A description of the components keyed to the categories listed in appendix A to this part.

(2) Approximate shipment dates.

(3) A list of recipient countries and endusers keyed to the items shipped.

[49 FR 47198, Dec. 3, 1984, as amended at 55 FR 34519, Aug. 23, 1990; 58 FR 13003, Mar. 9, 1993; 61 FR 35602, July 8, 1996; 62 FR 59277, Nov. 3, 1997; 65 FR 70290, Nov. 22, 2000]

§ 110.27 General license for import.

[Top of File]

(a) Except as provided in paragraphs (b), (c), and (f) of this section, a general license is issued to any person to import byproduct, source, or special nuclear material if the consignee is authorized to receive and possess the material under:

(1) A contract with the Department of Energy;

(2) An exemption from licensing requirements issued by the Commission; or

(3) A general or specific NRC or Agreement State license issued by the Commission or a State with which the Commission has entered into an agreement under Section 274b. of the Atomic Energy Act.

(b) The general license in paragraph (a) of this section does not authorize the import of source or special nuclear material in the form of irradiated fuel that exceeds 100 kilograms per shipment.

(c) Paragraph (a) of this section does not authorize the import under general license of radioactive waste, other than radioactive waste that is being returned to a United States Government or military facility in the United States which is authorized to possess the material.

(d) A person importing formula quantities of strategic special nuclear material (as defined in § 73.2 of this chapter) under this general license shall provide the notifications required by § 73.27 and § 73.72 of this chapter.

(e) A general license is issued to any person to import the major components of a utilization facility as defined in § 110.2 for end- use at a utilization facility licensed by the Commission.

(f) Individual import shipments of radioactive material listed in Appendix P must be less than the amounts specified in Category 2 in Table 1 of Appendix P to this part.

[51 FR 47208, Dec. 31, 1986, as amended at 56 FR 38336, Aug. 13, 1991; 58 FR 13003, Mar. 9, 1993; 60 FR 37564, July 21, 1995; 61 FR 35602, July 8, 1996; 65 FR 70291, Nov. 22, 2000; 68 FR 31589, May 28, 2003; 70 FR 37991, July 1, 2005]

§ 110.28 Embargoed destinations.

[Top of File]

Cuba	North Korea
Iran	Sudan

Iraq	Syria

[58 FR 13003, Mar. 9, 1993, as amended at 61 FR 35602, July 8, 1996; 65 FR 70291, Nov. 22, 2000; 70 FR 29936, May 25, 2005; 72 FR 1426, January 12, 2007]

§ 110.29 Restricted destinations.

[Top of File]

Afghanistan	India
Andorra	Israel
Angola	Libya
Burma (Myanmar)	Oman
Djibouti	Pakistan

[58 FR 13003, Mar. 9, 1993, as amended at 59 FR 48998, Sept. 26, 1994; 61 FR 35602, July 8, 1996; 70 FR 29936, May 25, 2005; 72 FR 1427, January 12, 2007]

§ 110.30 Members of the Nuclear Suppliers Group.

[Top of File]

Argentina	Latvia
Australia	Luxembourg
Austria	Netherlands
Belarus	New Zeland
Belgium	Norway
Brazil	Poland
Bulgaria	Portugal
Canada	Republic of Korea
Cyprus	Romania
Czech Republic	Russia
Denmark	Slovak Republic
Finland	Slovenia
France	South Africa
Germany	Spain
Greece	Sweden
Hungary	Switzerland
Ireland	Turkey
Italy	Ukraine
Japan	United Kingdom

[59 FR 48998, Sept. 26, 1994, as amended at 61 FR 35602, July 8, 1996; 65 FR 70291, Nov. 22, 2000]

§ 110.31 Application for a specific license.

[Top of File]

(a) A person shall file an application for a specific license to export or import with the Deputy Director of the NRC's Office of International Programs, using an appropriate method listed in § 110.4.

(b) An application for a specific license to export or import must be accompanied by the appropriate fee in accordance with the fee schedule in § 170.21 and § 170.31 of this chapter. A license application will not be processed unless the specified fee is received.

(c) Applications for an export, import, combined export/import, amendment or renewal licenses under 10 CFR Part 110 shall be filed on NRC Form 7.

(d) Each person shall provide in the license application, as appropriate, the information specified in § 110.32. The Commission also may require the submission of additional information if necessary to complete its review.

(e) An application may cover multiple shipments and destinations.

(f) The applicant shall withdraw an application when it is no longer needed. The Commission's official files retain all documents related to a withdrawn application.

[58 FR 13003, Mar. 9, 1993. Redesignated and amended at 59 FR 48998, Sept. 26, 1994; 65 FR 70291, Nov. 22, 2000; 68 FR 58824, Oct. 10, 2003; 71 FR 19104, Apr. 13, 2006; 71 FR 35995, June 23, 2006]

§ 110.32 Information required in an application for a specific license / NRC Form 7.

[Top of File]

(a) Name and address of applicant.

(b) Name and address of supplier of equipment or material.

(c) Country of origin of equipment or material, and any other countries that have processed the material prior to its import into the U.S.

(Note: This is meant to include all obligations attached to the material, according to the definition of obligations in § 110.2. Licensees must keep records of obligations attached to material which they own or is in their possession.)

(d) Names and addresses of all intermediate and ultimate consignees, other than intermediate consignees performing shipping services only.

(e) Dates of proposed first and last shipments.

(f) Description of the equipment or material including, as appropriate, the following:

(1) Maximum quantity of material in grams or kilograms (terabequerels or TBq for byproduct material) and its chemical and physical form.

(2) For enriched uranium, the maximum weight percentage of enrichment and maximum weight of contained U-235.

(3) For nuclear equipment, total dollar value.

(4) For nuclear reactors, the name of the facility and its design power level.

(5) For proposed exports or imports of radioactive waste, and for proposed exports of incidental radioactive material--the volume, classification (as defined in § 61.55 of this chapter), physical and chemical characteristics, route of transit of shipment, and ultimate disposition (including forms of management) of the waste.

(6) For proposed imports of radioactive waste--the industrial or other process responsible for generation of the waste, and the status of the arrangements for disposition, e.g., any agreement by a low-level waste compact or State to accept the material for management purposes or disposal.

(7) Description of end use by all consignees in sufficient detail to permit accurate evaluation of the justification for the proposed export or import, including the need for shipment by the dates specified.

(g) For proposed imports of material listed in Table 1 of Appendix P to this part, a copy of the applicant's authorization to receive and possess the radioactive material to be imported for each recipient.

(h) For proposed exports of material listed in Table 1 of Appendix P to this part, pertinent documentation that the recipient of the material has the necessary authorization under the laws and regulations of the importing country to receive and possess the material. Pertinent documentation shall consist of a copy of the recipient's authorization to receive and possess the material to be exported or a confirmation from the government of the importing country that the recipient is so authorized. The recipient authorization shall include the following information:

(1) Name of the recipient

(2) Recipient location and legal address or principal place of business

(3) Relevant radionuclides and radioactivity being imported or that the recipient is authorized to receive and possess

(4) Uses, if appropriate

(5) The expiration date of the recipient's authorization (if any)

[49 FR 47200, Dec. 3, 1984, as amended at 58 FR 13004, Mar. 9, 1993. Redesignated at 59 FR 48998, Sept. 26, 1994; 60 FR 37564, July

21, 1995; 65 FR 70291, Nov. 22, 2000; 70 FR 37992, July 1, 2005]

Subpart D--Review of License Applications

[Top of File]

§ 110.40 Commission review.

(a) Immediately after receipt of a license application for an export or import requiring a specific license under this part, the Commission will initiate its licensing review and, to the maximum extent feasible, will expeditiously process the application concurrently with any applicable review by the Executive Branch.

(b) The Commissioners shall review a license application for export of the following:

(1) A production or utilization facility.

(2) More than one effective kilogram of high-enriched uranium, plutonium or U-233.

(3) Nuclear grade graphite for nuclear end use.

(4) 1,000 kilograms or more of deuterium oxide (heavy water), other than exports of heavy water to Canada.

(5) An export involving assistance to end uses related to isotope separation, chemical reprocessing, heavy water production, advanced reactors, or the fabrication of nuclear fuel containing plutonium, except for exports of source material or low-enriched uranium to EURATOM or Japan for enrichment up to 5 percent in the isotope uranium-235, and those categories of exports which the Commission has approved in advance as constituting permitted incidental assistance.

(6) The initial export to a country since March 10, 1978 of source or special nuclear material for nuclear end use.

(7) An export involving over: (i) 10 grams of plutonium, U-233 or high-enriched uranium; (ii) 1 effective kilogram of low-enriched uranium; (iii) Nuclear grade graphite for nuclear end use; (iv) 250 kilograms of source material or heavy water; or (v) 37 TBq (1,000 curies) of tritium , to any country listed in § 110.28 or § 110.29.

(8) Any export subject to special limitations as determined by the staff or a majority of the Commissioners.

(c) If the Commission has not completed action on a license application within 60 days after receipt of the Executive Branch judgment, as provided for in § 110.41, or the license application when an Executive Branch judgment is not required, it will inform the applicant in writing of the reason for delay and, as appropriate, provide followup reports.

[43 FR 21641, May 19, 1978, as amended at 45 FR 51184, Aug. 1, 1980; 49 FR 47200, Dec. 3, 1984; 58 FR 13004, Mar. 9, 1993; 60 FR 37564, July 21, 1995; 70 FR 37992, July 1, 2005; 70 FR 41939, July 21, 2005; 70 FR 46066, Aug. 9, 2005; 71 FR 15012, Mar. 27, 2006]

§ 110.41 Executive Branch review.

[Top of File]

(a) An application for a license to export the following will be promptly forwarded to the Executive Branch for review:

(1) A production or utilization facility.

(2) More than one effective kilogram of high-enriched uranium or 10 grams of plutonium or U-233.

(3) Nuclear grade graphite for nuclear end use.

(4) More than 3.7 TBq (100 curies) of tritium, and deuterium oxide (heavy water), other than exports of heavy water to Canada.

(5) One kilogram or more of source or special nuclear material to be exported under the US-IAEA Agreement for Cooperation.

(6) An export involving assistance to end uses related to isotope separation, chemical reprocessing, heavy water production, advanced reactors, or the fabrication of nuclear fuel containing plutonium, except for exports of source material or low-enriched uranium to EURATOM and Japan for enrichment up to 5 percent in the isotope uranium-235, and those categories of exports approved in advance by the Executive Branch as constituting permitted incidental assistance.

(7) The initial export of nuclear material or equipment to a foreign reactor.

(8) An export involving radioactive waste.

(9) An export to any country listed in § 110.28 or § 110.29.

(10) An export subject to special limitations as determined by the Commission or the Executive Branch.

(b) The Executive Branch will be requested to:

(1) Provide its judgment as to whether the proposed export would be inimical to the common defense and security, along with supporting rationale and information.

(2) Where applicable, confirm that the proposed export would be under the terms of an agreement for cooperation; and

(3) Address the extent to which the export criteria in § 110.42 are met, if applicable, and the extent to which the recipient country or group of countries has adhered to the provisions of any applicable agreement for cooperation.

(c) The Commission may request the Executive Branch to address specific concerns and provide additional data and recommendations as necessary.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47200, Dec. 3, 1984; 58 FR 13004, Mar. 9, 1993; 60 FR 37564, July 21, 1995; 61 FR 35602, July 8, 1996; 70 FR 37992, July 1, 2005; 70 FR 41939, July 21, 2005; 70 FR 46066, Aug. 9, 2005]

§ 110.42 Export licensing criteria.

[Top of File]

(a) The review of license applications for export for peaceful nuclear uses of production or utilization facilities[1] or for export for peaceful nuclear uses of special nuclear or source material requiring a specific license under this part is governed by the following criteria:

(1) IAEA safeguards as required by Article III (2) of the NPT will be applied with respect to any such facilities or material proposed to be exported, to any such material or facilities previously exported and subject to the applicable agreement for cooperation, and to any special nuclear material used in or produced through the use thereof.

(2) No such material or facilities proposed to be exported or previously exported and subject to the applicable agreement for cooperation, and no special nuclear material produced through the use of such material or facilities, will be used for any nuclear explosive device or for research on or development of any nuclear explosive device.

(3) Adequate physical security measures will be maintained with respect to such material or facilities proposed to be exported and to any special nuclear material used in or produced through the use thereof. Physical security measures will be deemed adequate if such measures provide a level of protection equivalent to that set forth in § 110.44.

(4) No such material or facilities proposed to be exported, and no special nuclear material produced through the use of such material, will be retransferred to the jurisdiction of any other country or group of countries unless the prior approval of the United States is obtained for such retransfer.

(5) No such material proposed to be exported and no special nuclear material produced through the use of such material will be reprocessed, and no irradiated fuel elements containing such material removed from a reactor will be altered in form or content, unless the prior approval of the United States is obtained for such reprocessing or alteration.

(6) With respect to exports of such material or facilities to nonnuclear weapon states, IAEA safeguards will be maintained with respect to all peaceful activities in, under the jurisdiction of, or carried out under the control of such state at the time of export. This criterion will not be applied if the Commission has been notified by the President in writing that failure to approve an export because this criterion has not been met would be seriously prejudicial to the achievement of United States nonproliferation objectives or otherwise jeopardize the common defense and security, in which case the provisions of section 128 of the Atomic Energy Act regarding Congressional review will apply.

(7) The proposed export of a facility or of more than 0.003 effective kilograms of special nuclear material, other than plutonium containing 80 percent or more by weight of plutonium-238, would be under the terms of an agreement for cooperation.

(8) The proposed export is not inimical to the common defense and security and, in the case of facility exports, does not constitute an unreasonable risk to the public health and safety in the United States.

(9)(i) Except as provided in paragraph (a)(9)(ii) of this section, with respect to exports of high-enriched uranium to be used as a fuel or target in a nuclear research or test reactor, the Commission determines that:

(A) There is no alternative nuclear reactor fuel or target enriched to less than 20 percent in the isotope U-235 that can be used in that reactor;

(B) The proposed recipient of the uranium has provided assurances that, whenever an alternative nuclear reactor fuel or target can be used in that reactor, it will use that alternative fuel or target in lieu of highly-enriched uranium; and

(C) The United States Government is actively developing an alternative nuclear reactor fuel or target that can be used in that reactor.

(ii) With regard to a Recipient Country, the Commission may issue a license authorizing the export of high-enriched uranium for medical isotope production, including shipment to and use at intermediate and ultimate consignees, if the Commission determines that:

(A) The Recipient Country that supplies an assurance letter to the United States Government in connection with the consideration by the Commission of the export license application has informed the United States Government that any intermediate consignees and the ultimate consignee specified in the export license application are required to use the high-enriched uranium solely for the production of medical isotopes; and

(B) The high-enriched uranium will be irradiated only in a reactor in the Recipient Country that--

(1) Uses an alternative nuclear fuel; or

(2) Is the subject of an agreement with the United States Government to convert to an alternative nuclear reactor fuel when alternative nuclear reactor fuel can be used in the reactor.

(iii) A fuel or target "can be used" in a nuclear research or test reactor if--

(A) The fuel or target has been qualified by the Reduced Enrichment Research and Test Reactor Program of the Department of Energy; and

(B) Use of the fuel or target will permit the large majority of ongoing and planned experiments and isotope production to be conducted in the reactor without a large percentage increase in the total cost of operating the reactor.

(b) The review of license applications for the export of nuclear equipment, other than a production or utilization facility, and for deuterium and nuclear grade graphite for nuclear end use, is governed by the following criteria:

(1) IAEA safeguards as required by Article III (2) of the NPT will be applied with respect to such equipment or material.

(2) No such equipment or material will be used for any nuclear explosive device or for research on or development of any nuclear explosive device.

(3) No such equipment or material will be retransferred to the jurisdiction of any other country or group of countries without the prior consent of the United States.

(4) The proposed export is not inimical to the common defense and security.

(c) Except where paragraph (d) is applicable, the review of license applications for export of byproduct material or for export of source material for non-nuclear end uses requiring a specific license under this part is governed by the criterion that the proposed export is not inimical to the common defense and security.

(d) The review of license applications for the export of radioactive waste requiring a specific license under this part is governed by the following criteria:

(1) The proposed export is not inimical to the common defense and security.

(2) The receiving country, after being advised of the information required by § 110.32(f)(5), finds that it has the administrative and technical capacity and regulatory structure to manage and dispose of the waste and consents to the receipt of the radioactive waste. In the case of radioactive waste containing a nuclear material to which paragraph (a) or (b) of this section is applicable, the criteria in this paragraph (d) shall be in addition to the criteria provided in paragraph (a) or (b) of this section.

(e) In making its findings under paragraphs (a)(8) and (c) of this section for proposed exports of radioactive material listed in Appendix P to this part, the NRC shall consider:

(1) Whether the foreign recipient is authorized based on the authorization or confirmation required by § 110.32(h) to receive and possess the material under the laws and regulations of the importing country;

(2) Whether the importing country has the appropriate technical and administrative capability, resources and regulatory structure to manage the material in a safe and secure manner;

(3) For proposed exports of Category 1 amounts of radioactive material listed in Table 1 of Appendix P to this part, whether the government of the importing country provides consent to the United States Government for the import of the material;

(4) In cases where the importing country does not have the technical and administrative capability described in paragraph (e)(2) of this section, and in cases where there is insufficient evidence of the recipient's authorization to receive and possess the material to be exported, described in paragraph (e)(1) of this section, whether exceptional circumstances exist, and if so, whether the export should be licensed in light of those exceptional circumstances and the risks, if any, to the common defense and security of the proposed export;

(5) For proposed exports under exceptional circumstances of Category 1 or Category 2 amounts of radioactive material listed in Table 1 of Appendix P to this part, whether the government of the importing country provides consent to the United States Government for the import of the material;

(6) For proposed exports of radioactive material listed in Table 1 of Appendix P to this part under the exceptional circumstance in which there is a considerable health or medical need as acknowledged by the U.S. Government and the importing country, whether the United States and the importing country have, to the extent practicable, made arrangements for the safe and secure management of the radioactive sources during and at the end of their useful life;

(7) Based upon the available information, whether the foreign recipient has engaged in clandestine or illegal procurement of radioactive material listed in Table 1 of Appendix P to the part;

(8) Based upon available information, whether an import or export authorization for radioactive material listed in Table 1 of Appendix P to this part has been denied to the recipient or importing country, or whether the recipient or importing country has diverted any import or export of radioactive material previously authorized; and

(9) Based upon available information, whether there is a risk of diversion or malicious acts involving radioactive material in Table 1 of Appendix P to this part.

[49 FR 47200, Dec. 3, 1984, as amended at 55 FR 34519, Aug. 23, 1990; 58 FR 13004, Mar. 9, 1993; 58 FR 57964, Oct. 28, 1993; 60 FR 37564, July 21, 1995; 70 FR 37992, July 1, 2005; 70 FR 41939, July 21, 2005; 70 FR 46066, Aug. 9, 2005; 71 FR 20339; Apr. 20, 2006; 71 FR 40003, July 14, 2006]

[1] Exports of nuclear reactors, reactor pressure vessels, reactor primary coolant pumps, "on-line" reactor fuel charging and discharging machines, and complete reactor control rod systems, as specified in paragraphs (1) through (4) of appendix A to this part, are subject to the export licensing criteria in § 110.42(a). Exports of nuclear reactor components, as specified in paragraphs (5) through (9) of appendix A to this part, when exported separately from the items described in paragraphs (1) through (4) of appendix A of this part, are subject to the export licensing criteria in § 110.42(b).

§ 110.43 Import licensing criteria.

[Top of File]

The review of license applications for imports requiring a specific license under this part is governed by the following criteria:

(a) The proposed import is not inimical to the common defense and security.

(b) The proposed import does not constitute an unreasonable risk to the public health and safety.

(c) Any applicable requirements of subpart A of part 51 of this chapter are satisfied.

(d) With respect to the import of radioactive waste, an appropriate facility has agreed to accept the waste for management or disposal.

(e) With respect to proposed imports of radioactive material listed in Appendix P to this part, the NRC shall consider whether the U.S. recipient is authorized to possess the material under a contract with the Department of Energy or a license issued by the Commission or a State with which the Commission has entered into an agreement under Section 274b of the AEA.

(f) In making its findings under paragraphs (a) and (b) of this section for proposed imports of radioactive material listed in Appendix P to this part, the NRC shall consider:

(1) Based upon available information, whether the applicant has been engaged in clandestine or illegal procurement of radioactive material listed in Table 1 of Appendix P to this part;

(2) Based upon available information, whether an import or export authorization for radioactive material has been denied to the applicant or whether the applicant has diverted any import or export of radioactive material previously authorized; and

(3) Based upon available information, whether a risk of diversion or malicious acts involving the radioactive material listed in Table 1 of Appendix P to this part.

[60 FR 37565, July 21, 1995 as amended at 70 FR 37992, July 1, 2005]

§ 110.44 Physical security standards.

[Top of File]

(a) Physical security measures in recipient countries must provide protection at least comparable to the recommendations in the current version of IAEA publication INFCIRC/225/Rev. 4 (corrected), June 1999, “The Physical Protection of Nuclear Material and Nuclear Facilities,”

and is incorporated by reference in this part. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Notice of any changes made to the material incorporated by reference will be published in the Federal Register. Copies of INFCIRC/225/Rev. 4 may be obtained from the Deputy Director, Office of International Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, and are available for inspection at the NRC library, 11545 Rockville Pike, Rockville, Maryland 20852–2738. A copy is available for inspection at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html*.

(b) Commission determinations on the adequacy of physical security measures are based on—

(1) Receipt of written assurances from recipient countries that physical security measures providing protection at least comparable to the recommendations set forth in INFCIRC/225/Rev. 4 (corrected).

(2) Information obtained through country visits, information exchanges, or other sources. Determinations are made on a country-wide basis and are subject to continuing review. Appendix M to this part describes the different categories of nuclear material to which physical security measures are applied.

[58 FR 13004, Mar. 9, 1993, as amended at 59 FR 48998, Sept. 26, 1994; 59 FR 50689, Oct. 5, 1994. Redesignated at 60 FR 37565, July 21, 1995, as amended at 61 FR 35602, July 8, 1996; 65 FR 70291, Nov. 22, 2000; 69 FR 18803, Apr. 9, 2004]

§ 110.45 Issuance or denial of license.

[Top of File]

(a) The Commission will issue an export license if it has been notified by the State Department that it is the judgment of the Executive Branch that the proposed export will not be inimical to the common defense and security; and:

(1) Finds, based upon a reasonable judgment of the assurances provided and other information available to the Federal government, that the applicable criteria in § 110.42, or their equivalent, are met. (If an Executive Order provides an exemption pursuant to section 126a of the Atomic Energy Act, proposed exports to EURATOM countries are not required to meet the critieria in § 110.42(a) (4) and (5)); or

(2) Finds that there are no material changed circumstances associated with an export license application (except for byproduct material applications) from those existing at the time of issuance of a prior license to export to the same country, if the prior license was issued under the provisions of paragraph (a)(1) of this section.

(b) The Commission will issue an import license if it finds that:

(1) The proposed import will not be inimical to the common defense and security;

(2) The proposed import will not constitute an unreasonable risk to the public health and safety;

(3) The requirements of subpart A of part 51 of this chapter (to the extent applicable to the proposed import) have been satisfied;

(4) With respect to a proposed import of radioactive waste, an appropriate facility has agreed to accept the waste for management or disposal; and

(5) With respect to a proposed import of radioactive material listed in Table 1 of Appendix P to this part, the U.S. recipient is authorized to receive and possess the material under a contract with the Department of Energy or a license issued by the Commission or a State with which the Commission has entered into an agreement under Section 274b. of the Atomic Energy Act.

(c) With respect to a proposed import of radioactive material listed in Table 1 of Appendix P to this part:

(1) If the Commission authorizes a proposed import of Category 1 or Category 2 amounts of radioactive material, it will take appropriate steps to ensure that a copy of the recipient authorization, or confirmation by the U.S. Government that the recipient is authorized to receive and possess the source or sources to be exported, is provided to the Government of the exporting country or to the exporting facility.

(2) If the Commission authorizes a proposed import of Category 1 amounts of radioactive material, it will take appropriate steps to ensure that a copy of the consent of the United States Government to the import is provided to the government of the exporting country in cases where it is requested by such government.

(d) If, after receiving the Executive Branch judgement that the issuance of a proposed export license will not be inimical to the common defense and security, the Commission does not issue the proposed license on a timely basis because it is unable to make the statutory determinations required under the Atomic Energy Act, the Commission will publicly issue a decision to that effect and will submit the license application to the President. The Commission's decision will include an explanation of the basis for the decision and any dissenting or separate views. The provisions in this paragraph do not apply to Commission decisions regarding license applications for the export of byproduct material or radioactive waste requiring a specific license.

(e) The Commission will deny: (1) Any export license application for which the Executive Branch judgment does not recommend approval; (2) any byproduct material export license application for which the Commission is unable to make the finding in paragraph (a)(1) of this

section; or (3) any import license application for which the Commission is unable to make the finding in paragraph (b) of this section. The applicant will be notified in writing of the reason for denial.

[49 FR 47201, Dec. 3, 1984. Redesignated and amended at 60 FR 37565, July 21, 1995; 70 FR 37992, July 1, 2005]

§ 110.46 Conduct resulting in termination of nuclear exports.

[Top of File]

(a) Except as provided in paragraph (c) of this section, no license will be issued to export nuclear equipment or material, other than byproduct material, to any non-nuclear weapon state that is found by the President to have, after March 10, 1978:

(1) Detonated a nuclear explosive device;

(2) Terminated or abrogated IAEA safeguards;

(3) Materially violated an IAEA safeguards agreement; or

(4) Engaged in activities involving source or special nuclear material and having direct significance for the manufacture or acquisition of nuclear explosive devices, and failed to take steps which represent sufficient progress toward terminating such activities.

(b) Except as provided in paragraph (c) of this section, no license will be issued to export nuclear equipment or material, other than byproduct material, to any country or group of countries that is found by the President to have, after March 10, 1978:

(1) Materially violated an agreement for cooperation with the United States or the terms of any other agreement under which nuclear equipment or material has been exported;

(2) Assisted, encouraged or induced any non-nuclear weapon state to engage in activities involving source or special nuclear material and having direct significance for the manufacture or acquistion of nuclear explosive devices, and failed to take steps which represent sufficient progress toward terminating such assistance, encouragement or inducement; or

(3) Entered into an agreement for the transfer of reprocessing equipment, materials or technology to the sovereign control of a non-nuclear weapon state, except in connection with an international fuel cycle evaluation in which the United States is a participant or pursuant to an international agreement or understanding to which the United States subscribes.

(c) Under section 129 of the Atomic Energy Act, the President may waive the requirement for the termination of exports to a country described in paragraph (a) or (b) of this section after determining in writing that the cessation of exports would seriously prejudice the achievement of United States nonproliferation objectives or otherwise jeopardize the common defense and security. If the President makes this determination, the Commission will issue licenses to export to that country, if other applicable statutory provisions are met.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47202, Dec. 3, 1984. Redesignated at 60 FR 37565, July 21, 1995]

Subpart E--License Terms and Related Provisions

[Top of File]

§ 110.50 Terms.

(a) *General and specific licenses*. (1) Each license is subject to all applicable provisions of the Atomic Energy Act and to all applicable rules, regulations, decisions and orders of the Commission.

(2) Each license is subject to amendment, suspension, revocation or incorporation of separate conditions when required by amendments of the Atomic Energy Act or other applicable law, or by other rules, regulations, decisions or orders issued in accordance with the terms of the Atomic Energy Act or other applicable law.

(3) Each license authorizes export or import only and does not authorize any person to receive title to, acquire, receive, possess, deliver, use transport or transfer nuclear equipment or material.

(4) Each nuclear material license authorizes the export or import of only the nuclear material and accompanying packaging and fuel element hardware.

(5) No nuclear equipment license confers authority to export or import nuclear material.

(6) Each nuclear equipment export license authorizes the export of only those items required for use in the foreign nuclear installation for which the items are intended.

(7) A licensee shall not proceed to export or import and shall notify the Commission promptly if he knows or has reason to believe that the

packaging requirements of part 71 of this chapter have not been met.

(b) *Specific licenses*. (1) Each specific license will have an expiration date.

(2) A licensee may export or import only for the purpose stated in the license application.

(3) Unless a license specifically authorizes the export of foreign-origin nuclear material or equipment, a licensee may not ship such material or equipment until;

(i) the licensee has given at least 40 days advance notice of the intended shipment in writing to the Deputy Director, Office of International Programs (OIP), and

(ii) the Deputy Director, OIP, has

(A) obtained confirmation, through either the Department of Energy or State, that the foreign government in question has given its consent to the intended shipment pursuant to its agreement for cooperation with the United States, and

(B) communicated this in writing to the licensee.

(4) A licensee authorized to export or import the radioactive material listed in Appendix P to this part is responsible for notifying NRC and, in cases of exports, the government of the importing country in advance of each shipment. A list of points of contact in importing countries is available at NRC's Office of International Programs website, accessible on the NRC Public Web Site by the following links to What We Do--International Programs. The NRC's office responsible for receiving advance notifications for all export and import shipments is the NRC Operations Center. Specific details on where to send the information will be listed in each specific export and import license. Notifications must be received by the NRC at least 7 days in advance of each shipment, to the extent practical, but in no case less than 24 hours in advance of each shipment. Notifications may be electronic or in writing on business stationary, and must contain or be accompanied by the information which follows.

(i) For export notifications:

(A) Part 110 export license number and expiration date;

(B) Name of the individual and licensee making the notification, address, and telephone number;

(C) Foreign recipient name, address, and end use location(s) (if different than recipient's address);

(D) Radionuclides and activity level in TBq, both for single and aggregate shipments;

(E) Make, model and serial number, for any Category 1 and 2 sealed sources, if available;

(F) End use in the importing country, if known;

(G) Shipment date;

(H) A copy of the foreign recipient's authorization or confirmation of that authorization from the government of the importing country as required by § 110.32(h).

(ii) For import notifications:

(A) Part 110 import license number and expiration date;

(B) Name of individual and licensee making the notification, address, and telephone number;

(C) Recipient name, location, and address (if different than above);

(D) Radionuclides and activity level in TBq, both for single and aggregate shipments;

(E) Make, model and serial number, radionuclide, and activity level for any Category 1 and 2 sealed sources, if available;

(F) End use in the U.S.;

(G) Shipment date from exporting facility and estimated arrival date at the end use location;

(H) NRC or Agreement State license number to possess the import in the U.S. and expiration date.

(5) A licensee authorized to export or import nuclear material is responsible for compliance with applicable requirements of parts 40, 70, 71, and 73 of this chapter, unless a domestic licensee of the Commission has assumed that responsibility and the Commission has been so

notified.

(6) A license may be transferred, disposed of or assigned to another person only with the approval of the Commission by license amendment.

(7) Advance notifications containing the above information must be controlled, handled, and transmitted in accordance with § 2.390 of this chapter and other applicable NRC requirements governing protection of sensitive information.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47202, Dec. 3, 1984; 49 FR 49841, Dec. 24, 1984; 52 FR 9655, Mar. 26, 1987; 53 FR 4112, Feb. 12, 1988; 58 FR 13004, Mar. 9, 1993; 59 FR 48998, Sept. 26, 1994; 65 FR 70291, Nov. 22, 2000; 70 FR 37993, July 1, 2005]

§ 110.51 Amendment and renewal of licenses.

[Top of File]

(a) A licensee shall submit an application to renew a license or to amend a license on a completed NRC Form 7.

(b) If an application to renew a license is submitted 30 days or more before the license expires, the license remains valid until the Commission acts on the renewal application. An expired license is not renewable.

(c) An amendment is not required for:

(1) Changes in value (but not amount or quantity);

(2) Changes in the mailing addresses within the same countries of intermediate or ultimate consignees; or

(3) The addition of intermediate consignees in any of the importing countries specified in the license (for a nuclear equipment license only).

(d) In acting upon license renewal and amendment applications, the Commission will use, as appropriate, the same procedures and criteria it uses for original license applications.

[49 FR 47202, Dec. 3, 1984; 71 FR 19104, Apr. 13, 2006; 71 FR 35995, June 23, 2006]

§ 110.52 Revocation, suspension, and modification.

[Top of File]

(a) A license may be revoked, suspended, or modified for a condition which would warrant denial of the original license application.

(b) The Commission may require further information from a licensee to determine whether a license should be revoked, suspended, or modified.

(c) Except when the common defense and security or public health and safety requires otherwise, no license will be revoked, suspended, or modified before the licensee is informed in writing of the grounds for such action and afforded the opportunity to reply and be heard under procedures patterned on those in subpart I.

[43 FR 21641, May 19, 1978, as amended at 62 FR 59277, Nov. 3, 1997]

§ 110.53 United States address, records, and inspections.

[Top of File]

(a) Each licensee shall have an office in the United States where papers may be served and where records required by the Commission will be maintained.

(b)(1) Each licensee shall maintain records concerning his exports or imports. The licensee shall retain these records for five years after each export or import except that byproduct material records must be retained for three years after each export or import.

(2) Records which must be maintained pursuant to this part may be the original or a reproduced copy or microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability for producing legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

(c) Each licensee shall permit the Commission to inspect his records, premises, and activities pertaining to his exports and imports when

necessary to fulfill the requirements of the Atomic Energy Act.

[43 FR 21641, May 19, 1978, as amended at 53 FR 19263, May 27, 1988]

§ 110.54 Reporting requirements.

[Top of File]

(a) Reports of exports of nuclear facilities and equipment, nuclear grade graphite for nuclear end use, and deuterium shipped during the previous quarter must be submitted by licensees making exports under the general license or specific license of this part by January 15, April 15, July 15, and October 15 of each year on DOC/NRC Forms AP–A or AP–1, and associated forms. The reports must contain information on all nuclear facilities, equipment, and non-nuclear materials (nuclear grade graphite for nuclear end use and deuterium) listed in Annex II of the Additional Protocol.

(b) These required reports must be sent via facsimile to (202) 482–1731, e-mailed to *aprp@ap.gov*, or hand delivered or submitted by courier to Bureau of Industry and Security, in hard copy, to the following address: Treaty Compliance Division, Bureau of Industry and Security, U.S. Department of Commerce, Attn: AP Reports, 14th Street and Pennsylvania Avenue, NW., Room 4515, Washington, DC 20230. Telephone: (202) 482–1001.

[73 FR 78615, Dec. 23, 2008]

Subpart F--Violations and Enforcement

[Top of File]

§ 110.60 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55080, Nov. 24, 1992]

§ 110.61 Notice of violation.

[Top of File]

(a) Before instituting any enforcement action the Commission will serve on the licensee written notice of violation, except as provided in paragraph (d).

(b) The notice will state the alleged violation; require the licensee to respond in writing, within 20 days or other specified time; and may also require the licensee to state the corrective steps taken or to be taken and the date when full compliance will be achieved.

(c) The notice may provide that, if an adequate and timely reply is not received, an order to show cause may be issued pursuant to § 110.62 or a proceeding instituted to impose a civil penalty pursuant to § 110.64.

(d) The notice may be omitted and an order to show cause issued when the Commission determines that the violation is willful or that the

public health, safety, or interest so requires.

§ 110.62 Order to show cause.

[Top of File]

(a) In response to an alleged violation, described in § 110.60, the Commission may institute a proceeding to revoke, suspend, or modify a license by issuing an order to show cause:

(1) Stating the alleged violation and proposed enforcement action; and

(2) Informing the licensee of his right, within 20 days or other specified time, to file a written answer and demand a hearing.

(b) An answer consenting to the proposed enforcement action shall constitute a waiver by the licensee of a hearing and of all rights to seek further Commission or judicial review.

(c) The order to show cause may be omitted and an order issued to revoke, suspend, or modify the license in cases where the Commission determines that the violation is willful or that the public health, safety, or interest so requires.

§ 110.63 Order for revocation, suspension, or modification.

[Top of File]

(a) In response to an alleged violation described in § 110.60, the Commission may revoke, suspend, or modify a license by issuing an order:

(1) Stating the violation and the effective date of the proposed enforcement action; and

(2) Informing the licensee of his right, within 20 days or other specified time, to file a written answer and demand a hearing.

(b) If an answer is not filed within the time specified, the enforcement action will become effective and permanent as proposed.

(c) If a timely answer is filed, the Commission, after considering the answer, will issue an order dismissing the proceeding, staying the effectiveness of the order or taking other appropriate action.

(d) The order may be made effective immediately, with reasons stated, pending further hearing and order, when the Commission determines that the violation is willful or that the public health, safety, or interest so requires.

§ 110.64 Civil penalty.

[Top of File]

(a) In response to a violation, the Commission may institute a proceeding to impose a civil penalty under section 234 of the Atomic Energy Act by issuing a notice to the licensee:

(1) Stating the alleged violation and the amount of the proposed penalty;

(2) Informing the licensee of his right, within 20 days or other specified time, to file a written answer; and

(3) Advising that a delinquent payment for a subsequently imposed penalty may be referred to the Attorney General for collection pursuant to section 234c. of the Atomic Energy Act.

(b) If an answer is not filed within the time specified, the Commission will issue an order imposing the proposed penalty.

(c) If a timely answer is filed, the Commission, after considering the answer, will issue an order dismissing the proceeding or imposing a penalty subject to any required hearing.

(d) If an order imposing a civil penalty is issued, the licensee may request a hearing within 20 days or other specified time.

(e) Except when the matter has been referred to the Attorney General for collection, payment of penalties shall be made by check, draft, or money order payable to the Treasurer of the United States, and mailed to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(f) An enforcement action to impose a civil penalty will not itself revoke, modify, or suspend any license under this part.

[43 FR 21641, May 19, 1978, as amended at 62 FR 27495, May 20, 1997]

§ 110.65 Settlement and compromise.

[Top of File]

At any time after issuance of an order for any enforcement action under this subpart, an agreement may be entered into for settlement of the proceeding or compromise of a penalty. Upon approval by the Commission, or presiding officer if a hearing has been requested, the terms of the settlement or compromise will be embodied in the order disposing of the enforcement action.

§ 110.66 Enforcement hearing.

[Top of File]

(a) If the licensee demands a hearing, the Commission will issue an order specifying the time and place.

(b) A hearing pursuant to this subpart will be conducted under the procedures in subpart G of part 2.

§ 110.67 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 110 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 110 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 110.1, 110.2, 110.3, 110.4, 110.7, 110.10, 110.11, 110.30, 110.31, 110.32, 110.40, 110.41, 110.42, 110.43, 110.44, 110.45, 110.46, 110.51, 110.52, 110.60, 110.61, 110.62, 110.63, 110.64, 110.65, 110.66, 110.67, 110.70, 110.71, 110.72, 110.73, 110.80, 110.81, 110.82, 110.83, 110.84, 110.85, 110.86, 110.87, 110.88, 110.89, 110.90, 110.91, 110.100, 110.101, 110.102, 110.103, 110.104, 110.105, 110.106, 110.107, 110.108, 110.109, 110.110, 110.111, 110.112, 110.113, 110.120, 110.122, 110.124, 110.130, 110.131, 110.132, 110.133, 110.134, and 110.135.

[57 FR 55080, Nov. 24, 1992; 57 FR 62605, Dec. 31, 1992; 60 FR 37565, July 21, 1995]

Subpart G--Public Notification and Availability of Documents and Records

[Top of File]

§ 110.70 Public notice of receipt of an application.

(a) The Commission will notice the receipt of each license application for an export or import for which a specific license is required by making a copy available at the NRC Web site, http://www.nrc.gov.

(b) The Commission will also publish in the Federal Register a notice of receipt of an application for a license to export the following:

(1) A production or utilization facility.

(2) Five effective kilograms or more of plutonium, high-enriched uranium or uranium-233.

(3) 10,000 kilograms or more of heavy water.

(4) Nuclear grade graphite for nuclear end use.

(5) Radioactive waste.

(Note: Does not apply to exports of heavy water to Canada.)

(c) The Commission will also publish in the Federal Register a notice of receipt of a license application for an import of radioactive waste for which a specific license is required.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47202, Dec. 3, 1984; 53 FR 4112, Feb. 12, 1988; 58 FR 13004, Mar. 9, 1993; 60 FR 37565, July 21, 1995; 64 FR 48955, Sept. 9, 1999; 65 FR 70291, Nov. 22, 2000; 70 FR 41939, July 21, 2005]

§ 110.71 Notice of withdrawal of an application.

[Top of File]

The Commission will notice the withdrawal of an application by making a copy available at the NRC Web site, *http://www.nrc.gov.*

[64 FR 48955, Sept. 9, 1999]

§ 110.72 Public availability of documents.

[Top of File]

Unless exempt from disclosure under part 9 of this chapter, the following documents pertaining to each license and license application for an import or export requiring a specific license under this part will be made available at the NRC Web site, *http://www.nrc.gov,* and/or at the NRC Public Document Room:

(a) The license application and any requests for amendments;

(b) Commission correspondence with the applicant or licensee;

(c) Federal Register notices;

(d) The Commission letter requesting Executive Branch views;

(e) Correspondence from the State Department with Executive Branch views;

(f) Correspondence from foreign governments and international organizations;

(g) Filings pursuant to subpart I and Commission and Executive Branch responses, if any;

(h) If a hearing is held, the hearing record and decision;

(i) A statement of staff conclusions; and

(j) The license, requests for license amendments and amendments.

[43 FR 21641, May 19, 1978, as amended at 60 FR 37565, July 21, 1995; 64 FR 48955, Sept. 9, 1999]

§ 110.73 Availability of NRC records.

[Top of File]

(a) Commission records under this part will be made available to the public only in accordance with part 9 of this chapter.

(b) Proprietary information provided under this part may be protected under Part 9 and § 2.390(b), (c), and (d) of this chapter.

[69 FR 2281, Jan. 14, 2004]

Subpart H--Public Participation Procedures Concerning License Applications

[Top of File]

§ 110.80 Basis for hearings.

The procedures in this part will constitute the exclusive basis for hearings on export license applications.

§ 110.81 Written comments.

[Top of File]

(a) The Commission encourages written comments from the public regarding export and import license applications. The Commission will consider and, if appropriate, respond to these comments.

(b) If possible, these comments should be submitted within 30 days after public notice of receipt of the application and addressed to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemakings and Adjudications Staff.

(c) The Commission will provide the applicant with a copy of the comments and, if appropriate, a reasonable opportunity for response.

[43 FR 21641, May 19, 1978, as amended at 62 FR 27495, May 20, 1997]

§ 110.82 Hearing request or intervention petition.

[Top of File]

(a) A person may request a hearing or petition for leave to intervene on a license application for an import or export requiring a specific license.

(b) Hearing requests and intervention petitions must:

(1) State the name, address and telephone number of the requestor or petitioner;

(2) Set forth the issues sought to be raised;

(3) Explain why a hearing or an intervention would be in the public interest and how a hearing or intervention would assist the Commission in making the determinations required by § 110.45.

(4) Specify, when a person asserts that his interest may be affected, both the facts pertaining to his interest and how it may be affected, with particular reference to the factors in § 110.84.

(c) Hearing requests and intervention petitions will be considered timely only if filed not later than:

(1) 30 days after notice of receipt in the Federal Register, for those applications published in the Federal Register;

(2) 30 days after notice of receipt in the Public Document Room, for all other applications; or

(3) Such other time as may be provided by the Commission.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47202, Dec. 3, 1984; 60 FR 37565, July 21, 1995; 60 FR 55183, Oct. 30, 1995; 65 FR 70291, Nov. 22, 2000]

§ 110.83 Answers and replies.

[Top of File]

(a) Unless otherwise specified by the Commission, an answer to a hearing request or intervention petition may be filed within 30 days after the request or petition has been served.

(b) Unless otherwise specified by the Commission, a reply to an answer may be filed within 10 days after all timely answers have been filed.

(c) Answers and replies should address the factors in § 110.84.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47203, Dec. 3, 1984]

§ 110.84 Commission action on a hearing request or intervention petition.

[Top of File]

(a) In an export licensing proceeding, or in an import licensing proceeding in which a hearing request or intervention petition does not assert or establish an interest which may be affected, the Commission will consider:

(1) Whether a hearing would be in the public interest; and

(2) Whether a hearing would assist the Commission in making the statutory determinations required by the Atomic Energy Act.

(b) If a hearing request or intervention petition asserts an interest which may be affected, the Commission will consider:

(1) The nature of the alleged interest;

(2) How that interest relates to issuance or denial; and

(3) The possible effect of any order on that interest, including whether the relief requested is within the Commission's authority, and, if so,

whether granting relief would redress the alleged injury.

(c) Untimely hearing requests or intervention petitions may be denied unless good cause for failure to file on time is established. In reviewing untimely requests or petitions, the Commission will also consider:

(1) The availability of other means by which the requestor's or petitioner's interest, if any, will be protected or represented by other participants in a hearing; and

(2) The extent to which the issues will be broadened or action on the application delayed.

(d) Before granting or denying a hearing request or intervention petition, the Commission will review the Executive Branch's views on the license application and may request further information from the petitioner, requester, the Commission staff, the Executive Branch or others.

(e) The Commission will deny a request or petition that pertains solely to matters outside its jurisdiction.

(f) If an issue has been adequately explored in a previous licensing hearing conducted pursuant to this part, a request for a new hearing in connection with that issue will be denied unless:

(1) A hearing request or intervention petition establishes that an interest may be affected; or

(2) The Commission determines that changed circumstances or new information warrant a new hearing.

(g) After consideration of the factors covered by paragraphs (a) through (f), the Commission will issue a notice or order granting or denying a hearing request or intervention petition. Upon the affirmative vote of two Commissioners a hearing will be ordered. A notice granting a hearing will be published in the Federal Register and will specify whether the hearing will be oral or consist of written comments. A denial notice will set forth the reasons for denial.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47203, Dec. 3, 1984]

§ 110.85 Notice of hearing consisting of written comments.

[Top of File]

(a) A notice of hearing consisting of written comments will:

(1) State the issues to be considered;

(2) Provide the names and addresses of participants;

(3) Specify the time limits for participants and others to submit written views and respond to any written comments; and

(4) State any other instructions the Commission deems appropriate.

(b) The Secretary will give notice of any hearing under this section and § 110.86 to any person who so requests.

§ 110.86 Notice of oral hearing.

[Top of File]

(a) A notice of oral hearing will:

(1) State the time, place and issues to be considered;

(2) Provide names and addresses of participants;

(3) Designate the presiding officer;

(4) Specify the time limit for participants and others to indicate whether they wish to present views; and

(5) State any other instructions the Commission deems appropriate.

(b) If the Commission is not the presiding officer, the notice of oral hearing will also state:

(1) When the jurisdiction of the presiding officer commences and terminates;

(2) The powers of the presiding officer; and

(3) Instructions to the presiding officer to certify promptly the completed hearing record to the Commission without preliminary decision or findings, unless the Commission directs otherwise.

§ 110.87 Conditions in a notice or order.

[Top of File]

(a) A notice or order granting a hearing or permitting intervention may restrict irrelevant or duplicative testimony, or require common interests to be represented by a single spokesman.

(b) If a participant's interests do not extend to all the issues in the hearing, the notice or order may limit his participation accordingly.

(c) Unless authorized by the Commission, the granting of participation will not broaden the hearing issues.

§ 110.88 Authority of the Secretary.

[Top of File]

The Secretary is authorized to prescribe time schedules and other procedural arrangements, when not covered by this part, and rule on related procedural requests.

§ 110.89 Filing and service.

[Top of File]

(a) Hearing requests, intervention petitions, answers, replies and accompanying documents must be filed with the Commission by delivery or by mail to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, Attention: Rulemakings and Adjudications Staff or via the EFiling system, following the procedure set forth in 10 CFR 2.302. Filing by mail is complete upon deposit in the mail. Filing via the E-Filing system is completed by following the requirements described in 10 CFR 2.302(d).

(b) All filing and Commission notices and orders must be served upon the applicant; the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555; the Executive Secretary, Department of State, Washington, DC 20520; and participants if any. Hearing requests, intervention petitions, and answers and replies must be served by the person filing those pleadings.

(c) Service is completed by:

(1) Delivering the paper to the person; or leaving it in his office with someone in charge; or, if there is no one in charge, leaving it in a conspicuous place in the office; or, if he has no office or it is closed, leaving it at his usual place of residence with some occupant of suitable age and discretion;

(2) Following the requirements for E-Filing in 10 CFR 2.305;

(3) Depositing it in the United States mail, express mail, or expedited delivery service, properly stamped and addressed; or

(4) Any other manner authorized by law, when service cannot be made as provided in paragraphs (c)(1) through (3) of this section.

(d) Proof of service, stating the name and address of the person served and the manner and date of service, shall be shown, and may be made by:

(1) Written acknowledgment of the person served or an authorized representative;

(2) The certificate or affidavit of the person making the service; or

(3) Following the requirements for E-Filing in 10 CFR 2.305.

(e) The Commission may make special provisions for service when circumstances warrant.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47203, Dec. 3, 1984; 51 FR 35999, Oct. 8, 1986; 62 FR 27495, May 20, 1997; 72 FR 49154, Aug. 28, 2007]

§ 110.90 Computation of time.

[Top of File]

(a) In computing any period of time, the day of the act, event, or default after which the designated period of time begins to run is not included. The last day of the period so computed is included unless it is a Saturday or Sunday, a Federal legal holiday at the place where the action or event is to occur, or a day upon which, because of an emergency closure of the Federal government in Washington, DC, NRC Headquarters does not open for business, in which event the period runs until the end of the next day that is not a Saturday, Sunday, holiday, or emergency closure.

(b) In time periods of less than seven (7) days, intermediate Saturdays, Sundays, Federal legal holidays, and emergency closures are not counted.

(c) Whenever an action is required within a prescribed period by a document served under § 110.89 of this part, no additional time is added to the prescribed period except as set forth in 10 CFR 2.306(b).

(d) To be considered timely, a document must be served:

(1) By 5 p.m. Eastern Time for a document served in person or by expedited service; and

(2) By 11:59 p.m. Eastern Time for a document served by the E-Filing system.

[72 FR 49154, Aug. 28, 2007]

§ 110.91 Commission consultations.

[Top of File]

The Commission may consult at any time on a license application with the staff, the Executive Branch or other persons.

[49 FR 47203, Dec. 3, 1984]

Subpart I--Hearings

[Top of File]

§ 110.100 Public hearings.

Hearings under this part will be public unless the Commission directs otherwise.

§ 110.101 Filing and service.

[Top of File]

Filing and service of hearing documents shall be pursuant to § 110.89.

§ 110.102 Hearing docket.

[Top of File]

For each hearing, the Secretary will maintain a docket which will include the hearing transcript, exhibits and all papers filed or issued pursuant to the hearing.

§ 110.103 Acceptance of hearing documents.

[Top of File]

(a) Each document filed or issued must be clearly legible and bear the docket number, license application number, and hearing title.

(b) Each document shall be filed in one original and signed by the participant or their authorized representative, with their address and date of signature indicated. The signature is a representation that the document is submitted with full authority, the signer knows its contents, and that, to the best of his knowledge, the statements made in it are true.

(c) Filings submitted using the E-filing system must follow the requirements outlined in 10 CFR 2.304.

(d) A document not meeting the requirements of this section may be returned with an explanation for nonacceptance and, if so, will not be

docketed.

[43 FR 21641, May 19, 1978, as amended at 49 FR 47203, Dec. 3, 1984; 72 FR 49154, Aug. 28, 2007]

§ 110.104 Presiding officer.

[Top of File]

(a) The full Commission will ordinarily be the presiding officer at a hearing under this part. However, the Commission may provide in a hearing notice that one or more Commissioners, or any other person as provided by law, will preside.

(b) A participant may submit a written motion for the disqualification of any person presiding. The motion shall be supported by affidavit setting forth the alleged grounds for disqualification. If the presiding officer does not grant the motion or the person does not disqualify himself, the Commission will decide the matter.

(c) If any presiding officer designated by the Commission deems himself disqualified, he shall withdraw by notice on the record after notifying the Commission.

(d) If a presiding officer becomes unavailable, the Commission will designate a replacement.

(e) Any motion concerning the designation of a replacement presiding officer shall be made within 5 days after the designation.

(f) Unless otherwise ordered by the Commission, the jurisdiction of a presiding officer other than the Commission commences as designated in the hearing notice and terminates upon certification of the hearing record to the Commission, or when the presiding officer is disqualified.

§ 110.105 Responsibility and power of the presiding officer in an oral hearing.

[Top of File]

(a) The presiding officer in any oral hearing shall conduct a fair hearing, develop a record that will contribute to informed decisionmaking, and, within the framework of the Commission's orders, have the power necessary to achieve these ends, including the power to:

(1) Take action to avoid unnecessary delay and maintain order;

(2) Dispose of procedural requests;

(3) Question participants and witnesses, and entertain suggestions as to questions which may be asked of participants and witnessess;

(4) Order consolidation of participants;

(5) Establish the order of presentation;

(6) Hold conferences before or during the hearing;

(7) Establish reasonable time limits;

(8) Limit the number of witnesses; and

(9) Strike or reject duplicative or irrelevant presentations.

(b) Where the Commission itself does not preside:

(1) The presiding officer may certify questions or refer rulings to the Commission for decision;

(2) Any hearing order may be modified by the Commission; and

(3) The presiding officer will certify the completed hearing record to the Commission, which may then issue its opinion on the hearing or provide that additional testimony be presented.

§ 110.106 Participation in a hearing.

[Top of File]

(a) Unless otherwise limited by this part or by the Commission, participants in a hearing may submit:

(1) Initial and concluding written statements of position on the issues;

(2) Written questions to the presiding officer; and

(3) Written responses and rebuttal testimony to the statements of other participants.

(b) Participants in an oral hearing may also submit oral statements, questions, responses and rebuttal testimony.

(c) A participant in an import licensing hearing establishing that his interest may be affected, may be accorded additional procedural rights under subpart G of part 2 with respect to resolution of domestic factual issues regarding the public health, safety and environment of the United States, and the protection of the United States public against domestic theft, diversion or sabotage, to the extent that such issues are separable from the nondomestic issues associated with the license application.

§ 110.107 Presentation of testimony in an oral hearing.

[Top of File]

(a) All direct testimony in an oral hearing shall be filed no later than 7 days before the hearing or as otherwise ordered or allowed.

(b) Written testimony will be received into evidence in exhibit form.

(c) Unless proscribed under § 110.87, members of groups which are designated as participants may testify in their individual capacities.

(d) Participants may present their own witnesses.

(e) Testimony by the Commission and the Executive Branch will be presented only by persons officially designated for that purpose.

(f) Participants and witnesses will be questioned orally or in writing and only by the presiding officer. Questions may be addressed to individuals or to panels of participants or witnesses.

(g) The presiding officer may accept written testimony from a person unable to appear at the hearing, and may request him to respond to questions.

(h) No subpoenas will be granted at the request of participants for attendance and testimony of participants or witnesses or the production of evidence.

§ 110.108 Appearance in an oral hearing.

[Top of File]

(a) A participant may appear in a hearing on his own behalf or be represented by an authorized representative.

(b) A person appearing shall file a written notice stating his name, address and telephone number, and if an authorized representative, the basis of his eligibility and the name and address of the participant on whose behalf he appears.

(c) A person may be excluded from a hearing for disorderly, dilatory or contemptuous conduct, provided he is informed of the grounds and given an opportunity to respond.

§ 110.109 Motions and requests.

[Top of File]

(a) Motions and requests shall be addressed to the presiding officer, and, if written, also filed with the Secretary and served on other participants.

(b) Other participants may respond to the motion or request. Responses to written motions or requests shall be filed within 5 days after service.

(c) When the Commission does not preside, in response to a motion or request, the presiding officer may refer a ruling or certify a question to the Commission for decision and notify the participants.

(d) Unless otherwise ordered by the Commission, a motion or request, or the certification of a question or referral of a ruling, shall not stay or extend any aspect of the hearing.

§ 110.110 Default.

[Top of File]

When a participant fails to act within a specified time, the presiding officer may consider him in default, issue an appropriate ruling and proceed without further notice to the defaulting participant.

§ 110.111 Waiver of a rule or regulation.

[Top of File]

(a) A participant may petition that a Commission rule or regulation be waived with respect to the license application under consideration.

(b) The sole ground for a waiver shall be that, because of special circumstances concerning the subject of the hearing, application of a rule or regulation would not serve the purposes for which it was adopted.

(c) Waiver petition shall specify why application of the rule or regulation would not serve the purposes for which it was adopted.

(d) Other participants may, within 10 days, file a response to a waiver petition.

(e) When the Commission does not preside, the presiding officer will certify the waiver petition to the Commission, which, in response, will grant or deny the waiver or direct any further proceedings.

(f) Regardless of whether a waiver is granted or denied, a separate petition for rulemaking may be filed pursuant to subpart K of this part.

[43 FR 21641, May 19, 1978, as amended at 62 FR 59277, Nov. 3, 1997]

§ 110.112 Reporter and transcript for an oral hearing.

[Top of File]

(a) A reporter designated by the Commission will record an oral hearing and prepare the official hearing transcript.

(b) Except for any classified portions, transcripts will be made available at the NRC Web site, *http://www.nrc.gov*, and/or at the NRC Public Document Room.

(c) Corrections of the official transcript may be made only as specified by the Secretary.

[43 FR 21641, May 19, 1978, as amended at 64 FR 48955, Sept. 9, 1999]

§ 110.113 Commission action.

[Top of File]

(a) Upon completion of a hearing, the Commission will issue a written opinion including its decision on the license application, the reasons for the decision and any dissenting views.

(b) While the Commission will consider fully the hearing record, the licensing decision will be based on all relevant information, including information which might go beyond that in the hearing record.

(c) If the Commission considers information not in the hearing record in reaching its licensing decision, the hearing participants will be informed and, if not classified or otherwise privileged, the information will be made available at the NRC Web site, *http://www.nrc.gov*, and furnished to the participants.

(d) The Commission may issue a license before completion of a hearing if it finds that:

(1) Prompt issuance is required in the public interest, particularly the common defense and security; and

(2) A participant establishing that his interest may be affected has been provided a fair opportunity to present his views.

(e) The Commission may:

(1) Defer any hearing;

(2) Consolidate applications for hearing;

(3) Narrow or broaden the hearing issues; and

(4) Take other action, as appropriate.

[43 FR 21641, May 19, 1978, as amended at 64 FR 48955, Sept. 9, 1999]

Subpart J--Special Procedures for Classified Information in Hearings

[Top of File]

§ 110.120 Purpose and scope.

(a) This subpart contains special procedures concerning access to, and introduction of, classified information into hearings under this part.

(b) These procedures do not in any way apply to classified information exchanged between the Executive Branch and the Commission not introduced into a hearing. Such information will be declassified to the maximum extent feasible. The public statements of the Commission staff and Executive Branch will, to the extent consistent with classification requirements, reflect consideration of any such classified information.

§ 110.121 Security clearances and access to classified information.

[Top of File]

(a) No person without a security clearance will have access to classified information.

(b) Only the Commission will act upon an application for access to classified information.

(c) To the extent practicable, applications for access to classified information shall describe the information to which access is desired and its level of classification (confidential, secret or other); the reasons for requesting access; the names of individuals for whom access is requested; and the reasons why access is requested for those individuals.

(d) The Commission will consider requests for appropriate security clearances in reasonable numbers; conduct its review and grant or deny these in accordance with part 10 of this chapter; and make a reasonable charge to cover costs.

(e) The Commission will not grant security clearances for access to classified information, unless it determines that the available unclassified information is inadequate on the subject matter involved.

(f) When an application demonstrates that access to classified information not introduced into a hearing may be needed to prepare a participant's position on the hearing issues, the Commission may issue an order granting access to this information to the participant, his authorized representative or other persons. Access will be subject to the conditions in paragraphs (e) and (j) and will not be granted unless required security clearances have been obtained.

(g) Once classified information has been introduced into a hearing, the Commission will grant access to a participant, his authorized representative or such other persons as the Commission determines may be needed by the participant to prepare his position on the hearing issues. Access will be subject to the conditions in paragraphs (e) and (j) of this section and will not be granted unless required security clearances have been obtained.

(h) For good cause, the Commission may postpone action upon an application for access to classified information.

(i) The Commission will grant access to classified information only up to the level for which the persons described in paragraphs (f) and (g) of this section are cleared and only upon an adequate commitment by them not to disclose such information subject to penalties as provided by law.

(j) The Commission will not in any circumstances grant access to classified information:

(1) Unless it determines that the grant is not inimical to the common defense and security; and

(2) Which it has received from another Government agency, without the prior consent of the originating agency.

(k) Upon completion of a hearing, the Commission will terminate all security clearances granted pursuant to the hearing and may require the disposal of classified information to which access has been granted or the observance of other procedures to safeguard this information.

§ 110.122 Classification assistance.

[Top of File]

On the request of any hearing participant or the presiding officer (if other than the Commission), the Commission will designate a

representative to advise and assist the presiding officer or the participants with respect to security classification of information and the protective requirements to be observed.

§ 110.123 Notice of intent to introduce classified information.

[Top of File]

(a) A participant shall seek the required security clearances, where necessary, and file with the Secretary a notice of intent to introduce classified information into a hearing at the earliest possible time after the notice of hearing.

(b) If a participant has not filed a notice of intent in accordance with this section, he may introduce classified information only if he gives to the other participants and the Commission prompt written notice of intent and only as permitted by the Commission when it determines that the public interest will not be prejudiced.

(c) The notice of intent shall be unclassified and, to the extent consistent with classification requirements, state:

(1) The subject matter of the classified information, which it is anticipated will be involved;

(2) The highest level of classification of the information (confidential, secret or other);

(3) When it is anticipated that the information would be introduced; and

(4) The relevance and materiality of the information to the hearing issues.

§ 110.124 Rearrangement or suspension of a hearing.

[Top of File]

When a participant gives notice of intent to introduce classified information and other participants do not have the required security clearances, subject to § 110.121, the Commission may:

(a) Suspend or rearrange the normal order of the hearing to give other participants an opportunity to obtain the required security clearances with minimum delay in the conduct of the hearing; or

(b) Take such other action as it determines to be in the public interest.

§ 110.125 Unclassified statements required.

[Top of File]

(a) It is the obligation of hearing participants to introduce information in unclassified form wherever possible, and to declassify, to the maximum extent feasible, any classified information introduced into the hearing. This obligation rests on each participant whether or not any other participant has the required security clearances.

(b) When classified information is offered for introduction into a hearing:

(1) The participant offering it shall, to the extent consistent with classification requirements, submit to the presiding officer and other participants an unclassified statement describing the substance of the classified information as accurately and completely as possible;

(2) In accordance with procedures agreed upon by the participants or prescribed by the presiding officer, and after notice to all participants and opportunity to be heard on the notice, the presiding officer will determine whether an unclassified statement may be substituted for the classified information in the hearing record without prejudice to the interest of any participant or the public;

(3) If the Commission determines that the unclassified statement (together with such unclassified modifications as it finds are necessary or appropriate to protect the interest of other participants and the public) adequately sets forth information in the classified matter which is relevant and material to the issues in the hearing, it will direct that the classified matter be excluded from the record of the hearing; and

(4) The Commission may postpone any of the procedures in this section until all other evidence has been received. However, a participant shall not postpone service of any unclassified statement required in this section.

§ 110.126 Protection of classified information.

[Top of File]

Nothing in this subpart shall relieve any person from safeguarding classified information as required by law and rules, regulations or orders of any Government agency.

Subpart K--Rulemaking

[Top of File]

§ 110.130 Initiation of rulemaking.

The Commission may initiate action to amend the regulations in this part on its own initiative or in response to a petition.

§ 110.131 Petition for rulemaking.

[Top of File]

(a) A petition for rulemaking should be addressed to the Secretary of the Commission, for the attention of the Secretary's Rulemakings and Adjudications Staff. The petition should be sent using an appropriate method listed in § 110.4.

(b) The petition shall state the basis for the requested amendment.

(c) The petition may request the Commission to suspend all or part of any licensing proceeding under this part pending disposition of the petition.

(d) The Secretary will assign a docket number to the petition, place a copy in the Public Document Room and notice its receipt in the Federal Register.

(e) Publication may be limited by order of the Commission to the extent required by section 181 of the Atomic Energy Act.

[43 FR 21641, May 19, 1978, as amended at 63 FR 15744, Apr. 1, 1998; 68 FR 58824, Oct. 10, 2003]

§ 110.132 Commission action on a petition.

[Top of File]

(a) The Commission may grant or deny the petition in whole or in part.

(b) If the petition is granted, a notice of proposed rulemaking or a notice of rulemaking will be published in the Federal Register.

(c) If the petition is denied, the petitioner will be informed of the grounds.

(d) Commission action on a petition will normally follow, whenever appropriate, receipt and evaluation of Executive Branch views.

(e) The Commission, in exercising the discretion authorized by section 4(a)(1) of the Administrative Procedure Act (5 U.S.C. 553(a)(1)), will decide what, if any, public rulemaking procedures will be followed.

§ 110.133 Notice of proposed rulemaking.

[Top of File]

(a) When the Commission proposes to amend the regulations in this part, it will normally publish a notice of proposed rulemaking in the Federal Register.

(b) A notice of proposed rulemaking will include:

(1) The authority for the proposed rule;

(2) The substance and purpose of the proposed rule;

(3) Directions for public participation;

(4) The time and place of any public hearing; and

(5) If a hearing is to be held by other than the Commission, designating of a presiding officer and instructions for the conduct of the hearing.

(c) A notice of proposed rulemaking will be published not less than 15 days before any hearing, unless the Commission for good cause provides otherwise in the notice.

§ 110.134 Public participation.

[Top of File]

(a) The Commission may hold an oral hearing on a proposed rule or permit any person to participate in a rulemaking proceeding through the submission of written comments.

(b) When it is in the public interest and is authorized by law, public rule-making procedures may be omitted and a notice of rulemaking published pursuant to § 110.135.

§ 110.135 Notice of rulemaking.

[Top of File]

(a) Upon approval of an amendment, the Commission will publish in the Federal Register a notice of rule-making which includes a statement of its basis and purpose, effective date and, where appropriate, any significant variations from the amendment as proposed in any notice of proposed rulemaking.

(b) The effective date of an amendment will normally be no earlier than 30 days after publication of the notice of rulemaking, unless the Commission for good cause provides otherwise in the notice.

Appendix A to Part 110--Illustrative List of Nuclear Reactor Equipment Under NRC Export Licensing Authority

[Top of File]

Note--A nuclear reactor basically includes the items within or attached directly to the reactor vessel, the equipment which controls the level of power in the core, and the components which normally contain or come in direct contact with or control the primary coolant of the reactor core.

(1) Reactor pressure vessels, i.e., metal vessels, as complete units or major shop-fabricated parts, especially designed or prepared to contain the core of a nuclear reactor and capable of withstanding the operating pressure of the primary coolant.

(2) On-line (e.g., CANDU) reactor fuel charging and discharging machines, i.e., manipulative equipment especially designed for inserting or removing fuel in an operating nuclear reactor.

(3) Complete reactor control rod system, i.e., rods especially designed or prepared for the control of the reaction rate in a nuclear reactor, including the neutron absorbing part and the support or suspension structures therefor;

(4) Reactor primary coolant pumps, i.e., pumps especially designed or prepared for circulating the primary coolant in a nuclear reactor.

(5) Reactor pressure tubes, i.e., tubes especially designed or prepared to contain fuel elements and the primary coolant in a nuclear reactor at an operating pressure in excess of 50 atmospheres.

(6) Zirconium tubes, i.e., zirconium metal and alloys in the form of tubes or assemblies of tubes especially designed or prepared for use in a nuclear reactor.

(7) Reactor internals, e.g., core support structures, control and rod guide tubes, thermal shields, baffles, core grid plates and diffuser plates especially designed or prepared for use in a nuclear reactor.

(8) Reactor control rod drive mechanisms, including detection and measuring equipment to determine flux levels.

(9) Any other components especially designed or prepared for use in a nuclear reactor or in any of the components described in this appendix.

[55 FR 30450, July 26, 1990, as amended at 55 FR 34519, Aug. 23, 1990; 58 FR 13004, Mar. 9, 1993; 61 FR 35602, July 8, 1996; 65 FR 70291, Nov. 22, 2000]

Appendix B to Part 110--Illustrative List of Gas Centrifuge Enrichment Plant Components Under NRC's Export Licensing Authority

[Top of File]

1. *Assemblies and components especially designed or prepared for use in gas centrifuges.*

Note: The gas centrifuge normally consists of a thin-walled cylinder(s) of between 75mm (3 ins.) and 400 mm (16 ins.) diameter contained in a vacuum environment and spun at high peripheral speed (of the order of 300 m/per second and more) with the central axis vertical. In order to achieve high speed, the materials of construction for the rotating rotor assembly, and hence its individual components, have to be manufactured to very close tolerances in order to minimize the unbalance. In contrast to other centrifuges, the gas centrifuge for uranium enrichment is characterized by having within the rotor chamber a rotating disc-shaped baffle(s) and a stationary tube arrangement for feeding and extracting UF_6 gas and featuring at least 3 separate channels of which 2 are connected to scoops extending from the rotor axis towards the periphery of the rotor chamber. Also contained within the vacuum environment are a number of critical items which do not rotate and which, although they are especially designed, are not difficult to fabricate nor are they fabricated out of unique materials. A centrifuge facility, however, requires a large number of these components so that quantities can provide an important indication of end use.

1.1 *Rotating Components.*

(a) Complete Rotor Assemblies: Thin-walled cylinders, or a number of interconnected thin-walled cylinders, manufactured from one of the high strength-to-density ratio materials described in the Footnote to this Section.

If interconnected, the cylinders are joined together by flexible bellows or rings as described in § 1.1(c). The rotor is fitted with an internal baffle(s) and end caps, as described in § 1.1 (d) and (e), if in final form. However, the complete assembly may be delivered only partly assembled.

(b) Rotor Tubes: Especially designed or prepared thin-walled cylinders with thickness of 12mm (.50 in.) or less, a diameter of between 75mm (3 ins.) and 400mm (16 ins.), and manufactured from one of the high strength-to-density ratio materials described in the Footnote to this Section.

(c) Rings or Bellows: Components especially designed or prepared to give localized support to the rotor tube or to join together a number of rotor tubes. The bellows in a short cylinder of wall thickness 3mm (.125 in.) or less, a diameter of between 75mm (3 ins.) and 400mm (16 ins.), having a convolute, and manufactured from one of the high strength-to-density ratio materials described in the footnote to this section.

(d) Baffles: Disc shaped components of between 75mm (3 ins.) and 400mm (16 ins.) diameter especially designed or prepared to be mounted inside the centrifuge rotor tube, in order to isolate the take-off chamber from the main separation chamber and, in some cases, to assist the UF_6 gas circulation within the main separation chamber of the rotor tube, and manufactured from one of the high strength-to-density ratio materials described in the Footnote to this Section.

(e) Top Caps/Bottom Caps: Disc shaped components of between 75mm (3 ins.) and 400mm (16 ins.) diameter especially designed or prepared to fit to the ends of the rotor tube, and so contain the UF_6 within the rotor tube, and in some cases to support, retain or contain as an integrated part, an element of the upper bearing (top cap) or to carry the rotating elements of the motor and lower bearing (bottom cap), and manufactured from one of the high strength-to-density ratio materials described in the Footnote to this Section.

Footnote:

The materials used for centrifuge rotating components are:

(a) Maraging steel capable of an ultimate tensile strength of 2.050×10^9 N/m^2(300,000 lb/in.^{2}) or more.

(b) Aluminium alloys capable of an ultimate tensile strength of 0.460×10^9 N/m^2 (67,000 lb/in.^{2}) or more.

(c) Filamentary materials suitable for use in composite structures and having a specific modulus of 3.18×10^6m or greater and a specific ultimate tensile strength of 7.62×10^4m or greater.

("Specific Modulus" is the Young's modulus in N/m^2 divided by the specific weight in N/m^3 when measured at a temperature of 23$\pm$20C and a relative humidity of 50$\pm$5%. "Specific tensile strength" is the ultimate tensile strength in N/m^2 divided by the specific weight in N/m^3 when measured at a temperature of 23$\pm$20C and a relative humidity of 50$\pm$5%.)

1.2 Static Components.

(a) Magnetic Suspension Bearings: Especially designed or prepared bearing assemblies consisting of an annular magnet suspended within a housing containing a damping medium. The housing will be manufactured from a UF_6 resistant material (see footnote to section 2). The magnet couples with a pole piece or a second magnet fitted to the top cap described in Section 1.1(e). The magnet may be ring-shaped with a relation between outer and inner diameter smaller or equal to 1.6:1. The magnet may be in a form having an initial permeability of 0.15 Henry/meter (120,000 in CGS units) or more, or a remanence of 98.5 percent or more, or an energy product of greater than 80,000 joules/m^3 (10×10^6 gauss-oersteds.) In addition to the usual material properties, it is a prerequisite that the deviation of the magnetic axes from the geometrical axes is limited to very small tolerances (lower than 0.1mm) or that homogeneity of the material of the magnet is specially called for.

(b) Bearings/Dampers: Especially designed or prepared bearings comprising a pivot/cup assembly mounted on a damper. The pivot is normally a hardened steel shaft polished into a hemisphere at one end with a means of attachment to the bottom cap described in Section 1.1(e) at the other. The shaft may, however, have a hydrodynamic bearing attached. The cup is pellet-shaped with hemispherical indentation in one surface. These components are often supplied separately to the damper.

(c) Molecular Pumps: Especially designed or prepared cylinders having internally machined or extruded helical grooves and internally machined bores. Typical dimensions are as follows: 7mm (0.3 ins.) to 400mm (16 ins.) internal diameter, 10mm (0.4 ins.) or more wall thickness, 1 to 1 length to diameter ratio. The grooves are typically rectangular in cross-section and 2mm (0.08 in.) or more in depth.

(d) Motor Stators: Especially designed or prepared ring shaped stators for high speed multi-phase AC hysteresis (or reluctance) motors for synchronous operation within a vacuum in the frequency range of 600-2000 Hz and a power range of 50-1000 volts amps. The stators consist of multi-phase windings on a laminated low loss iron core comprised of thin layers typically 2.0mm (0.08 in.) thick or less.

(e) Centrifuge housing/recipients: Components especially designed or prepared to contain the rotor tube assembly of a gas centrifuge. The housing consists of a rigid cylinder of wall thickness up to 30 mm (1.2in) with precision machined ends to locate the bearings and with one or more flanges for mounting. The machined ends are parallel to each other and perpendicular to the cylinder's longitudinal axis to within 0.05 degrees or less. The housing may also be a honeycomb type structure to accommodate several rotor tubes. The housings are made of or protected by materials resistant to corrosion by UF6.

(f) Scoops: Especially designed or prepared tubes of up to 12 mm (0.5in) internal diameter for the extraction of UF_6 gas from within the rotor tube by a Pitot tube action (that is, with an aperture facing into the circumferential gas flow within the rotor tube, for example by bending the end of a radially disposed tube) and capable of being fixed to the central gas extraction system. The tubes are made of or protected by materials resistant to corrosion by UF_6.

2. Especially designed or prepared auxiliary systems, equipment and components for gas centrifuge enrichment plants.

Note: The auxiliary systems, equipment and components for a gas centrifuge enrichment plant are the systems of the plant needed to feed UF_6 to the centrifuges to link the individual centrifuges to each other to form cascades (or stages) to allow for progressively higher enrichments and to extract the product and tails of UF6 from the centrifuges, together with the equipment required to drive the centrifuges or to control the plant.

Normally UF_6 is evaporated from the solid using heated autoclaves and is distributed in gaseous form to the centrifuges by way of cascade header pipework. The "product" and "tails" of UF_6 gaseous streams flowing from the centrifuges are also passed by way of cascade header pipework to cold traps (operating at about 70 ½C) where they are condensed prior to onward transfer into suitable containers for transportation or storage. Because an enrichment plant consists of many thousands of centrifuges arranged in cascades, there are many kilometers of cascade header pipework incorporating thousands of welds with a substantial amount of repetition of layout. The equipment, component and piping systems are fabricated to very high vacuum and cleanliness standards.

The following items either come into direct contact with UF_6 process gas or directly control the centrifuge and the passage of the gas from centrifuge to centrifuge and cascade to cascade.

(a) Feed Systems/Product and Tails Withdrawal Systems:

Especially designed or prepared process systems including:

1. Feed autoclaves (or stations), used for passing UF_6 to the centrifuge cascades at up to 100 KN/m^2 (15 psi) and at a rate of 1 kg/h or more.

2. Desublimers (or cold traps) used to remove UF_6 from the cascades at up to 3 kN/m^2 (0.5 lb/in^2) pressure. The desublimers are capable of being chilled to 70 ½C and heated to 70 ½C.

3. Product and tails stations used for trapping UF_6 into containers.

This plant equipment and pipework are wholly made of or lined with UF_6 resistant materials (see Footnote to this Section) and are fabricated to very high vacuum and cleanliness standards.

(b) Machine Header Piping Systems:

Especially designed or prepared piping systems and header systems for handling UF_6 within the centrifuge cascades.

This piping network is normally of the "triple" header system with each centrifuge connected to each of the headers. There is thus a substantial amount of repetition in its form. It is wholly made of UF_6 resistant materials (see Note to this Section) and is fabricated to very high vacuum and cleanliness standards.

(c) UF6 Mass Spectrometers/Ion Sources: Especially designed or prepared magnetic or quadrapole mass spectrometers capable of taking "on-line" sample of feed, product or tails from UF_6 gas streams and having all of the following characteristics:

1. Unit resolution for mass greater than 320.

2. Ion sources constructed of or lined with nichrome, monel or nickel-plate.

3. Electron bombardment ionization sources.

4. Having a collector system suitable for isotope analysis.

(d) Frequency Changers: Frequency changers (also known as converters or invertors) especially designed or prepared to supply motor stators as defined under Section 1.2(d), or parts, components and subassemblies of such frequency changers having all of the following characteristics:

1. A multiphase output of 600 Hz to 2000Hz.

2. High stability (with frequency control better than 0.1%).

3. Low harmonic distortion (less than 2%).

4. An efficiency of greater than 80%.

Footnote

Materials resistant to corrosion by UF_6 include stainless steel, aluminum, aluminum alloys, nickel or alloys containing 60% or more nickel.

[49 FR 47203, Dec. 3, 1984. Redesignated at 55 FR 30450, July 26, 1990; 58 FR 13005, Mar. 9, 1993; 61 FR 35602, July 8, 1996; 65 FR 70291, Nov. 22, 2000]

Appendix C to Part 110--Illustrative List of Gaseous Diffusion Enrichment Plant Assemblies and Components Under NRC Export Licensing Authority

[Top of File]

Note--In the gaseous diffusion method of uranium isotope separation, the main technological assembly is a special porous gaseous diffusion barrier, heat exchanger for cooling the gas (which is heated by the process of compression), seal valves and control valves, and pipelines. Inasmuch as gaseous diffusion technology uses uranium hexafluoride (UF_6), all equipment, pipeline and instrumentation surfaces (that come in contact with the gas) must be made of materials that remain stable in contact with UF_6. A gaseous diffusion facility requires a number of these assemblies, so that quantities can provide an important indication of end use.

The auxiliary systems, equipment and components for gaseous diffusion enrichment plants are the systems of plant needed to feed UF_6 to the gaseous diffusion assembly to link the individual assemblies to each other to form cascades (or stages) to allow for progressively higher enrichments and to extract the "product" and "tails" UF_6 from the diffusion cascades. Because of the high inertial properties of diffusion cascades, any interruption in their operation, and especially their shut-down, leads to serious consequences. Therefore, a strict and constant maintenance of vacuum in all technological systems, automatic protection for accidents, and precise automated regulation of the gas flow is of importance in a gaseous diffusion plant. All this leads to a need to equip the plant with a large number of special measuring, regulating, and controlling systems.

Normally UF_6 is evaporated from cylinders placed within autoclaves and is distributed in gaseous form to the entry point by way of cascade header pipework. The "product" and "tails" UF_6 gaseous streams flowing from exit points are passed by way of cascade header pipework to either cold traps or to compression stations where the UF_6 gas is liquified prior to onward transfer into suitable containers for transportation or storage. Because a gaseous diffusion enrichment plant consists of a large number of gaseous diffusion assemblies arranged in cascades, there are many kilometers of cascade header pipework, incorporating thousands of welds with substantial amounts of repetition of layout. The equipment, components and piping systems are fabricated to very high vacuum and cleanliness standards.

The items listed below either come into direct contact with the UF_6 process gas or directly control the flow within the cascade. All surfaces which come into contact with the process gas are wholly made of, or lined with, UF6-resistant materials. For the purposes of this appendix the materials resistant to corrosion by UF_6 include stainless steel, aluminum, aluminum alloys, aluminum oxide, nickel or alloys containing 60 percent or more nickel, and UF_6-resistant fully fluorinated hydrocarbon polymers.

1. Assemblies and components especially designed or prepared for use in gaseous diffusion enrichment.

1.1 Gaseous Diffusion Barriers

Especially designed or prepared thin, porous filters, with a pore size of 100-1000 A (angstroms), a thickness of 5 mm or less, and for tubular forms, a diameter of 25 mm or less, made of metallic, polymer or ceramic materials resistant to corrosion by UF_6, and especially prepared compounds or powders for the manufacture of such filters. Such compounds and powders include nickel or alloys containing 60 percent or more nickel, aluminum oxide, or UF_6-resistant fully fluorinated hydrocarbon polymers having a purity of 99.9 percent or more, a

particle size less than 10 microns, and a high degree of particle size uniformity, which are especially prepared for the manufacture of gaseous diffusion barriers.

1.2 Diffuser Housings

Especially designed or prepared hermetically sealed cylindrical vessels greater than 30 cm in diameter and greater than 90 cm in length, or rectangular vessels of comparable dimensions, which have an inlet connection and two outlet connections all of which are greater than 5 cm in diameter, for containing the gaseous diffusion barrier, made of or lined with UF_6-resistant materials and designed for horizontal or vertical installation.

1.3 Compressors and Gas Blowers

Especially designed or prepared axial, centrifugal, or positive displacement compressors, or gas blowers with a suction volume capacity of 1 m^3/min or more of UF_6, and with a discharge pressure of up to several hundred kN/m^2 (100 PSI), designed for long-term operation in the UF_6 environment with or without an electrical motor of appropriate power, as well as separate assemblies of such compressors and gas blowers. These compressors and gas blowers have a pressure ratio between 2/1 and 6/1 and are made of, or lined with, materials resistant to UF_6.

1.4 Rotary Shaft Seals

Especially designed or prepared vacuum seals, with seal feed and seal exhaust connections, for sealing the shaft connecting the compressor or the gas blower rotor with the driver motor so as to ensure a reliable seal against in-leaking of air into the inner chamber of the compressor or gas blower which is filled with UF_6. Such seals are normally designed for a buffer gas in-leakage rate of less than 1000 cm^3/min.

1.5 Heat Exchangers for Cooling UF_6

Especially designed or prepared heat exchangers made of or lined with UF_6 resistant materials (except stainless steel) or with copper or any combination of those metals, and intended for a leakage pressure change rate of less than 10 N/m^2 (0.0015 PSI) per hour under a pressure difference of 100 kN/m^2 (15 PSI).

2. Auxiliary systems, equipment and components especially designed or prepared for use in gaseous diffusion enrichment.

2.1 Feed Systems/Product and Tails Withdrawal Systems

Especially designed or prepared process systems, capable of operating at pressures of 300 kN/m^2 (45 PSI) or less, including:

1. Feed autoclaves (or systems), used for passing UF_6 to the gaseous diffusion cascades;

2. Desublimers (or cold traps) used to remove UF_6 from diffusion cascades;

3. Liquefaction stations where UF_6 gas from the cascade is compressed and cooled to form liquid UF6;

4. "Product" or "tails" stations used for transferring UF_6 into containers.

2.2 Header Piping Systems

Especially designed or prepared piping systems and header systems for handling UF_6 within the gaseous diffusion cascades. This piping network is normally of the "double" header system with each cell connected to each of the headers.

2.3 Vacuum Systems

(a) Especially designed or prepared large vacuum manifolds, vacuum headers and vacuum pumps having a suction capacity of 5 m^3/min or more.

(b) Vacuum pumps especially designed for service in UF_6-bearing atmospheres made of, or lined with, aluminum, nickel, or alloys bearing more than 60 percent nickel. These pumps may be either rotary or positive displacement, may have fluorocarbon seals, and may have special working fluids present.

2.4 Special Shut-Off and Control Valves

Especially designed or prepared manual or automated shut-off and control bellows valves made of UF_6 resistant materials with a diameter

of 4 cm to 1.5 m for installation in main and auxiliary systems of gaseous diffusion enrichment plants.

2.5 UF6 Mass Spectrometers/Ion Sources

Especially designed or prepared magnetic or quadruple mass spectrometers capable of taking "on-line" samples of feed, product or tails, from UF_6 gas streams and having all of the following characteristics:

(a) unit resolution for mass greater than 320;

(b) ion sources constructed of or lined with nichrome or monel or nickel plated;

(c) electron bombardment ionization sources;

(d) having a collector system suitable for isotopic analysis.

[55 FR 30451, July 26, 1990]

Appendix D to Part 110--Illustrative List of Aerodynamic Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

[Top of File]

Note--In aerodynamic enrichment processes, a mixture of gaseous UF6 and light gas (hydrogen or helium) is compressed and then passed through separating elements wherein isotopic separation is accomplished by the generation of high centrifugal forces over a curved-wall geometry. Two processes of this type have been successfully developed: the separation nozzle process and the vortex tube process. For both processes the main components of a separation stage included cylindrical vessels housing the special separation elements (nozzles or vortex tubes), gas compressors and heat exchangers to remove the heat of compression. An aerodynamic plant requires a number of these stages, so that quantities can provide an important indication of end use. Because aerodynamic processes use UF6, all equipment, pipeline and instrumentation surfaces (that come in contact with the gas) must be made of materials that remain stable in contact with UF6. All surfaces which come into contact with the process gas are made of or protected by UF6-resistant materials; including copper, stainless steel, aluminum, aluminum alloys, nickel or alloys containing 60% or more nickel and UF6-resistant fully fluorinated hydrocarbon polymers.

The following items either come into direct contact with the UF6 process gas or directly control the flow within the cascade:

(1) Separation nozzles and assemblies.

Especially designed or prepared nozzles that consist of slit-shaped, curved channels having a radius of curvature less than 1 mm (typically 0.1 to 0.05 mm). The nozzles are resistant to UF6 corrosion and have a knife-edge within the nozzle that separates the gas flowing through the nozzle into two fractions.

(2) Vortex tubes and assemblies.

Especially designed or prepared vortex tubes that are cylindrical or tapered, made of or protected by materials resistant to UF6 corrosion, have a diameter of between 0.5 cm and 4 cm, a length to diameter ratio of 20:1 or less and with one or more tangential inlets. The tubes may be equipped with nozzle-type appendages at either or both ends.

The feed gas enters the vortex tube tangentially at one end or through swirl vanes or at numerous tangential positions along the periphery of the tube.

(3) Compressors and gas blowers.

Especially designed or prepared axial, centrifugal, or positive displacement compressors or gas blowers made of or protected by materials resistant to UF_6 corrosion and with a suction volume capacity of 2 m^3/min or more of UF6/carrier gas (hydrogen or helium) mixture. These compressors and gas blowers typically have a pressure ratio between 1.2:1 and 6:1.

(4) Rotary shaft seals.

Especially designed or prepared seals, with seal feed and seal exhaust connections, for sealing the shaft connecting the compressor rotor or the gas blower rotor with the driver motor to ensure a reliable seal against out-leakage of process gas or in-leakage of air or seal gas into the inner chamber of the compressor or gas blower which is filled with a UF6/carrier gas mixture.

(5) Heat exchangers for gas cooling.

Especially designed or prepared heat exchangers, made of or protected by materials resistant to UF6 corrosion.

(6) Separation element housings.

Especially designed or prepared separation element housings, made of or protected by materials resistant to UF6 corrosion, for containing vortex tubes or separation nozzles.

These housings may be cylindrical vessels greater than 300 mm in diameter and greater than 900 mm in length, or may be rectangular vessels of comparable dimensions, and may be designed for horizonal or vertical installation.

(7) Feed systems/product and tails withdrawal systems.

Especially designed or prepared process systems or equipment for enrichment plants made of or protected by materials resistant to UF6 corrosion, including:

(i) Feed autoclaves, ovens, or systems used for passing UF6 to the enrichment process;

(ii) Desublimers (or cold traps) used to remove UF6 from the enrichment process for subsequent transfer upon heating;

(iii) Solidification or liquefaction stations used to remove UF6 from the enrichment process by compressing and converting UF6 to a liquid or solid form; and

(iv) "Product" or "tails" stations used for transferring UF6 into containers.

(8) Header piping systems.

Especially designed or prepared header piping systems, made of or protected by materials resistant to UF6 corrosion, for handling UF_6 within the aerodynamic cascades.

The piping network is normally of the "double" header design with each stage or group of stages connected to each of the headers.

(9) Vacuum systems and pumps.

Especially designed or prepared vacuum systems having a suction capacity of 5 m^3/min or more, consisting of vacuum manifolds, vacuum headers and vacuum pumps, and designed for service in UF6-bearing atmospheres.

Especially designed or prepared vacuum pumps for service in UF6-bearing atmospheres and made of or protected by materials resistant to UF6 corrosion. These pumps may use fluorocarbon seals and special working fluids.

(10) Special shut-off and control valves.

Especially designed or prepared manual or automated shut-off and control bellows valves made of or protected by materials resistant to UF6 corrosion with a diameter of 40 to 1500 mm for installation in main and auxiliary systems of aerodynamic enrichment plants.

(11) UF_6 mass spectrometers/ion sources.

Especially designed or prepared magnetic or quadrupole mass spectrometers capable of taking "on-line" samples of feed, "product" or "tails", from UF6 gas streams and having all of the following characteristics:

(i) Unit resolution for mass greater than 320;

(ii) Ion sources constructed of or lined with nichrome or monel or nickel plated;

(iii) Electron bombardment ionization sources; and

(iv) Collector system suitable for isotopic analysis.

(12) UF6/carrier gas separation systems.

Especially designed or prepared process systems for separating UF6 from carrier gas (hydrogen or helium).

These systems are designed to reduce the UF6 content in the carrier gas to 1 ppm or less and may incorporate equipment such as:

(i) Cryogenic heat exchangers and cryoseparators capable of temperatures of -120ºC or less;

(ii) Cryogenic refrigeration units capable of temperatures of -120ºC or less;

(iii) Separation nozzle or vortex tube units for the separation of UF6 from carrier gas; or

(iv) UF6 cold traps capable of temperatures of -20°C or less.

[61 FR 35603, July 8, 1996]

Appendix E to Part 110--Illustrative List of Chemical Exchange or Ion Exchange Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

[Top of File]

Note--The slight difference in mass between the isotopes of uranium causes small changes in chemical reaction equilibria that can be used as a basis for separation of the isotopes. Two processes have been successfully developed: liquid-liquid chemical exchange and solid-liquid ion exchange.

A. In the liquid-liquid chemical exchange process, immiscible liquid phases (aqueous and organic) are countercurrently contacted to give the cascading effect of thousands of separation stages. The aqueous phase consists of uranium chloride in hydrochloric acid solution; the organic phase consists of an extractant containing uranium chloride in an organic solvent. The contactors employed in the separation cascade can be liquid-liquid exchange columns (such as pulsed columns with sieve plates) or liquid centrifugal contactors. Chemical conversions (oxidation and reduction) are required at both ends of the separation cascade in order to provide for the reflux requirements at each end. A major design concern is to avoid contamination of the process streams with certain metal ions. Plastic, plastic-lined (including use of fluorocarbon polymers) and/or glass-lined columns and piping are therefore used.

(1) Liquid-liquid exchange columns.

Countercurrent liquid-liquid exchange columns having mechanical power input (i.e., pulsed columns with sieve plates, reciprocating plate columns, and columns with internal turbine mixers), especially designed or prepared for uranium enrichment using the chemical exchange process. For corrosion resistance to concentrated hydrochloric acid solutions, these columns and their internals are made of or protected by suitable plastic materials (such as fluorocarbon polymers) or glass. The stage residence time of the columns is designed to be short (30 seconds or less).

(2) Liquid-liquid centrifugal contactors.

Especially designed or prepared for uranium enrichment using the chemical exchange process. These contactors use rotation to achieve dispersion of the organic and aqueous streams and then centrifugal force to separate the phases. For corrosion resistance to concentrated hydrochloric acid solutions, the contactors are made of or are lined with suitable plastic materials (such as fluorocarbon polymers) or are lined with glass. The stage residence time of the centrifugal contactors is designed to be short (30 seconds or less).

(3) Uranium reduction systems and equipment.

(i) Especially designed or prepared electrochemical reduction cells to reduce uranium from one valence state to another for uranium enrichment using the chemical exchange process. The cell materials in contact with process solutions must be corrosion resistant to concentrated hydrochloric acid solutions.

The cell cathodic compartment must be designed to prevent re-oxidation of uranium to its higher valence state. To keep the uranium in the cathodic compartment, the cell may have an impervious diaphragm membrane constructed of special cation exchange material. The cathode consists of a suitable solid conductor such as graphite.

These systems consist of solvent extraction equipment for stripping the U+4 from the organic stream into an aqueous solution, evaporation and/or other equipment to accomplish solution pH adjustment and control, and pumps or other transfer devices for feeding to the electrochemical reduction cells. A major design concern is to avoid contamination of the aqueous stream with certain metal ions. For those parts in contact with the process stream, the system is constructed of equipment made of or protected by materials such as glass, fluorocarbon polymers, polyphenyl sulfate, polyether sulfone, and resin-impregnated graphite.

(ii) Especially designed or prepared systems at the product end of the cascade for taking the U+4 out of the organic stream, adjusting the acid concentration and feeding to the electrochemical reduction cells.

These systems consist of solvent extraction equipment for stripping the U+4 from the organic stream into an aqueous solution, evaporation and/or other equipment to accomplish solution pH adjustment and control, and pumps or other transfer devices for feeding to the electrochemical reduction cells. A major design concern is to avoid contamination of the aqueous stream with certain metal ions. For those parts in contact with the process stream, the system is constructed of equipment made of or protected by materials such as glass, fluorocarbon polymers, polyphenyl sulfate, polyether sulfone, and resin-impregnated graphite.

(4) Feed preparation systems.

Especially designed or prepared systems for producing high-purity uranium chloride feed solutions for chemical exchange uranium isotope separation plants.

These systems consist of dissolution, solvent extraction and/or ion exchange equipment for purification and electrolytic cells for reducing the uranium U+6 or U+4 to U+3. These systems produce uranium chloride solutions having only a few parts per million of metallic impurities such as chromium, iron, vanadium, molybdenum and other bivalent or higher multi-valent cations. Materials of construction for portions of the system processing high-purity U+3 include glass, fluorocarbon polymers, polyphenyl sulfate or polyether sulfone plastic-

lined and resin-impregnated graphite.

(5) Uranium oxidation systems.

Especially designed or prepared systems for oxidation of U+3 to U+4 for return to the uranium isotope separation cascade in the chemical exchange enrichment process.

These systems may incorporate equipment such as:

(i) Equipment for contacting chlorine and oxygen with the aqueous effluent from the isotope separation equipment and extracting the resultant U+4 into the stripped organic stream returning from the product end of the cascade; and

(ii) Equipment that separates water from hydrochloric acid so that the water and the concentrated hydrochloric acid may be reintroduced to the process at the proper locations.

B. In the solid-liquid ion-exchange process, enrichment is accomplished by uranium adsorption/desorption on a special, fast-acting, ion-exchange resin or adsorbent. A solution of uranium in hydrochloric acid and other chemical agents is passed through cylindrical enrichment columns containing packed beds of the adsorbent. For a continuous process, a reflux system is necessary to release the uranium from the adsorbent back in the liquid flow so that "product" and "tails" can be collected. This is accomplished with the use of suitable reduction/ oxidation chemical agents that are fully regenerated in separate external circuits and that may be partially regenerated within the isotopic separation columns themselves. The presence of hot concentrated hydrochloric acid solutions in the process requires that the equipment be made of or protected by special corrosion-resistant materials.

(1) Fast reacting ion exchange resins/adsorbents.

Especially designed or prepared for uranium enrichment using the ion exchange process, including porous macroreticular resins, and/or pellicular structures in which the active chemical exchange groups are limited to a coating on the surface of an inactive porous support structure, and other composite structures in any suitable form including particles or fibers. These ion exchange resins/adsorbents have diameters of 0.2 mm or less and must be chemically resistant to concentrated hydrochloric acid solutions as well as physically strong enough so as not to degrade in the exchange columns. The resins/adsorbents are especially designed to achieve very fast uranium isotope exchange kinetics (exchange rate half-time of less than 10 seconds) and are capable of operating at a temperature in the range of 100ºC to 200ºC.

(2) Ion exchange columns.

Cylindrical columns greater than 1000 mm in diameter for containing and supporting packed beds of ion exchange resin/adsorbent, especially designed or prepared for uranium enrichment using the ion exchange process. These columns are made of or protected by materials (such as titanium or fluorocarbon plastics) resistant to corrosion by concentrated hydrochloric acid solutions and are capable of operating at a temperature in the range of 100ºC to 200ºC and pressures above 0.7 MPa (102 psia).

(3) Ion exchange reflux systems.

(i) Especially designed or prepared chemical or electrochemical reduction systems for regeneration of the chemical reducing agent(s) used in ion exchange uranium enrichment cascades.

The ion exchange enrichment process may use, for example, trivalent titanium (Ti+3) as a reducing cation in which case the reduction system would regenerate Ti+3 by reducing Ti+4.

(ii) Especially designed or prepared chemical or electrochemical oxidation systems for regeneration of the chemical oxidizing agent(s) used in ion exchange uranium enrichment cascades.

The ion exchange enrichment process may use, for example, trivalent iron (Fe+3) as an oxidant in which case the oxidation system would regenerate Fe+3 by oxidizing Fe+2.

[61 FR 35604, July 8, 1996]

Appendix F to Part 110--Illustrative List of Laser-Based Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

[Top of File]

Note--Present systems for enrichment processes using lasers fall into two categories: the process medium is atomic uranium vapor and the process medium is the vapor of a uranium compound. Common nomenclature for these processes include: first category-atomic vapor laser isotope separation (AVLIS or SILVA); second category-molecular laser isotope separation (MLIS or MOLIS) and chemical reaction by isotope selective laser activation (CRISLA). The systems, equipment and components for laser enrichment plants include: (a) Devices to feed uranium-metal vapor for selective photo-ionization or devices to feed the vapor of a uranium compound for photo-dissociation or chemical activation; (b) devices to collect enriched and depleted uranium metal as "product" and "tails" in the first category, and devices to collect dissociated or reacted compounds as "product" and unaffected material as 'tails' in the second category; (c) process laser systems to selectively excite the uranium-235 species; and (d) feed preparation and product conversion equipment. The complexity of the

spectroscopy of uranium atoms and compounds may require incorporation of a number of available laser technologies.

All surfaces that come into contact with the uranium or UF6 are wholly made of or protected by corrosion-resistant materials. For laser-based enrichment items, the materials resistant to corrosion by the vapor or liquid of uranium metal or uranium alloys include yttria-coated graphite and tantalum; and the materials resistant to corrosion by UF6 include copper, stainless steel, aluminum, aluminum alloys, nickel or alloys containing 60% or more nickel and UF6-resistant fully fluorinated hydrocarbon polymers.

Many of the following items come into direct contact with uranium metal vapor or liquid or with process gas consisting of UF6 or a mixture of UF6 and other gases:

(1) Uranium vaporization systems (AVLIS).

Especially designed or prepared uranium vaporization systems that contain high-power strip or scanning electron beam guns with a delivered power on the target of more than 2.5 kW/cm.

(2) Liquid uranium metal handling systems (AVLIS).

Especially designed or prepared liquid metal handling systems for molten uranium or uranium alloys, consisting of crucibles and cooling equipment for the crucibles.

The crucibles and other system parts that come into contact with molten uranium or uranium alloys are made of or protected by materials of suitable corrosion and heat resistance, such as tantalum, yttria-coated graphite, graphite coated with other rare earth oxides or mixtures thereof.

(3) Uranium metal "product" and "tails" collector assemblies (AVLIS).

Especially designed or prepared "product" and "tails" collector assemblies for uranium metal in liquid or solid form.

Components for these assemblies are made of or protected by materials resistant to the heat and corrosion of uranium metal vapor or liquid, such as yttria-coated graphite or tantalum, and may include pipes, valves, fittings, "gutters", feed-throughs, heat exchangers and collector plates for magnetic, electrostatic or other separation methods.

(4) Separator module housings (AVLIS).

Especially designed or prepared cylindrical or rectangular vessels for containing the uranium metal vapor source, the electron beam gun, and the "product" and "tails" collectors.

These housings have multiplicity of ports for electrical and water feed-throughs, laser beam windows, vacuum pump connections and instrumentation diagnostics and monitoring with opening and closure provisions to allow refurbishment of internal components.

(5) Supersonic expansion nozzles (MLIS).

Especially designed or prepared supersonic expansion nozzles for cooling mixtures of UF6 and carrier gas to 150 K or less which are corrosion resistant to UF6.

(6) Uranium pentafluoride product collectors (MLIS).

Especially designed or prepared uranium pentafluoride (UF5) solid product collectors consisting of filter, impact, or cyclone-type collectors, or combinations thereof, which are corrosion resistant to the UF5/UF6 environment.

(7) UF6/carrier gas compressors (MLIS).

Especially designed or prepared compressors for UF6/carrier gas mixtures, designed for long term operation in a UF6 environment. Components of these compressors that come into contact with process gas are made of or protected by materials resistant to UF6 corrosion.

(8) Rotary shaft seals (MLIS).

Especially designed or prepared rotary shaft seals, with seal feed and seal exhaust connections, for sealing the shaft connecting the compressor rotor with the driver motor to ensure a reliable seal against out-leakage of process gas or in-leakage of air or seal gas into the inner chamber of the compressor which is filled with a UF6/carrier gas mixture.

(9) Fluorination systems (MLIS).

Especially designed or prepared systems for fluorinating UF5 (solid) to UF6 (gas).

These systems are designed to fluorinate the collected UF5 powder to UF6 for subsequent collection in product containers or for transfer as feed to MLIS units for additional enrichment. In one approach, the fluorination reaction may be accomplished within the isotope separation system to react and recover directly off the "product" collectors. In another approach, the UF5 powder may be removed/transferred from

the "product" collectors into a suitable reaction vessel (e.g., fluidized-bed reactor, screw reactor or flame tower) for fluorination. In both approaches equipment is used for storage and transfer of fluorine (or other suitable fluorinating agents) and for collection and transfer of UF6.

(10) UF6 mass spectrometers/ion sources (MLIS).

Especially designed or prepared magnetic or quadrupole mass spectrometers capable of taking "on-line" samples of feed, "product" or "tails", from UF6 gas streams and having all of the following characteristics:

(i) Unit resolution for mass greater than 320;

(ii) Ion sources constructed of or lined with nichrome or monel or nickel plated;

(iii) Electron bombardment ionization sources; and

(iv) Collector system suitable for isotopic analysis.

(11) Feed systems/product and tails withdrawal systems (MLIS).

Especially designed or prepared process systems or equipment for enrichment plants made of or protected by materials resistant to corrosion by UF6, including:

(i) Feed autoclaves, ovens, or systems used for passing UF6 to the enrichment process;

(ii) Desublimers (or cold traps) used to remove UF6 from the enrichment process for subsequent transfer upon heating;

(iii) Solidification or liquefaction stations used to remove UF6 from the enrichment process by compressing and converting UF6 to a liquid or solid; and

(iv) "Product" or "tails" stations used to transfer UF6 into containers.

(12) UF6/carrier gas separation systems (MLIS).

Especially designed or prepared process systems for separating UF6 from carrier gas. The carrier gas may be nitrogen, argon, or other gas.

These systems may incorporate equipment such as:

(i) Cryogenic heat exchangers or cryoseparators capable of temperatures of -120ºC or less;

(ii) Cryogenic refrigeration units capable of temperatures of -120ºC or less; or

(iii) UF6 cold traps capable of temperatures of -20ºC or less.

(13) Lasers or Laser systems (AVLIS, MLIS and CRISLA).

Especially designed or prepared for the separation of uranium isotopes. The laser system for the AVLIS process usually consists of two lasers: a copper vapor laser and a dye laser. The laser system for MLIS usually consists of a CO_2 or excimer laser and a multi-pass optical cell with revolving mirrors at both ends. Lasers or laser systems for both processes require a spectrum frequency stabilizer for operation over extended periods.

[61 FR 35605, July 8, 1996]

Appendix G to Part 110--Illustrative List of Plasma Separation Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

[Top of File]

Note--In the plasma separation process, a plasma of uranium ions passes through an electric field tuned to the 235U ion resonance frequency so that they preferentially absorb energy and increase the diameter of their corkscrew-like orbits. Ions with a large-diameter path are trapped to produce a product enriched in 235U. The plasma, made by ionizing uranium vapor, is contained in a vacuum chamber with a high-strength magnetic field produced by a superconducting magnet. The main technological systems of the process include the uranium plasma generation system, the separator module with superconducting magnet, and metal removal systems for the collection of "product" and "tails".

(1) Microwave power sources and antennae.

Especially designed or prepared microwave power sources and antennae for producing or accelerating ions having the following characteristics: greater than 30 GHz frequency and greater than 50 kW mean power output for ion production.

(2) Ion excitation coils.

Especially designed or prepared radio frequency ion excitation coils for frequencies of more than 100 kHz and capable of handling more than 40 kW mean power.

(3) Uranium plasma generation systems.

Especially designed or prepared systems for the generation of uranium plasma, which may contain high power strip or scanning electron beam guns with a delivered power on the target of more than 2.5 kW/cm.

(4) Liquid uranium metal handling systems.

Especially designed or prepared liquid metal handling systems for molten uranium or uranium alloys, consisting of crucible and cooling equipment for the crucibles.

The crucibles and other system parts that come into contact with molten uranium or uranium alloys are made of or protected by corrosion and heat resistance materials, such as tantalum, yttria-coated graphite, graphite coated with other rare earth oxides or mixtures thereof.

(5) Uranium metal "product" and "tails" collector assemblies.

Especially designed or prepared "product" and "tails" collector assemblies for uranium metal in solid form. These collector assemblies are made of or protected by materials resistant to the heat and corrosion of uranium metal vapor, such as yttria-coated graphite or tantalum.

(6) Separator module housings.

Especially designed or prepared cylindrical vessels for use in plasma separation enrichment plants for containing the uranium plasma source, radio-frequency drive coil and the "product" and "tails" collectors.

These housings have a multiplicity of ports for electrical feed-throughs, diffusion pump connections and instrumentation diagnostics and monitoring. They have provisions for opening and closure to allow for refurbishment of internal components and are constructed of a suitable non-magnetic material such as stainless steel.

[61 FR 35606, July 8,1996]

Appendix H to Part 110--Illustrative List of Electromagnetic Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

[Top of File]

Note--In the electromagnetic process, uranium metal ions produced by ionization of a salt feed material (typically UCL4) are accelerated and passed through a magnetic field that has the effect of causing the ions of different isotopes to follow different paths. The major components of an electromagnetic isotope separator include: a magnetic field for ion-beam diversion/separation of the isotopes, an ion source with its acceleration system, and a collection system for the separated ions. Auxiliary systems for the process include the magnet power supply system, the ion source high-voltage power supply system, the vacuum system, and extensive chemical handling systems for recovery of product and cleaning/recycling of components.

(1) Electromagnetic isotope separators.

Especially designed or prepared for the separation of uranium isotopes, and equipment and components therefor, including:

(i) Ion Sources--especially designed or prepared single or multiple uranium ion sources consisting of a vapor source, ionizer, and beam accelerator, constructed of materials such as graphite, stainless steel, or copper, and capable of providing a total ion beam current of 50 mA or greater;

(ii) Ion collectors--collector plates consisting of two or more slits and pockets especially designed or prepared for collection of enriched and depleted uranium ion beams and constructed of materials such as graphite or stainless steel;

(iii) Vacuum housings--especially designed or prepared vacuum housings for uranium electromagnetic separators, constructed of suitable non-magnetic materials such as stainless steel and designed for operation at pressures of 0.1 Pa or lower.

The housings are specially designed to contain the ion sources, collector plates and water-cooled liners and have provision for diffusion pump connections and opening and closure for removal and reinstallation of these components; and

(iv) Magnet pole pieces--especially designed or prepared magnet pole pieces having a diameter greater than 2 m used to maintain a constant magnetic field within an electromagnetic isotope separator and to transfer the magnetic field between adjoining separators.

(2) High voltage power supplies.

Especially designed or prepared high-voltage power supplies for ion sources, having all of the following characteristics:

(i) Capable of continuous operation;

(ii) Output voltage of 20,000 V or greater;

(iii) Output current of 1 A or greater; and

(iv) Voltage regulation of better than 0.01% over an 8 hour time period.

(3) Magnet power supplies.

Especially designed or prepared high-power, direct current magnet power supplies having all of the following characteristics:

(i) Capable of continuously producing a current output of 500 A or greater at a voltage of 100 V or greater; and

(ii) A current or voltage regulation better than 0.01% over an 8 hour time period.

[61 FR 35606, July 8, 1996]

Appendix I to Part 110--Illustrative List of Reprocessing Plant Components Under NRC Export Licensing Authority

[Top of File]

Note--Reprocessing irradiated nuclear fuel separates plutonium and uranium from intensely radioactive fission products and other transuranic elements. Different technical processes can accomplish this separation. However, over the years Purex has become the most commonly used and accepted process. Purex involves the dissolution of irradiated nuclear fuel in nitric acid, followed by separation of the uranium, plutonium, and fission products by solvent extraction using a mixture of tributyl phosphate in an organic diluent.

Purex facilities have process functions similar to each other, including: irradiated fuel element chopping, fuel dissolution, solvent extraction, and process liquor storage. There may also be equipment for thermal denitration of uranium nitrate, conversion of plutonium nitrate to oxide metal, and treatment of fission product waste liquor to a form suitable for long term storage or disposal. However, the specific type and configuration of the equipment performing these functions may differ between Purex facilities for several reasons, including the type and quantity of irradiated nuclear fuel to be reprocessed and the intended disposition of the recovered materials, and the safety and maintenance philosophy incorporated into the design of the facility. A plant of the reprocessing of irradiated fuel elements, includes the equipment and components which normally come in direct contact with and directly control the irradiated fuel and the major nuclear material and fission product processing streams.

(1) Fuel element chopping machines, i.e., remotely operated equipment specially designed or prepared to cut, chop, or shear irradiated nuclear reactor fuel assemblies, bundles, or rods.

(2) Critically safe tanks, i.e., small diameter, annular or slab tanks specially designed or prepared for the dissolution of irradiated nuclear reactor fuel.

(3) Solvent extraction equipment.

Especially designed or prepared solvent extractors such as packed or pulse columns, mixer settlers or centrifugal contactors for use in a plant for the reprocessing of irradiated fuel. Because solvent extractors must be resistant to the corrosive effect of nitric acid, they are normally fabricated to extremely high standards (including special welding and inspection and quality assurance and quality control techniques) out of low carbon stainless steels, titanium, zirconium or other high quality materials.

(4) Chemical holding or storage vessels.

Especially designed or prepared holding or storage vessels for use in a plant for the reprocessing of irradiated fuel. Because holding or storage vessels must be resistant to the corrosive effect of nitric acid, they are normally fabricated of materials such as low carbon stainless steels, titanium or zirconium, or other high quality materials. Holding or storage vessels may be designed for remote operation and maintenance and may have the following features for control of nuclear criticality:

(i) Walls or internal structures with a boron equivalent of at least 2 percent, or

(ii) A maximum diameter of 7 inches (17.78 cm) for cylindrical vessels, or

(iii) A maximum width of 3 inches (7.62 cm) for either a slab or annular vessel.

(5) Plutonium nitrate to plutonium oxide conversion systems. Complete systems especially designed or prepared for the conversion of plutonium nitrate to plutonium oxide, in particular adapted so as to avoid criticality and radiation effects and to minimize toxicity hazards.

(6) Plutonium metal production systems. Complete systems especially designed or prepared for the production of plutonium metal, in particular adapted so as to avoid criticality and radiation effects and to minimize toxicity hazards.

(7) Process control instrumentation specially designed or prepared for monitoring or controlling the processing of material in a reprocessing plant.

[55 FR 30451, July 26, 1990, as amended at 58 FR 13005, Mar. 9, 1993. Redesignated at 61 FR 35603, July 8, 1996]

Appendix J to Part 110--Illustrative List of Uranium Conversion Plant Equipment and Plutonium Conversion Plant Equipment Under NRC Export Licensing Authority

[Top of File]

Note--Uranium conversion plants and systems may perform one or more transformations from one uranium chemical species to another, including: conversion of uranium ore concentrates to UO3, conversion of UO3 to UO2, conversion of uranium oxides to UF4 or UF6, conversion of UF4 to UF6, conversion of UF6 to UF4, conversion of UF4 to uranium metal, and conversion of uranium fluorides to UO2. Many key equipment items for uranium conversion plants are common to several segments of the chemical process industry, including furnaces, rotary kilns, fluidized bed reactors, flame tower reactors, liquid centrifuges, distillation columns and liquid-liquid extraction columns. However, few of the items are available "off-the-shelf"; most would be prepared according to customer requirements and specifications. Some require special design and construction considerations to address the corrosive properties of the chemicals handled (HF, F2, CLF3, and uranium fluorides). In all of the uranium conversion processes, equipment which individually is not especially designed or prepared for uranium conversion can be assembled into systems which are especially designed or prepared for uranium conversion.

(a) Uranium Conversion Plant Equipment

(1) Especially designed or prepared systems for the conversion of uranium ore concentrates to UO3.

Conversion of uranium ore concentrates to UO3 can be performed by first dissolving the ore in nitric acid and extracting purified uranyl nitrate using a solvent such as tributyl phosphate. Next, the uranyl nitrate is converted to UO3 either by concentration and denitration or by neutralization with gaseous ammonia to produce ammonium diuranate with subsequent filtering, drying, and calcining.

(2) Especially designed or prepared systems for the conversion of UO3 to UF6.

Conversion of UO3 to UF6 can be performed directly by fluorination. The process requires a source of fluorine gas or chlorine trifluoride.

(3) Especially Designed or Prepared Systems for the conversion of UO3 to UO2.

Conversion of UO3 to UO2 can be performed through reduction of UO3 with cracked ammonia gas or hydrogen.

(4) Especially Designed or Prepared Systems for the conversion of UO2 to UF4.

Conversion of UO2 to UF4 can be performed by reacting UO2 with hydrogen fluoride gas (HF) at 300-500ºC.

(5) Especially Designed or Prepared Systems for the conversion of UF4 to UF6.

Conversion of UF4 to UF6 is performed by exothermic reaction with fluorine in a tower reactor. UF6 is condensed from the hot effluent gases by passing the effluent stream through a cold trap cooled to -10ºC. The process requires a source of fluorine gas.

(6) Especially Designed or Prepared Systems for the conversion of UF4 to U metal.

Conversion of UF4 to U metal is performed by reduction with magnesium (large batches) or calcium (small batches). The reaction is carried out at temperatures above the melting point of uranium (1130ºC).

(7) Especially designed or prepared systems for the conversion of UF6 to UO2.

Conversion of UF6 to UO2 can be performed by one of three processes. In the first, UF6 is reduced and hydrolyzed to UO2 using hydrogen and steam. In the second, UF6 is hydrolyzed by solution in water, ammonia is added to precipitate ammonium diuranate, and the diuranate is reduced to UO2 with hydrogen at 820ºC. In the third process, gaseous UF6, CO2, and NH3 are combined in water, precipitating ammonium uranyl carbonate. The ammonium uranyl carbonate is combined with steam and hydrogen at 500-600ºC to yield UO2. UF6 to UO2 conversion is often performed as the first stage of a fuel fabrication plant.

(8) Especially Designed or Prepared Systems for the conversion of UF6 to UF4. Conversion of UF6 to UF4 is performed by reduction with hydrogen.

(9) Especially designed or prepared systems for the conversion of UO2 to UCl4 as feed for electromagnetic enrichment.

Note: Plutonium conversion plants and systems may perform one or more transformations from one plutonium chemical species to another, including: conversion of plutonium nitrate to PuO2, conversion of PuO2 to PuF4 and conversion of PuF4 to plutonium metal. Plutonium conversion plants are usually associated with reprocessing facilities, but may also be associated with plutonium fuel fabrication facilities. Many of the key equipment items for plutonium conversion plants are common to several segments of the chemical process industry. For example, the types of equipment employed in these processes may include the following items: furnaces, rotary kilns, fluidized bed reactors, flame tower reactors, liquid centrifuges, distillation columns and liquid-liquid extraction columns. Hot cells, glove boxes and remote manipulators may also be required. However, few of the items are available off-the-shelf; most would be prepared according to the requirements and specifications of the customer. Particular care is essential in designing for the special radiological, toxicity and criticality hazards associated with plutonium. In some circumstances, special design and construction considerations are required to address the corrosive properties of some of the chemicals handled (e.g., HF). Finally, it should be noted that, for all plutonium conversion processes, items of equipment which individually are not especially designed or prepared for plutonium conversion can be assembled into systems that are especially designed or prepared for use in plutonium conversion.

(b) Plutonium Conversion Plant Equipment

(1) Especially designed or prepared systems for the conversion of plutonium nitrate to oxide.

The main functions involved in this process are: process feed storage and adjustment, precipitation and solid/liquor separation, calcination, product handling, ventilation, waste management, and process control. The process systems are particularly adapted so as to avoid criticality and radiation effects and to minimize toxicity hazards. In most reprocessing facilities, this process involves the conversion of plutoniumnitrate to plutonium dioxide. Other processes can involve the precipitation of plutonium oxalate or plutonium peroxide.

(2) Especially designed or prepared systems for plutonium metal production.

This process usually involves the fluorination of plutonium dioxide, normally with highly corrosive hydrogen fluoride, to produce plutonium fluoride, which is subsequently reduced using high purity calcium metal to produce metallic plutonium and a calcium fluoride slag. The main functions involved in this process are the following: fluorination (e.g., involving equipment fabricated or lined with a precious metal), metal reduction (e.g., employing ceramic crucibles), slag recovery, product handling, ventilation, waste management and process control. The process systems are particularly adapted so as to avoid criticality and radiation effects and to minimize toxicity hazards. Other processes include the fluorination of plutonium oxalate or plutonium peroxide followed by reduction to metal.

[61 FR 35606, July 8, 1996, as amended at 65 FR 70291, Nov. 22, 2000]

Appendix K to Part 110--Illustrative List of Equipment and Components Under NRC Export Licensing Authority for Use in a Plant for the Production of Heavy Water, Deuterium and Deuterium Compounds

[Top of File]

Note: Heavy water can be produced by a variety of processes. However, two processes have proven to be commercially viable: the water-hydrogen sulphide exchange process (GS process) and the ammonia-hydrogen exchange process.

A. The water-hydrogen sulphide exchange process (GS process) is based upon the exchange of hydrogen and deuterium between water and hydrogen sulphide within a series of towers which are operated with the top section cold and the bottom section hot. Water flows down the towers while the hydrogen sulphide gas circulates from the bottom to the top of the towers. A series of perforated trays are used to promote mixing between the gas and the water. Deuterium migrates to the water at low temperatures and to the hydrogen sulphide at high temperatures. Gas or water, enriched in deuterium, is removed from the first stage towers at the junction of the hot and cold sections and the process is repeated in subsequent stage towers. The product of the last stage, water enriched up to 30 percent in deuterium, is sent to a distillation unit to produce reactor grade heavy water; i.e., 99.75 percent deuterium oxide.

B. The ammonia-hydrogen exchange process can extract deuterium from synthesis gas through contact with liquid ammonia in the presence of a catalyst. The systhesis gas is fed into exchange towers and then to an ammonia converter. Inside the towers the gas flows from the bottom to the top while the liquid ammonia flows from the top to the bottom. The deuterium is stripped from the hydrogen in the systhesis gas and concentrated in the ammonia. The ammonia then flows into an ammonia cracker at the bottom of the tower while the gas flows into an ammonia converter at the top. Further enrichment takes place in subsequent stages and reactor-grade heavy water is produced through final distillation. The synthesis gas feed can be provided by an ammonia plant that can be constructed in association with a heavy water ammonia-hydrogen exchange plant. The ammonia-hydrogen exchange process can also use ordinary water as a feed source of deuterium.

C.1. Much of the key equipment for heavy water production plants using either the water-hydrogen sulphide exchange process (GS process) or the ammonia-hydrogen exchange process are common to several segments of the chemical and petroleum industries; particularly in small plants using the GS process. However, few items are available "off-the-shelf." Both processes require the handling of large quantities of flammable, corrosive and toxic fluids at elevated pressures. Thus, in establishing the design and operating standards for plants and equipment using these processes, careful attention to materials selection and specifications is required to ensure long service life with high safety and reliability factors. The choice is primarily a function of economics and need. Most equipment, therefore, is prepared to customer requirements.

In both processes, equipment which individually is not especially designed or prepared for heavy water production can be assembled into especially designed or prepared systems for producing heavy water. Examples of such systems are the catalyst production system used in the ammonia-hydrogen exchange process and the water distillation systems used for the final concentration of heavy water to reactor-

grade in either process.

C.2. Equipment especially designed or prepared for the production of heavy water utilizing either the water-hydrogen sulphide exchange process or the ammonia-hydrogen exchange process:

(i) Water-hydrogen Sulphide Exchange Towers

Exchange towers fabricated from carbon steel (such as ASTM A516) with diameters of 6 m (20 ft) to 9 m (30 ft), capable of operating at pressures greater than or equal to 2 MPa (300 psi) and with a corrosion allowance of 6mm or greater.

(ii) Blowers and Compressors

Single stage, low head (i.e., 0.2 MPa or 30 psi) centrifugal blowers or compressors for hydrogen-sulphide gas circulation (i.e., gas containing more than 70 percent H2S). The blowers or compressors have a throughput capacity greater than or equal to 56 m^3/second (120,000 SCFM) while operating at pressures greater than or equal to 1.8 MPa (260 psi) suction and have seals designed for wet H2S service.

(iii) Ammonia-Hydrogen Exchange Towers

Ammonia-hydrogen exchange towers greater than or equal to 35 m (114.3 ft) in height with diameters of 1.5 m (4.9 ft) to 2.5 m (8.2 ft) capable of operating at pressures greater than 15 MPa (2225 psi). The towers have at least one flanged, axial opening of the same diameter as the cylindrical part through which the tower internals can be inserted or withdrawn.

(iv) Tower Internals and Stage Pumps Used in the Ammonia-hydrogen Exchange Process.

Tower internals include especially designed stage contactors which promote intimate gas/liquid contact. Stage pumps include especially designed submersible pumps for circulation of liquid ammonia within a contacting stage internal to the stage towers.

(v) Ammonia Crackers Utilizing the Ammonia-hydrogen Exchange Process.

Ammonia crackers with operating pressures greater than or equal to 3 MPa (450 psi).

(vi) Infrared Absorption Analyzers

Infrared absorption analyzers capable of "on-line" hydrogen/deuterium ratio analysis where deuterium concentrations are equal to or greater than 90 percent.

(vii) Catalytic Burners Used in the Ammonia-hydrogen Exchange Process.

Catalytic burners for the conversion of enriched deuterium gas into heavy water.

(viii) Complete Heavy Water Upgrade Systems or Columns.

Complete heavy water upgrade systems or columns especially designed or prepared for the upgrade of heavy water to reactor-grade deuterium concentration. These systems, which usually employ water distillation to separate heavy water from light water, are especially designed or prepared to produce reactor-grade heavy water (i.e., typically 99.75% deuterium oxide) from heavy water feedstock of lesser concentration.

[58 FR 13005, Mar. 9, 1993. Redesignated at 61 FR 35603, July 8, 1996; 65 FR 70292, Nov. 22, 2000]

Appendix L to Part 110--Illustrative List of Byproduct Materials Under NRC Export/Import Licensing Authority[a]

[Top of File]

Actinium 225 (Ac 225)
Actinium 227 (Ac 227)
Actinium 228 (Ac 228)
Americium 241 (Am 241)
Americium 242m (Am 242m)
Americium 242 (Am 242)
Americium 243 (Am 243)
Antimony 124 (Sb 124)
Antimony 125 (Sb 125)
Antimony 126 (Sb 126)
Arsenic 73 (As 73)
Arsenic 74 (As 74)
Arsenic 76 (As 76)

Arsenic 77 (As 77)
Barium 131 (Ba 131)
Barium 133 (Ba 133)
Barium 140 (Ba 140)
Bismuth 207 (Bi 207)
Bismuth 210 (Bi 210)
Bromine 82 (Br 82)
Cadmium 109 (Cd 109)
Cadmium 113 (Cd 113)
Cadmium 115m (Cd 115m)
Cadmium 115 (Cd 115)
Calcium 45 (Ca 45)
Calcium 47 (Ca 47)
Californium 248 (Cf 248)
Californium 249 (Cf 249)
Californium 250 (Cf 250)
Californium 251 (Cf 251)
Californium 252 (Cf 252)
Californium 253 (Cf 253)
Californium 254 (Cf 254)
Carbon 14 (C 14)
Cerium 141 (Ce 141)
Cerium 143 (Ce 143)
Cerium 144 (Ce 144)
Cesium 131 (Cs 131)
Cesium 134m (Cs 134m)
Cesium 134 (Cs 134)
Cesium 135 (Cs 135)
Cesium 136 (Cs 136)
Cesium 137 (Cs 137)
Chlorine 36 (Cl 36)
Chlorine 38 (Cl 38)
Chromium 51 (Cr 51)
Cobalt 58m (Co 58m)
Cobalt 58 (Co 58)
Cobalt 60 (Co 60)
Copper 64 (Cu 64)
Curium 240 (Cm 240)
Curium 241 (Cm 241)
Curium 242 (Cm 242)
Curium 243 (Cm 243)
Curium 244 (Cm 244)
Curium 245 (Cm 245)
Curium 247 (Cm 247)
Dysprosium 165 (Dy 165)
Dysprosium 166 (Dy 166)
Einsteinium 252 (Es 252)
Einsteinium 253 (Es 253)
Einsteinium 254 (Es 254)
Einsteinium 255 (Es 255)
Erbium 169 (Er 169)
Erbium 171 (Er 171)
Europium 152 (Eu 152)
Europium 152 9.2 h (Eu 152 9.2 h)
Europium 152 13 yr (Eu 152 13 yr)
Europium 154 (Eu 154)
Europium 155 (Eu 155)
Fermium 257 (Fm 257)
Fluorine 18 (F 18)
Gadolinium 148 (Gd 148)
Gadolinium 153 (Gd 153)
Gadolinium 159 (Gd 159)
Gallium 72 (Ga 72)
Germanium 68 (Ge 68)
Germanium 71 (Ge 71)
Gold 198 (Au 198)
Gold 199 (Au 199)
Hafnium 172 (Hf 172)
Hafnium 181 (Hf 181)
Holmium 166m (Ho 166m)
Holmium 166 (Ho 166)
Hydrogen 3 (H 3)
Indium 113m (In 113m)
Indium 114m (In 114m)
Indium 115m (In 115m)
Indium 115 (In 115)
Iodine 125 (I 125)
Iodine 126 (I 126)

Iodine 129 (I 129)
Iodine 131 (I 131)
Iodine 132 (I 132)
Iodine 133 (I 133)
Iodine 134 (I 134)
Iodine 135 (I 135)
Iridium 192 (Ir 192)
Iridium 194 (Ir 194)
Iron 55 (Fe 55)
Iron 59 (Fe 59)
Krypton 85 (Kr 85)
Krypton 87 (Kr 87)
Lanthanum 140 (La 140)
Lead 210 (Pb 210)
Lutetium 177 (Lu 177)
Manganese 52 (Mn 52)
Manganese 54 (Mn 54)
Manganese 56 (Mn 56)
Mendelevium 258 (Md 258)
Mercury 197m (Hg 197m)
Mercury 197 (Hg 197)
Mercury 203 (Hg 203)
Molybdenum 99 (Mo 99)
Neodymium 147 (Nd 147)
Neodymium 149 (Nd 149)
Neptunium 235 (Np 235)
Neptunium 237 (Np 237)
Nickel 59 (Ni 59)
Nickel 63 (Ni 63)
Nickel 65 (Ni 65)
Niobium 93m (Nb 93m)
Niobium 94 (Nb 94)
Niobium 95 (Nb 95)
Niobium 97 (Nb 97)
Osmium 185 (Os 185)
Osmium 191m (Os 191m)
Osmium 191 (Os 191)
Osmium 193 (Os 193)
Palladium 103 (Pd 103)
Palladium 109 (Pd 109)
Phosphorus 32 (P 32)
Phosphorus 33 (P 33)
Platinum 191 (Pt 191)
Platinum 193m (Pt 193m)
Platinum 193 (Pt 193)
Platinum 197m(Pt 197m)
Platinum 197 (Pt 197)
Polonium 208 (Po 208)
Polonium 209 (Po 209)
Polonium 210 (Po 210)
Potassium 42 (K 42)
Praseodymium 142 (Pr 142)
Praseodymium 143 (Pr 143)
Promethium 145 (Pm 145)
Promethium 147 (Pm 147)
Promethium 149 (Pm 149)
Radium 223 (Ra 223)
Radium-226 (Ra-226)[b]
Rhenium 186 (Re 186)
Rhenium 188 (Re 188)
Rhodium 103m (Rh 103m)
Rhodium 105 (Rh 105)
Rubidium 86 (Rb 86)
Rubidium 87 (Rb 87)
Ruthenium 97 (Ru 97)
Ruthenium 103 (Ru 103)
Ruthenium 105 (Ru 105)
Ruthenium 106 (Ru 106)
Samarium 151 (Sm 151)
Samarium 153 (Sm 153)
Scandium 46 (Sc 46)
Scandium 47 (Sc 47)
Scandium 48 (Sc 48)
Selenium 75 (Se 75)
Silicon 31 (Si 31)
Silver 105 (Ag 105)
Silver 110m (Ag 110m)

Silver 111 (Ag 111)
Sodium 22 (Na 22)
Sodium 24 (Na 24)
Strontium 85 (Sr 85)
Strontium 89 (Sr 89)
Strontium 90 (Sr 90)
Strontium 91 (Sr 91)
Strontium 92 (Sr 92)
Sulphur 35 (S 35)
Tantalum 182 (Ta 182)
Technetium 96 (Tc 96)
Technetium 97m (Tc 97m)
Technetium 97 (Tc 97)
Technetium 99m (Tc 99m)
Technetium 99 (Tc 99)
Tellurium 125m (Te 125m)
Tellurium 127m (Te 127m)
Tellurium 127 (Te 127)
Tellurium 129m (Te 129m)
Tellurium 129 (Te 129)
Tellurium 131m (Te 131m)
Tellurium 132 (Te 132)
Terbium 160 (Tb 160)
Thallium 200 (Tl 200)
Thallium 201 (Tl 201)
Thallium 202 (Tl 202)
Thallium 204 (Tl 204)
Thulium 170 (Tm 170)
Thulium 171 (Tm 171)
Tin 113 (Sn 113)
Tin 123 (Sn 123)
Tin 125 (Sn 125)
Tin 126 (Sn 126)
Titanium 44 (Ti 44)
Tritium (H3)
Tungsten 181 (W 181)
Tungsten 185 (W 185)
Tungsten 187 (W 187)
Vanadium 48 (V 48)
Xenon 131m (Xe 131m)
Xenon 133 (Xe 133)
Xenon 135 (Xe 135)
Ytterbium 175 (Yb 175)
Yttrium 90 (Y 90)
Yttrium 91 (Y 91)
Yttrium 92 (Y 92)
Yttrium 93 (Y 93)
Zinc 65 (Zn 65)
Zinc 69m (Zn 69m)
Zinc 69 (Zn 69)
Zirconium 93 (Zr 93)
Zirconium 95 (Zr 95)
Zirconium 97 (Zr 97)

[58 FR 13005, Mar. 9, 1993, as amended at 59 FR 48998, Sept. 26, 1994. Redesignated and amended at 61 FR 35603, 35607, July 8, 1996; 65 FR 70292, Nov. 22, 2000; 71 FR 20339, Apr. 20, 2006]

[a] Any accelerator-produced material produced, extracted, or converted for use for a commercial, medical, or research activity.

[b] Discrete sources of radium-226 (Ra-226).

Appendix M to Part 110--Categorization of Nuclear Material[d]

[Top of File]

[From IAEA INFCIRC/225, REV. 1]

Material	Form	Category		
		I	II	III[e]

1. Plutonium[a]	Unirradiated[b]	2 kg or more	Less than 2 kg but more than 500 g	500 g or less.
2. Uranium -235[c]	Unirradiated:[b] Uranium enriched to 20 pct U^{235} or more	5 kg or more	Less than 5 kg but more than 1 kg	1 kg or less.
	Uranium enriched to 10 pct U^{235} but less than 20 pct.		10 kg or more	Less than 10 kg.
	Uranium enriched above natural, but less than 10 pct U^{235}			10 kg or more.
3. Uranium-233	Unirradiated[b]	2 kg or more	Less than 2 kg but more than 500 g	500 g or less

[a] All plutonium except that with isotopic concentration exceeding 80 pct in plutonium-238.

[b] Material not irradiated in a reactor or material irradiated in a reactor but with a radiation level equal to or less than 100 rd/h at 1 m unshielded.

[c] Natural uranium, depleted uranium, thorium and quantities of uranium enriched to less than 10% not falling into Category III should be protected in accordance with prudent management practice.

[d] Irradiated fuel should be protected as category I, II, or III nuclear material depending on the category of the fresh fuel. However, fuel which by virtue of its original fissile material content is included as category I or II before irradiation should only be reduced one category level, while the radiation level from the fuel exceeds 100 rd/h at 1 m unshielded.

[e] Physical security determinations will not be required for 15 g or less of plutonium, uranium-233 or high-enriched uranium, or for 1 kg or less of uranium with an enrichment between 10 and 20 pct in uranium-235.

(Sec. 161, as amended, Pub. L. 83-703, 68 Stat. 948 (42 U.S.C. 2201); sec. 201, as amended, Pub. L. 93-438, 88 Stat. 1243 (42 U.S.C. 5841))

[43 FR 21641, May 19, 1978. Redesignated and amended at 49 FR 47204, Dec. 3, 1984. Further redesignated at 55 FR 30450, July 26, 1990; 58 FR 13005, Mar. 9, 1993; 61 FR 35603, July 8, 1996]

Appendix N to Part 110--Illustrative List of Lithium Isotope Separation Facilities, Plants and Equipment Under NRC's Export Licensing Authority

[Top of File]

a. Facilities or plants for the separation of lithium isotopes.

b. Equipment for the separation of lithium isotopes, such as:

(1) Packed liquid-liquid exchange columns especially designed for lithium amalgams;

(2) Mercury and/or lithium amalgam pumps;

(3) Lithium amalgam electrolysis cells;

(4) Evaporators for concentrated lithium hydroxide solution.

[65 FR 70292, Nov. 22, 2000]

Appendix O to Part 110--Illustrative List of Fuel Element Fabrication Plant Equipment and Components Under NRC's Export Licensing Authority

[Top of File]

Note: Nuclear fuel elements are manufactured from source or special nuclear material. For oxide fuels, the most common type of fuel equipment for pressing pellets, sintering, grinding and grading will be present. Mixed oxide fuels are handled in glove boxes (or equivalent containment) until they are sealed in the cladding. In all cases the fuel is hermetically sealed inside a suitable cladding which is designed to be the primary envelope encasing the fuel so as to provide suitable performance and safety during reactor operation. Also, in all cases precise control of processes, procedures and equipment to extremely high standards is necessary in order to ensure predictable and safe fuel performance.

(a) Items that are considered especially designed or prepared for the fabrication of fuel elements include equipment that:

(1) Normally comes in direct contact with, or directly processes or controls, the production flow of nuclear material;

(2) Seals the nuclear material within the cladding;

(3) Checks the integrity of the cladding or the seal; and

(4) Checks the finished treatment of the sealed fuel.

(b) This equipment or systems of equipment may include, for example:

(1) Fully automatic pellet inspection stations especially designed or prepared for checking final dimensions and surface defects of fuel pellets;

(2) Automatic welding machines especially designed or prepared for welding end caps onto the fuel pins (or rods);

(3) Automatic test and inspection stations especially designed or prepared for checking the integrity of completed fuel pins (or rods). This item typically includes equipment for:

(i) X-ray examination of pin (or rod) end cap welds;

(ii) Helium leak detection from pressurized pins (or rods); and

(iii) Gamma-ray scanning of the pins (or rods) to check for correct loading of the fuel pellets inside.

[65 FR 70292, Nov. 22, 2000]

Appendix P to Part 110--Category 1 and 2 Radioactive Material

[Top of File]

TABLE 1.--IMPORT AND EXPORT THRESHOLD LIMITS

Radioactive material	Category 1		Category 2	
	Terabequerels (TBq)	Curies (Ci)[1]	Terabequerels (TBq)	Curies (Ci)[1]
Americium-241	60	1,600	0.6	16
Americium-241/Be	60	1,600	0.6	16
Californium-252	20	540	0.2	5.4
Curium-244	50	1,400	0.5	14
Cobalt-60	30	810	0.3	8.1
Cesium-137	100	2,700	1.0	27
Gadolinium-153	1,000	27,000	10.0	270
Iridium-192	80	2,200	0.8	22
Plutonium-238[2]	60	1,600	0.6	16
Plutonium-239/Be[2]	60	1,600	0.6	16
Promethium-147	40,000	1,100,000	400	11,000
Radium-226[a]	40	1,100	0.4	11
Selenium-75	200	5,400	2.0	54
Strontium-90 (Y-90)	1,000	27,000	10.0	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3.0	81

[1] The values to be used to determine whether a license is required are given in TBq. Curie (Ci) values are provided for practical usefulness only and are rounded after conversion.

[2] The limits for Pu-238 and Pu-239/Be in this table apply for imports to the U.S. The limits for exports of Pu-238 and Pu-239/Be can be found in § 110.21.

[a] Discrete sources of radium-226.

Calculation of Shipments Containing Multiple Sources or Radionuclides

The "sum of fractions" methodology for evaluating combinations of radionuclides being transported, is to be used when import or export shipments contain multiple sources or multiple radionuclides. The threshold limit values used in a sum of the fractions calculation must be the metric values (i.e., TBq).

I. If multiple sources and/or multiple radionuclides are present in an import or export shipment, the sum of the fractions of the activity of each radionuclides must be determined to verify the shipment is less than the Category 1 or 2 limits of Table 1, as appropriate. If the calculated sum of the fractions ratio, using the following equation, is greater than or equal to 1.0, then the import or export shipment exceeds the threshold limits of Table 1 and the applicable security provisions of this part apply.

II. Use the equation below to calculate the sum of the fractions ratio by inserting the actual activity of the applicable radionuclides or of the individual sources (of the same radionuclides) in the numerator of the equation and the corresponding threshold activity limit from the Table 1 in the denominator of the equation. Ensure the numerator and denominator values are in the same units and all calculations must be performed using the TBq (i.e., metric) values of Table 1.

R_1 = activity for radionuclides or source number 1

R_2 = activity for radionuclides or source number 2

R_N = activity for radionuclides or source number n

AR_1 = activity limit for radionuclides or source number 1

AR_2 = activity limit for radionuclides or source number 2

AR_N = activity limit for radionuclides or source number n

Equation to calculate the sum of the fractions ratio.

[70 FR 37993, July 1, 2005; 71 FR 20340, Apr. 20, 2006]

PART 140--FINANCIAL PROTECTION REQUIREMENTS AND INDEMNITY AGREEMENTS

[Top of File]

Subpart A--General Provisions

[Top of File]

§ 140.1 Purpose.

The regulations in this part are issued to provide appropriate procedures and requirements for determining:

(a) The financial protection required of licensees and for the indemnification and limitation of liability of certain licensees and other persons pursuant to section 170 of the Atomic Energy Act of 1954, as amended; and

(b) The liability insurance required of uranium enrichment facility licensees pursuant to section 193 of the Atomic Energy Act of 1954, as amended.

[57 FR 18394, Apr. 30, 1992]

§ 140.2 Scope.

[Top of File]

(a) The regulations in this part apply:

(1) To each person who is an applicant for or holder of a license issued under 10 CFR parts 50, 52, or 54 to operate a nuclear reactor, and

(2) With respect to an extraordinary nuclear occurrence, to each person who is an applicant for or holder of a license to operate a production facility or a utilization facility (including an operating license issued under part 50 of this chapter and a combined license under part 52 of this chapter), and to other persons indemnified with respect to the involved facilities.

(3) To each person licensed pursuant to part 70 of this chapter to possess and use plutonium in a plutonium processing and fuel fabrication plant.

(4) To each person licensed pursuant to parts 40 and 70 of this chapter to construct and operate a uranium enrichment facility.

(b)(1) Subpart B of this part does not apply to any person subject to subparts C or D of this part. Subpart C of this part applies only to persons found by the Commission to be Federal agencies. Subpart D of this part applies only to persons found by the Commission to be nonprofit educational institutions with respect to licenses and applications for licenses for the conduct of educational activities.

(2) Any applicant or licensee subject to this part may apply for a finding that such applicant or licensee is subject to the provisions of subparts C or D of this part. The application should state the grounds for the requested finding. Any application for a finding pursuant to this paragraph may be included in an application for license.

(c) Subpart E of this part sets forth the procedures the Commission will follow and the criteria the Commission will apply in making a determination as to whether or not there has been an extraordinary nuclear occurrence. The form of nuclear energy liability policy for facilities (appendix A) and the forms of indemnity agreements with licensees (appendices B, C, D, and E) include provisions requiring the waiver of certain defenses with respect to an extraordinary nuclear occurrence. These provisions and subpart E are incorporated in this part pursuant to Pub. L. 89-645 (80 Stat. 891). They provide additional assurance of prompt compensation under available indemnity and underlying financial protection for injury or damage resulting from the hazardous properties of radioactive materials or radiation, and they in no way detract from the protection to the public otherwise provided under this part.

[25 FR 2944, Apr. 7, 1960, as amended at 33 FR 15998, Oct. 31, 1968; 42 FR 48, Jan. 3, 1977; 56 FR 64980, Dec. 13, 1991; 57 FR 18394, Apr. 30, 1992; 72 FR 49564, Aug. 28, 2007]

§ 140.3 Definitions.

[Top of File]

As used in this part,

(a) *Act* means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto.

(b) *Commission* means the Nuclear Regulatory Commission or its duly authorized representatives.

(c) *Federal agency* means a Government agency such that any liability in tort based on the activities of such agency would be satisfied by funds appropriated by the Congress and paid out of the United States Treasury.

(d) *Financial protection* means the ability to respond in damages for public liability and to meet the cost of investigating and defending claims and settling suits for such damages.

(e) *Government agency* means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

(f) *Nuclear reactor* means any apparatus, other than an atomic weapon, designed or used to sustain nuclear fission in a self-supporting chain reaction.

(g) *Person* means: (1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department, except that the Department shall be considered a person within the meaning of the regulations in this part to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244), any State or any political subdivision thereof, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

(h) *Plutonium processing and fuel fabrication plant* means a plant in which the following operations or activities are conducted:

(1) Operations for manufacture of reactor fuel containing plutonium, where the license or licenses authorize the possession of either five or more kilograms of plutonium, excluding that contained in sealed sources and welded or otherwise sealed unirradiated or irradiated fuel rods, at the site of the plant or authorize the processing of one or more kilograms of plutonium, excluding that contained in sealed sources and welded or otherwise sealed unirradiated or irradiated fuel rods, at the plant, including any of the following processes: (i) Preparation of fuel material; (ii) formation of fuel material into desired shapes; (iii) application of protective cladding; (iv) recovery of scrap material; and (v) storage associated with such operations; or

(2) Research and development activities involving any of the operations described in paragraph (h)(1) of this section, except for research and development activities where the operator is licensed to possess or use plutonium in amounts less than those specified in paragraph (h)(1).

(i) *Source material* means source material as defined in the regulations contained in part 40 of this chapter.

(j) *Special nuclear material* means: (1) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artifically enriched by any of the foregoing, but does not include source material.

(k) *Testing reactor* means a nuclear reactor which is of a type described in § 50.21(c) of this chapter and for which an application has been filed for a license authorizing operation at:

(1) A thermal power level in excess of 10 megawatts; or

(2) A thermal power level in excess of 1 megawatt, if the reactor is to contain:

(i) A circulating loop through the core in which the applicant proposes to conduct fuel experiments; or

(ii) A liquid fuel loading; or

(iii) An experimental facility in the core in excess of 16 square inches in cross-section.

(l) *Department* means the Department of Energy established by the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565, 42 U.S.C. 7101 et seq.), to the extent that the Department, or its duly authorized representatives, exercises functions formerly vested in the U.S. Atomic Energy Commission, its Chairman, members, officers and components and transferred to the U.S. Energy Research and Development Administration and to the Administrator thereof pursuant to sections 104 (b), (c) and (d) of the Energy Reorganization Act of 1974 (Pub. L. 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the Secretary of Energy pursuant to section 301(a) of the Department of Energy Organization Act (Pub. L. 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

(m) *Uranium enrichment facility* means:

(1) Any facility used for separating the isotopes of uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for such equipment or device, capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

[25 FR 2944, Apr. 7, 1960, as amended at 40 FR 8793, Mar. 3, 1975; 42 FR 48, Jan. 3, 1977; 45 FR 14201, Mar. 5, 1980; 57 FR 18394,

Apr. 30, 1992]

§ 140.4 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretations of the meaning of the regulations in this part by any officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 140.5 Communications.

[Top of File]

Except where otherwise specified, all communications and reports concerning the regulations in this part and applications filed under them should be sent by mail addressed to: ATTN: Document Control Desk, Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD–ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/eie.html*, by calling (301) 415–6030, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[53 FR 6140, Mar. 1, 1988, as amended at 53 FR 43422, Oct. 27, 1988; 48 FR 58824, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 73 FR 5726, Jan. 31, 2008]

§ 140.6 Reports.

[Top of File]

(a) In the event of bodily injury or property damage arising out of or in connection with the possession or use of the radioactive material at the location or in the course of transportation, or in the event any claim is made therefor, written notice containing particulars sufficient to identify the licensee and reasonably obtainable information with respect to the time, place, and circumstances thereof, or to the nature of the claim, shall be furnished by or for the licensee to the Director, Office of Nuclear Reactor Regulation, Director, Office of New Reactors, Director, Office of Federal and State Materials and Environmental Management Programs, or Director, Office of Nuclear Material Safety and Safeguards, as appropriate, using an appropriate method listed in § 140.5, but in any case as promptly as practicable. The terms the radioactive material, the location, and in the course of transportation as used in this section shall have the meanings defined in the applicable indemnity agreement between the licensee and the Commission.

(b) The Commission may require any person subject to this part to keep such records and furnish such reports to the Commission as the Commission deems necessary for the administration of the regulations in this part.

[25 FR 2944, Apr. 7, 1960, as amended at 41 FR 16447, Apr. 19, 1976; 42 FR 49, Jan. 3, 1977; 68 FR 58824, Oct. 10, 2003; 73 FR 5726, Jan. 31, 2008]

§ 140.7 Fees.

[Top of File]

(a)(1) Each reactor licensee shall pay a fee to the Commission based on the following schedule:

(i) For indemnification from $500 million to $400 million inclusive, a fee of $30 per year per thousand kilowatts of thermal capacity authorized in the license;

(ii) For indemnification from $399 million to $300 million inclusive, a fee of $24 per year per thousand kilowatts of thermal capacity authorized in the license;

(iii) For indemnification from $299 million to $200 million inclusive, a fee of $18 per year per thousand kilowatts of thermal capacity authorized in the license;

(iv) For indemnification from $199 million to $100 million inclusive, a fee of $12 per year per thousand kilowatts of thermal capacity authorized in the license; and

(v) For indemnification from $99 million to $1 million inclusive, a fee of $6 per year per thousand kilowatts of thermal capacity authorized in the license.

(2) No fee will be less than $100 per annum for any nuclear reactor. This fee is for the period beginning with the date on which the applicable indemnity agreement is effective. The various levels of indemnity fees are set forth in the schedule in this paragraph. The amount of indemnification for determining indemnity fees will be computed by subtracting from the statutory limit of liability the amount of financial protection required of the licensee. In the case of licensees subject to the provision of § 140.11(a)(4), this total amount will be the amount, as determined by the Commission, of the financial protection available to licensees at the close of the calendar year preceding the one in which the fee becomes due. For those instances in which a certified financial statement is provided as a guarantee of payment of deferred premiums in accordance with § 140.21(e), a fee of $1,000 or the indemnity fee, whichever is greater, is required.

(b) Where a licensee manufactures a number of nuclear reactors each having a power level not exceeding $3\frac{1}{3}$ megawatts, for sale to others and operates them at the licensee's location temporarily prior to delivery, the licensee shall report to the Commission the maximum number of such reactors to be operated at that location at any one time. In such cases, the fee shall equal $100 multiplied by the number of reactors reported by the licensee. In the event the number of reactors operated at any one time exceed the estimate so reported, the licensee shall report the additional number of reactors to the Commission and additional charges will be made. If experience shows that less than the estimated number of reactors have been operated, appropriate adjustment in subsequent bills will be made by the Commission.

(c) Each person licensed to possess and use plutonium in a plutonium processing and fuel fabrication plant shall pay to the Commission a fee of $5,000 per year for indemnification. This fee is for the period beginning with the date on which the applicable indemnity agreement is effective.

(d) Indemnity fee payments, made payable to the U.S. Nuclear Regulatory Commission, are to be made in U.S. funds by check, draft, money order, credit card, or electronic funds transfer such as ACH (Automated Clearing House) using EDI (Electronic Data Interchange). Federal agencies may also make payments by the On-Line Payment and Collections System (OPAC's). Where specific payment instructions are provided on the invoices, payment should be made accordingly, e.g. invoices of $5,000 or more should be paid via ACH through NRC's Lockbox Bank at the address indicated on the invoice. Credit card payments should be made up to the limit established by the credit card bank, in accordance with specific instructions provided with the invoices, to the Lockbox Bank designated for credit card payments.

[25 FR 2944, Apr. 7, 1960, as amended at 42 FR 49, Jan. 3, 1977; 63 FR 31815, June 10, 1998]

§ 140.8 Specific exemptions.

[Top of File]

The Commission may, upon application of any interested person or upon its own initiative, grant such exemptions from the requirements of the regulations in this part as it determines are authorized by law and are otherwise in the public interest.

[34 FR 19546, Dec. 11, 1969]

§ 140.9 Modification of indemnity agreements.

[Top of File]

The Commission will publish in the Federal Register a notice of its intent to enter into an indemnity agreement, or agreement amending an indemnity agreement, which contains provisions different from the form of the applicable indemnity agreement set forth in the appendices to this part, as such appendices may be amended from time to time.

[48 FR 1030, Jan. 10, 1983]

§ 140.9a Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150090039.

(b) The approved information collection requirements contained in this part appear in §§ 140.6, 140.7, 140.13, 140.13a, 140.13b, 140.15, 140.17, 140.20, and 140.21.

[62 FR 52190, Oct. 6, 1977]

Subpart B--Provisions Applicable Only to Applicants and Licensees Other Than Federal Agencies and Nonprofit Educational Institutions

[Top of File]

§ 140.10 Scope.

This subpart applies to each person who is an applicant for or holder of a license issued under 10 CFR parts 50 or 54 to operate a nuclear reactor, or is the applicant for or holder of a combined license issued under parts 52 or 54 of this chapter, except licenses held by persons found by the Commission to be Federal agencies or nonprofit educational institutions licensed to conduct educational activities. This subpart also applies to persons licensed to possess and use plutonium in a plutonium processing and fuel fabrication plant.

[56 FR 64980, Dec. 13, 1991; 72 FR 49564, Aug. 28, 2007]

§ 140.11 Amounts of financial protection for certain reactors.

[Top of File]

(a) Each licensee is required to have and maintain financial protection:

(1) In the amount of $1,000,000 for each nuclear reactor he is authorized to operate at a thermal power level not exceeding ten kilowatts;

(2) In the amount of $1,500,000 for each nuclear reactor he is authorized to operate at a thermal power level in excess of ten kilowatts but not in excess of one megawatt;

(3) In the amount of $2,500,000 for each nuclear reactor other than a testing reactor or a reactor licensed under section 104b of the Act which he is authorized to operate at a thermal power level exceeding one megawatt but not in excess of ten megawatts; and

(4) In an amount equal to the sum of $300,000,000 and the amount available as secondary financial protection (in the form of private liability insurance available under an industry retrospective rating plan providing for deferred premium charges equal to the pro rata share of the aggregate public liability claims and costs, excluding costs payment of which is not authorized by section 170o.(1)(D) of the Act, in excess of that covered by primary financial protection) for each nuclear reactor which is licensed to operate and which is designed for the production of electrical energy and has a rated capacity of 100,000 electrical kilowatts or more: Provided, however, that under such a plan for deferred premium charges for each nuclear reactor which is licensed to operate, no more than $111,900,000 with respect to any nuclear incident (plus any surcharge assessed under subsection 170o.(1)(E) of the Act) and no more than $17,500,000 per incident within one calendar year shall be charged. *Except that*, where a person is authorized to operate a combination of 2 or more nuclear reactors located at a single site, each of which has a rated capacity of 100,000 or more electrical kilowatts but not more than 300,000 electrical kilowatts with a combined rated capacity of not more than 1,300,000 electrical kilowatts, each such combination of reactors shall be considered to be a single nuclear reactor for the sole purpose of assessing the applicable financial protection required under this section.

(b) In any case where a person is authorized under parts 50, 52, or 54 of this chapter to operate two or more nuclear reactors at the same location, the total primary financial protection required of the licensee for all such reactors is the highest amount which would otherwise be required for any one of those reactors; provided, that such primary financial protection covers all reactors at the location.

[25 FR 2944, Apr. 7, 1960, as amended at 34 FR 706, Jan. 17, 1969; 37 FR 3423, Feb. 16, 1972; 39 FR 5310, Feb. 12, 1974; 40 FR 7082, Feb. 19, 1975; 42 FR 49, Jan. 3, 1977; 42 FR 20140, Apr. 18, 1977; 44 FR 20632, Apr. 6, 1979; 54 FR 24158, June 6, 1989; 58 FR 42852, Aug. 12, 1993; 63 FR 39016, July 21, 1998; 68 FR 46930, Aug. 7, 2003; ; 70 FR 61888, Oct. 27, 2005; 72 FR 49565, Aug. 28, 2007; 73 FR 56452, Sep. 29, 2008]

§ 140.12 Amount of financial protection required for other reactors.

[Top of File]

(a) Each licensee is required to have and maintain financial protection for each nuclear reactor for which the amount of financial protection is not determined in § 140.11, in an amount determined pursuant to the formula and other provisions of this section: *Provided*, That in no event shall the amount of financial protection required for any nuclear reactor under this section be less than $4,500,000 or more than $74,000,000.

(b)(1) The formula is:

x=B times P.

(2) In the formula:

x=Amount of financial protection in dollars.
B=Base amount of financial protection.
P=Population factor.

(3) The base amount of financial protection is equal to $185 times the maximum power level, expressed in thermal kilowatts, as authorized by the applicable license.

(4) The population factor (P) shall be determined as follows:

(i) *Step 1*. The area to be considered includes all minor civil divisions (as shown in the 1950 Census of Population, Bureau of the Census, or later data available from the Bureau) which are wholly or partly within a circle with the facility at its center and having a radius in miles equal to the square root of the maximum authorized power level in thermal megawatts.

(ii) *Step 2*. Identify all minor civil divisions according to the same census which are in whole or in part within the circle determined in Step 1. Determine the population of each such minor civil division (according to the same census or later data available from the Bureau of the Census). For each minor civil division, divide its population by the square of the estimated distance to the nearest mile from the reactor to the geographic center of the minor civil division: *Provided*, That no such distance shall be deemed to be less than one mile. If the sum of the quotients thus obtained for all minor civil divisions wholly or partly within the circle is 1,000 or less, the population factor is 1. If the sum of these quotients is more than 1,000 but not more than 3,000, the population factor is 1.2. If the sum of these quotients is more than 3,000 but not more than 5,000, the population factor is 1.4. If the sum of these quotients is more than 5,000 but not more than 7,000, the population factor is 1.6. If the sum of these quotients is more than 7,000 but not more than 9,000, the population factor is 1.8. If the sum of these quotients is more than 9,000 the population factor is 2.0.

(c) In any case where a person is authorized under parts 50, 52, or 54 of this chapter to operate two or more nuclear reactors at the same location, the total financial protection required of the licensee for all such reactors is the highest amount which would otherwise be required for any one of those reactors; provided, that such financial protection covers all reactors at the location.

(d) Except in cases where the amount of financial protection calculated under this section is a multiple of $100,000, amounts determined pursuant to this section shall be adjusted to the next highest multiple of $100,000.

[25 FR 2944, Apr. 7, 1960, as amended at 26 FR 1397, Feb. 17, 1961; 32 FR 8125, June 7, 1967; 72 FR 49565, Aug. 28, 2007]

§ 140.13 Amount of financial protection required of certain holders of construction permits and combined licenses under 10 CFR part 52.

[Top of File]

Each holder of a part 50 construction permit, or a holder of a combined license under part 52 of this chapter before the date that the Commission had made the finding under 10 CFR 52.103(g), who also holds a license under part 70 of this chapter authorizing ownership, possession and storage only of special nuclear material at the site of the nuclear reactor for use as fuel in operation of the nuclear reactor after issuance of either an operating license under 10 CFR part 50 or combined license under 10 CFR part 52, shall, during the period before issuance of a license authorizing operation under 10 CFR part 50, or the period before the Commission makes the finding under § 52.103(g) of this chapter, as applicable, have and maintain financial protection in the amount of $1,000,000. Proof of financial protection shall be filed with the Commission in the manner specified in § 140.15 of this chapter before issuance of the license under part 70 of this chapter.

[25 FR 2944, Apr. 7, 1960, as amended at 32 FR 2563, Feb. 7, 1967; 72 FR 49565, Aug. 28, 2007]

§ 140.13a Amount of financial protection required for plutonium processing and fuel fabrication plants.

[Top of File]

(a) Each holder of a license issued pursuant to part 70 of this chapter to possess and use plutonium at a plutonium processing and fuel fabrication plant is required to have and maintain financial protection in the form specified in § 140.14 in the amount of $200,000,000. Proof of financial protection shall be filed with the Commission in the manner in § 140.15 prior to issuance of the license under part 70 of this chapter.

(b) In any case, when a person is authorized pursuant to part 70 of this chapter to possess and use plutonium at two or more plutonium processing and fuel fabrication plants at the same location, the total financial protection required of the licensee for all such plants is the highest amount which would otherwise be required for any one of those plants: Provided, however, That such financial protection covers all such plants at the location.

[42 FR 49, Jan. 3, 1977, as amended at 42 FR 20140, Apr. 18, 1977; 44 FR 20632, Apr. 6, 1979; 54 FR 24158, June 6, 1989]

§ 140.13b Amount of liability insurance required for uranium enrichment facilities.

[Top of File]

Each holder of a license issued under Parts 40 or 70 of this chapter for a uranium enrichment facility that involves the use of source material or special nuclear material is required to have and maintain liability insurance. The liability insurance must be the type and in the amounts the Commission considers appropriate to cover liability claims arising out of any occurrence within the United States that causes, within or outside the United States, bodily injury, sickness, disease, death, loss of or damage to property, or loss of use of property arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of chemical compounds containing source material or special nuclear material. Proof of liability insurance must be filed with the Commission as required by § 140.15 before issuance of a license for a uranium enrichment facility under parts 40 and 70 of this chapter.

[57 FR 18394, Apr. 30, 1992]

§ 140.14 Types of financial protection.

[Top of File]

(a) The amounts of financial protection required under this part may be furnished and maintained in the form of:

(1) An effective policy of liability insurance from private sources; or

(2) Adequate resources to provide the financial protection required by §§ 140.11, 140.12; 140.13 or § 140.13a; or

(3) Such other type of financial protection as the Commission may approve; or

(4) Any combination of the foregoing.

(b) In any case where the Commission has approved proof of financial protection filed by a licensee the licensee shall not substitute one type of financial protection for another type without first obtaining the written approval of the Commission.

[25 FR 2944, Apr. 7, 1960, as amended at 42 FR 49, Jan. 3, 1977]

§ 140.15 Proof of financial protection.

[Top of File]

(a)(1) Licensees who maintain financial protection in whole or in part in the form of liability insurance shall provide proof of financial protection that consists of a copy of the liability policy (or policies) together with a certificate by the insurers issuing the policy stating that the copy is a true copy of the currently effective policy issued to the licensee. The licensee may furnish proof of financial protection in the form of the nuclear energy liability insurance policy set forth in § 140.91 or in any other form acceptable to the Commission.

(2) Such proof may alternatively, consist of a copy of the declarations page of a nuclear energy liability policy in the form set forth in § 140.91 and issued to the licensee: *Provided*, That such policy form has been filed by the insurers with the Commission. The declarations page shall be accompanied by a certificate by the insurers stating that said copy is a true copy of the declarations page of a currently effective policy and identifying the policy (including endorsements) by reference to the policy form which has been filed by them with the Commission.

(3) The Commission will accept any other form of nuclear energy liability insurance as proof of financial protection if it determines that the provisions of such insurance provide financial protection under the requirements of the Commission's regulations and the Act.

(b) Proof of financial protection in the case of licensees who maintain financial protection in whole or in part in the form specified in § 140.14 (a)(2) shall consist of a showing that the licensee clearly has adequate resources to provide the financial protection required under this part. For this purpose the applicant or licensee shall file with the Commission:

(1) Annual financial statements for the three complete calendar or fiscal years preceding the date of filing, together with an opinion thereon by a certified public accountant. The financial statements shall include balance sheets, operating statements and such supporting schedules as may be needed for interpretation of the balance sheets and operating statements.

(2) If the most recent statements required under paragraph (b)(1) of this section have been prepared as of a date more than 90 days prior to the date of filing, similar financial statements, prepared as of a date not more than 90 days prior to the date of filing, should be included. These statements need not be reviewed by a certified public accountant.

(c) The Commission may require any licensee to file with the Commission such additional proof of financial protection or other financial information as the Commission determines to be appropriate for the purpose of determining whether the licensee is maintaining financial protection as required under this part.

(d) Proof of financial protection shall be subject to the approval of the Commission.

(e) The licensee shall promptly notify the Commission of any material change in proof of financial protection or in other financial information filed with the Commission under this part.

[25 FR 2944, Apr. 7, 1960, as amended at 33 FR 15999, Oct. 31, 1968; 49 FR 11148, Mar. 26, 1984]

§ 140.16 Commission review of proof of financial protection.

[Top of File]

The Commission will review proof of financial protection filed by any licensee or applicant for license. If the Commission finds that the

licensee or applicant for license is maintaining financial protection in accordance with the requirements of this part, approval of the financial protection will be evidenced by incorporation of appropriate provision in the license.

§ 140.17 Special provisions applicable to licensees furnishing financial protection in whole or in part in the form of liability insurance.

[Top of File]

In any case where a licensee undertakes to maintain financial protection in the form of liability insurance for all or part of the financial protection required by this part,

(a) The Commission may require proof that the organization or organizations which have issued such policies are legally authorized to issue them and do business in the United States and have clear ability to meet their obligations; and

(b) At least 30 days prior to the termination of any such policy, the licensee shall notify the Commission of the renewal of such policy or shall file other proof of financial protection.

§ 140.18 Special provisions applicable to licensees furnishing financial protection in whole or in part in the form of adequate resources.

[Top of File]

In any case where a licensee undertakes to maintain financial protection in the form specified in § 140.14(a)(2) for all or part of the financial protection required by this part, the Commission may require such licensee to file with the Commission such financial information as the Commission determines to be appropriate for the purpose of determining whether the licensee is maintaining financial protection as required by this part.

[42 FR 43385, Aug. 29, 1977]

§ 140.19 Failure by licensees to maintain financial protection.

[Top of File]

In any case where the Commission finds that the financial protection maintained by a licensee is not adequate to meet the requirements of this part, the Commission may suspend or revoke the license or may issue such order with respect to licensed activities as the Commission determines to be appropriate or necessary in order to carry out the provisions of this part and of section 170 of the Act.

§ 140.20 Indemnity agreements and liens.

[Top of File]

(a) The Commission will execute and issue agreements of indemnity pursuant to the regulations in this part or such other regulations as may be issued by the Commission. Such agreements, as to any licensee, shall be effective on:

(1)(i) The effective date of the license (issued pursuant to part 50 of this chapter) authorizing the licensee to operate the nuclear reactor involved; or

(ii) The date that the Commission makes the finding under § 52.103(g) of this chapter; or

(iii) The effective date of the license (issued under part 70 of this chapter) authorizing the licensee to possess and store special nuclear material at the site of the nuclear reactor for use as fuel in operation of the nuclear reactor after issuance of an operating license for the reactor, whichever is earlier. No such agreement, however, shall be effective prior to September 26, 1957; or

(2) August 1, 1977 or the effective date of the license (issued pursuant to part 70 of this chapter) authorizing the licensee to possess and use plutonium at the site of the plutonium processing and fuel fabrication plant for processing in that plant, whichever date is later.

(b) If the licensee fails to pay assessed deferred premiums, the Commission reserves the right to pay those premiums on behalf of the licensee and to recover the amount of such premiums from the licensee.

(c) The Commission shall require the immediate submission of financial statements by those licensees who indicate, after an assessment of the retrospective premium by the insurance pools, that they will not pay the assessment. Such financial statements shall include, as a minimum, exhibits indicating internally generated funds from operations and accumulated retained earnings. Subsequent submission of financial statements by such licensees may be requested by the Commission, as required.

(d) If premiums are paid by the Commission as provided in paragraph (b) of this section, payment by the Commission shall create a lien in the amount paid in favor of the United States upon all property and rights to property, whether real or personal, belonging to such licensee.

The lien shall arise at the time payment is made by the Commission and shall continue until the liability for the amount (or a judgment against the licensee arising out of such liability) is satisfied or becomes unenforceable. The Commission will issue a certificate of release of any such lien if it finds that the liability for the amount has been fully satisfied or has become legally unenforceable.

(e) If the Commission determines that the licensee is financially able to reimburse the Commission for a deferred premium payment made in its behalf, and the licensee, after notice of such determination by the Commission fails to make such reimbursement within 120 days, the Commission will take appropriate steps to suspend the license for 30 days. The Commission may take such further action as is necessary if reimbursement is not made within the 30-day suspension period including but not limited to termination of the operating license.

(f)(1)(i) The general form of indemnity agreement to be entered into by the Commission with reactor licensees who furnish financial protection in the form of the nuclear energy liability insurance policy set forth in appendix A is contained in § 140.92, appendix B. The general form of indemnity agreement to be entered into by the Commission with reactor licensees who furnish financial protection in the form specified in § 140.14(a)(2) is set forth in § 140.93, appendix C.

(ii) The general form of indemnity agreement to be entered into by the Commission with persons licensed to possess and use plutonium in a plutonium processing and fuel fabrication plant and who furnish financial protection in the form of the nuclear energy liability insurance policy set forth in appendix A[2] is contained in § 140.107, appendix G. The general form of indemnity agreement to be entered into by the Commission with such licensees who furnish financial protection in the form specified in § 140.14(a)(2) is set forth in § 140.108, appendix H.

(2) The form of indemnity agreement to be entered into by the Commission with any particular licensee under this subpart shall contain such modifications of the applicable form in §§ 140.92, 140.93, 140.107 and 140.108, appendices A, B, C, G and H, as are provided for in applicable licenses, regulations or orders of the Commission.

(3) Each licensee who has executed an indemnity agreement under this subpart shall enter into such agreements amending such indemnity agreement as are required by applicable licenses, regulations, or orders of the Commission.

[42 FR 49, Jan. 3, 1977; 72 FR 49565, Aug. 28, 2007]

[2] The form of the nuclear energy liability insurance policy for these licensees will be the subject of pertinent endorsements after discussion with the insurance pools.

§ 140.21 Licensee guarantees of payment of deferred premiums.

[Top of File]

Each licensee required to have and maintain financial protection for each nuclear reactor as determined in § 140.11(a)(4) shall at the issuance of the license and annually, on the anniversary of the date on which the indemnity agreement is effective, provide evidence to the Commission that it maintains one of the following types of guarantee of payment of deferred premium in an amount of $15 million for each reactor he is licensed to operate:

(a) Surety bond,

(b) Letter of credit,

(c) Revolving credit/term loan arrangement,

(d) Maintenance of escrow deposits of government securities,

(e) Annual certified financial statement showing either that a cash flow (i.e., cash available to a company after all operating expenses, taxes, interest charges, and dividends have been paid) can be generated and would be available for payment of retrospective premiums within three (3) months after submission of the statement, or a cash reserve or a combination of cash flow and cash reserve, or

(f) Such other type of guarantee as may be approved by the Commission.

[42 FR 50, Jan. 3, 1977; 71 FR 15012, Mar. 27, 2006]

§ 140.22 Commission guarantee and reimbursement agreements.

[Top of File]

Each licensee required to have and maintain financial protection for each nuclear reactor as determined in § 140.11(a)(4) shall execute an indemnity agreement with the Commission that provides for the payment by the Commission of deferred premiums not paid by the licensee and reimbursement of the Commission by the licensee. The general forms of agreement to be entered into by the Committee and licensees are set forth in § 140.92, appendix B and § 140.93, appendix C.

[42 FR 50, Jan. 3, 1977]

Subpart C--Provisions Applicable Only to Federal Agencies

[Top of File]

§ 140.51 Scope.

This subpart applies only to persons found by the Commission to be Federal agencies, which have applied for or are holders of licenses issued pursuant to part 50 of this chapter authorizing operation of nuclear reactors.

Note: Federal agencies are not required to furnish financial protection.

§ 140.52 Indemnity agreements.

[Top of File]

(a) The Commission will execute and issue agreements of indemnity with each Federal agency subject to this subpart pursuant to the regulations in this part or such other regulations as may be issued by the Commission. Such agreements, as to any licensee, shall be effective on:

(1) The effective date of the license (issued pursuant to part 50 of this chapter) authorizing the licensee to operate the nuclear reactor involved; or

(2) The effective date of the license (issued pursuant to part 70 of this chapter) authorizing the licensee to possess and store special nuclear material at the site of the nuclear reactor for use as fuel in operation of the nuclear reactor after issuance of an operating license for the reactor, whichever is earlier. No such agreement, however, shall be effective prior to September 26, 1957.

(b)(1) The general form of indemnity agreement to be entered into with licensees subject to this subpart is contained in § 140.94 appendix D.

(2) The form of indemnity agreement to be entered into by the Commission with any particular licensee under this subpart shall contain such modifications of the form in § 140.94, as are provided for in applicable licenses, regulations or orders of the Commission.

(3) Each licensee who has executed an indemnity agreement under this subpart shall enter into such agreements amending such indemnity agreement as are required by applicable licenses, regulations or orders of the Commission.

[27 FR 2885, Mar. 29, 1962, as amended at 33 FR 15999, Oct. 31, 1968]

Subpart D--Provisions Applicable Only to Nonprofit Educational Institutions

[Top of File]

§ 140.71 Scope.

This subpart applies only to applicants for and holders of licenses issued for the conduct of educational activities to persons found by the Commission to be nonprofit educational institutions, except that this subpart does not apply to Federal agencies.

Note: Financial protection is not required with respect to licenses issued for the conduct of educational activities to persons found by the Commission to be non-profit educational institutions.

§ 140.72 Indemnity agreements.

[Top of File]

(a) The Commission will execute and issue agreements of indemnity with each non-profit educational institution subject to this subpart pursuant to the regulations in this part or such other regulations as may be issued by the Commission. Such agreements, as to any licensee, shall be effective on:

(1) The effective date of the license (issued pursuant to part 50 of this chapter) authorizing the licensee to operate the nuclear reactor involved; or

(2) The effective date of the license (issued pursuant to part 70 of this chapter) authorizing the licensee to possess and store special nuclear material at the site of the nuclear reactor for use as fuel in operation of the nuclear reactor after issuance of an operating license for the reactor, whichever is earlier. No such agreement, however, shall be effective prior to September 26, 1957.

(b)(1) The general form of indemnity agreement to be entered into with licensees subject to this subpart is contained in § 140.95 appendix

E.

(2) The form of indemnity agreement to be entered into by the Commission with any particular licensee under this subpart shall contain such modifications of the form in § 140.95 appendix E, as are provided for in applicable licenses, regulations or orders of the Commission.

(3) Each licensee who has executed an indemnity agreement under this subpart shall enter into such agreements amending such indemnity agreement as are required by applicable licenses, regulations or orders of the Commission.

[27 FR 2885, Mar. 29, 1962, as amended at 33 FR 15999, Oct. 31, 1968]

Subpart E--Extraordinary Nuclear Occurences

[Top of File]

§ 140.81 Scope and purpose.

(a) *Scope*. This subpart applies to applicants for and holders of licenses authorizing operation of production facilities and utilization facilities, including combined licenses under part 52 of this chapter, and to other persons indemnified with respect to such facilities.

(b) *Purpose*. One purpose of this subpart is to set forth the criteria which the Commission proposes to follow in order to determine whether there has been an "extraordinary nuclear occurrence." The other purpose is to establish the conditions of the waivers of defenses proposed for incorporation in indemnity agreements and insurance policies or contracts furnished as proof of financial protection.

(1) The system is to come into effect only where the discharge or dispersal constitutes a substantial amount of source, special nuclear or byproduct material, or has caused substantial radiation levels offsite. The various limits in present NRC regulations are not appropriate for direct application in the determination of an "extraordinary nuclear occurrence," for they were arrived at with other purposes in mind, and those limits have been set at a level which is conservatively arrived at by incorporating a significant safety factor. Thus, a discharge or dispersal which exceeds the limits in NRC regulations, or in license conditions, although possible cause for concern, is not one which would be expected to cause substantial injury or damage unless it exceeds by some significant multiple the appropriate regulatory limit. Accordingly, in arriving at the values in the criteria to be deemed "substantial" it is more appropriate to adopt values separate from NRC health and safety regulations, and, of course, the selection of these values will not in any way affect such regulations. A substantial discharge, for purposes of the criteria, represents a perturbation of the environment which is clearly above that which could be anticipated from the conduct of normal activities. The criteria are intended solely for the purposes of administration of the Commission's statutory responsibilities under Pub. L. 89-645, and are not intended to indicate a level of discharge or dispersal at which damage to persons or property necessarily will occur, or a level at which damage is likely to occur, or even a level at which some type of protective action is indicated. It should be clearly understood that the criteria in no way establish or indicate that there is a specific threshold of exposure at which biological damage from radiation will take place. It cannot be emphasized too frequently that the levels set to be used as criteria for the first part of the determination, that is, the criteria for amounts offsite or radiation levels offsite which are substantial, are not meant to indicate that, because such amounts or levels are determined to be substantial for purposes of administration, they are "substantial" in terms of their propensity for causing injury or damage.

(2) It is the purpose of the second part of the determination that the Commission decide whether there have in fact been or will probably be substantial damages to persons offsite or property offsite. The criteria for substantial damages were formulated, and the numerical values selected, on a wholly different basis from that on which the criteria used for the first part of the determination with respect to substantial discharge were derived. The only interrelation between the values selected for the discharge criteria and the damage criteria is that the discharge values are set so low that it is extremely unlikely the damage criteria could be satisfied unless the discharge values have been exceeded.

(3) The first part of the test is designed so that the Commission can assure itself that something exceptional has occurred; that something untoward and unexpected has in fact taken place and that this event is of sufficient significance to raise the possibility that some damage to persons or property offsite has resulted or may result. If there appears to be no damage, the waivers will not apply because the Commission will be unable, under the second part of the test, to make a determination that "substantial damages" have resulted or will probably result. If damages have resulted or will probably result, they could vary from de minimis to serious, and the waivers will not apply until the damages, both actual and probable, are determined to be "substantial" within the second part of the test.

(4) The presence or absence of an extraordinary nuclear occurrence determination does not concomitantly determine whether or not a particular claimant will recover on his claim. In effect, it is intended primarily to determine whether certain potential obstacles to recovery are to be removed from the route the claimant would ordinarily follow to seek compensation for his injury or damage. If there has not been an extraordinary nuclear occurrence determination, the claimant must proceed (in the absence of settlement) with a tort action subject to whatever issues must be met, and whatever defenses are available to the defendant, under the law applicable in the relevant jurisdiction. If there has been an extraordinary nuclear occurrence determination, the claimant must still proceed (in the absence of settlement) with a tort action, but the claimant's burden is substantially eased by the elimination of certain issues which may be involved and certain defenses which may be available to the defendant. In either case the defendant may defend with respect to such of the following matters as are in issue in any given claim: The nature of the claimant's alleged damages, the causal relationship between the event and the alleged damages, and the amount of the alleged damages.

[33 FR 15999, Oct. 31, 1968, as amended at 40 FR 8793, Mar. 3, 1975; 72 FR 49565, Aug. 28, 2007]

§ 140.82 Procedures.

[Top of File]

(a) The Commission may initiate, on its own motion, the making of a determination as to whether or not there has been an extraordinary nuclear occurrence. In the event the Commission does not so initiate the making of a determination, any affected person, or any licensee or person with whom an indemnity agreement is executed or a person providing financial protection may petition the Commission for a determination of whether or not there has been an extraordinary nuclear occurrence. If the Commission does not have, or does not expect to have, within 7 days after it has received notification of an alleged event, enough information available to make a determination that there has been an extraordinary nuclear occurrence, the Commission will publish a notice in the Federal Register setting forth the date and place of the alleged event and requesting any persons having knowledge thereof to submit their information to the Commission.

(b) When a procedure is initiated under paragraph (a) of this section, the Commission will designate members of the principal staff to begin immediately to assemble the relevant information and prepare a report on which the Commission can make its determination.

[33 FR 15999, Oct. 31, 1968, as amended at 40 FR 8794, Mar. 3, 1975]

§ 140.83 Determination of extraordinary nuclear occurrence.

[Top of File]

If the Commission determines that both of the criteria set forth in §§ 140.84 and 140.85 have been met, it will make the determination that there has been an extraordinary nuclear occurrence. If the Commission publishes a notice in the Federal Register in accordance with § 140.82(a) and does not make a determination within 90 days thereafter that there has been an extraordinary nuclear occurrence, the alleged event will be deemed not to be an extraordinary nuclear occurrence. The time for the making of a determination may be extended by the Commission by notice published in the Federal Register.

[33 FR 15999, Oct. 31, 1968]

§ 140.84 Criterion I--Substantial discharge of radioactive material or substantial radiation levels offsite.

[Top of File]

The Commission will determine that there has been a substantial discharge or dispersal of radioactive material offsite, or that there have been substantial levels of radiation offsite, when, as a result of an event comprised of one or more related happenings, radioactive material is released from its intended place of confinement or radiation levels occur offsite and either of the following findings are also made:

(a) The Commission finds that one or more persons offsite were, could have been, or might be exposed to radiation or to radioactive material, resulting in a dose or in a projected dose in excess of one of the levels in the following table:

Total Projected Radiation Doses

Critical Organ	Dose (rems)
Thyroid	30
Whole body	20
Bone marrow	20
Skin	60
Other organs or tissues	30

Exposures from the following types of sources of radiation shall be included:

(1) Radiation from sources external to the body;

(2) Radioactive material that may be taken into the body from its occurrence in air or water; and

(3) Radioactive material that may be taken into the body from its occurrence in food or on terrestrial surfaces.

(b) The Commission finds that:

(1) Surface contamination of at least a total of any 100 square meters of offsite property has occurred as the result of a release of radioactive material from a production or utilization facility and such contamination is characterized by levels of radiation in excess of one of the values listed in Column 1 or Column 2 of the following table, or

(2) Surface contamination of any offsite property has occurred as the result of a release of radioactive material in the course of transportation and such contamination is characterized by levels of radiation in excess of one of the values listed in column 2 of the following table:

Total Surface Contamination Levels[1]

Type of emitter	Column 1 Offsite property, contiguous to site, owned or leased by person with whom an indemnity agreement is executed	Column 2 Other offsite property
Alpha emission from transuranic isotopes.	3.5 microcuries per square meter.	0.35 microcuries per square meter.
Alpha emission from isotopes other than transuranic isotopes.	35 microcuries per square meter.	3.5 microcuries per square meter.
Beta or gamma emission.	40 millirads/hour @ 1 cm.[2]	4 millirads/hour @ 1 cm.[2]

[1] The maximum levels (above background), observed or projected, 8 or more hours after initial deposition.

[2] Measured through not more than 7 milligrams per square centimeter of total absorber.

[33 FR 15999, Oct. 31, 1968, as amended at 40 FR 8794, Mar. 3, 1975]

§ 140.85 Criterion II--Substantial damages to persons offsite or property offsite.

[Top of File]

(a) After the Commission has determined that an event has satisfied Criterion I, the Commission will determine that the event has resulted or will probably result in substantial damages to persons offsite or property offsite if any of the following findings are made:

(1) The Commission finds that such event has resulted in the death or hospitalization, within 30 days of the event, of five or more people located offsite showing objective clinical evidence of physical injury from exposure to the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material; or

(2) The Commission finds that $2,500,000 or more of damage offsite has been or will probably be sustained by any one person, or $5 million or more of such damage in the aggregate has been or will probably be sustained, as the result of such event; or

(3) The Commission finds that $5,000 or more of damage offsite has been or will probably be sustained by each of 50 or more persons, provided that $1 million or more of such damage in the aggregate has been or will probably be sustained, as the result of such event.

(b) As used in paragraphs (a) (2) and (3) of this section, "damage" shall be that arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material, and shall be based upon estimates of one or more of the following:

(1) Total cost necessary to put affected property back into use,

(2) Loss of use of affected property,

(3) Value of affected property where not practical to restore to use,

(4) Financial loss resulting from protective actions appropriate to reduce or avoid exposure to radiation or to radioactive materials.

[33 FR 15999, Oct. 31, 1968]

Subpart F--Violations

[Top of File]

§ 140.87 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55080, Nov. 24, 1992]

§ 140.89 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 140 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 140 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 140.1, 140.2, 140.3, 140.4, 140.5, 140.7, 140.8, 140.9, 140.9a, 140.10, 140.14, 140.16, 140.18, 140.19, 140.20, 140.51, 140.52, 140.71, 140.72, 140.81, 140.82, 140.83, 140.84, 140.85, 140.87, 140.89, 140.91, 140.92, 140.93, 140.94, 140.95, 140.96, 140.107, 140.108, and 140.109.

[57 FR 55080, Nov. 24, 1992]

Appendices to Part 140

[Top of File]

§ 140.91 Appendix A--Form of nuclear energy liability policy for facilities.

While the text of the policy which follows is exemplary of a contract acceptable to the Commission as evidence of the financial protection required of the licensee by section 170 of the Atomic Energy Act of 1954, as amended, variations on this text submitted by the licensee also will be considered by the Commission in determining whether the licensee meets the financial protection requirements of the Act. The full text of the policy is published solely for the purpose of completeness. Publication of this text should not be construed as a Commission endorsement of any particular provision pertaining solely to the business relationship between the insurers and the insureds or to any other matter not within the Commission's statutory jurisdiction under the Atomic Energy Act.

Nuclear Energy Liability Policy

(Facility Form)

The undersigned members of----------, hereinafter called the "companies," each for itself, severally and not jointly, and in the respective proportions hereinafter set forth, agree with the insured, named in the declarations made a part hereof, in consideration of the premium and in reliance upon the statements in the declarations and subject to the limit of liability, exclusions, conditions and other terms of this policy;

Insuring Agreements

I. *Coverage A--Bodily injury and property damage liability*. To pay on behalf of the insured:

(1) All sums which the insured shall become legally obligated to pay as damages because of bodily injury or property damage caused by the nuclear energy hazard, and the companies shall defend any suit against the insured alleging such bodily injury or property damage and seeking damages which are payable under the terms of this policy; but the companies may make such investigation, negotiation and settlement of any claim or suit as they deem expedient;

(2) Costs taxed against the insured in any such suit and interest on any judgment therein;

(3) Premiums on appeal bonds and on bonds to release attachments in any such suit, but without obligation to apply for or furnish such bonds;

(4) Reasonable expenses, other than loss of earnings, incurred by the insured at the companies' request.

Coverage B--Damage to property of an insured away from the facility. With respect to property damage caused by the nuclear energy hazard to property of an insured which is away from the facility, to pay to such insured those sums which such insured would have been legally obligated to pay as damages therefor, had such property belonged to another.

Coverage C--Subrogation--Offsite employees. With respect to bodily injury sustained by any employee of an insured and caused by the nuclear energy hazard, to pay to the workmen's compensation carrier of such insured all sums which such carrier would have been entitled to recover and retain as damages from another person or organization, had such person or organization alone been legally responsible for such bodily injury, by reason of the rights acquired by subrogation by the payment of the benefits required of such carrier under the applicable workmen's compensation or occupational disease law. An employer who is a duly qualified self-insurer under such law shall be deemed to be a workmen's compensation carrier within the meaning of this coverage. This Coverage C does not apply to bodily injury sustained by any person who is employed at and in connection with the facility. This Coverage C shall not constitute workmen's compensation insurance as required under the laws of any state.

II. *Definition of insured*. The unqualified word *insured* includes (a) the named insured and (b) any other person or organization with respect to his legal responsibility for damages because of bodily injury or property damage caused by the nuclear energy hazard.

Subdivision (b) above does not include as an insured the United States of America or any of its agencies.

Subject to Condition 3 and the other provisions of this policy, the insurance applies separately to each insured against whom claim is made or suit is brought.

III. *Definitions*. Wherever used in this policy:

Bodily injury means bodily injury, sickness or disease, including death resulting therefrom, sustained by any person;

Property damage means physical injury to or destruction or radioactive contamination of property, and loss of use of property so injured, destroyed or contaminated, and loss of use of property while evacuated or withdrawn from use because possibly so contaminated or because of imminent danger of such contamination;

Nuclear material means source material, special nuclear material or byproduct material;

Source material, *special nuclear material*, and *byproduct material* have the meanings given them in the Atomic Energy Act of 1954, or in any law amendatory thereof;

Spent fuel means any fuel element or fuel component, solid or liquid, which has been used or exposed to radiation in any nuclear reactor;

Waste means any waste material (1) containing byproduct material and (2) resulting from the operation by any person or organization of any nuclear facility included within the definition of nuclear facility under paragraph (1) or (2) thereof;

The facility means the facility described in the declarations and includes the location designated in Item 3 of the declarations and all property and operations at such location;

Nuclear facility means the facility as defined in any Nuclear Energy Liability Policy (Facility Form) issued by the companies or by----------.

The term *nuclear facility* also means

(1) Any nuclear reactor,

(2) Any equipment or device designed or used for (a) separating the isotopes of uranium or plutonium, (b) processing or utilizing spent fuel, or (c) handling, processing or packaging waste,

(3) Any equipment or device used for the processing, fabricating or alloying of special nuclear material if at any time the total amount of such material in the custody of the insured at the premises where such equipment or device is located consists of or contains more than 25 grams of plutonium or uranium-233 or any combination thereof, or more than 250 grams of uranium-235,

(4) Any structure, basin, excavation, premises or place prepared or used for the storage or disposal of waste, and includes the site on which any of the foregoing is located, all operations conducted on such site and all premises used for such operations;

Indemnified nuclear facility means

(1) The facility as defined in any Nuclear Energy Liability Policy (Facility Form) issued by the companies or by----------,

(2) Any other nuclear facility,

if financial protection is required pursuant to the Atomic Energy Act of 1954, or any law amendatory thereof, with respect to any activities or operations conducted thereat;

Nuclear reactor means any apparatus designed or used to sustain nuclear fission in a self-supporting chain reaction or to contain a critical mass of fissionable material;

Nuclear energy hazard means the radioactive, toxic, explosive or other hazardous properties of nuclear material, but only if:

(1) The nuclear material is at the facility or has been discharged or dispersed therefrom without intent to relinquish possession or custody thereof to any person or organization, or

(2) The nuclear material is in an insured shipment which is (a) in the course of transportation, including handling and temporary storage incidental thereto, within the territorial limits of the United States of America, its territories or possessions, Puerto Rico or the Canal Zone and (b) away from any other nuclear facility;

Insured shipment means a shipment of source material, special nuclear material, spent fuel of waste, herein called material, (1) to the facility from a nuclear facility owned by the United States of America, but only if the transportation of the material is not by predetermination to be interrupted by the removal of the material from a transporting conveyance for any purpose other than the continuation of its transportation, or (2) from the facility to any other location except an indemnified nuclear facility, but only until the material is removed from a transporting conveyance for any purpose other than the continuation of its transportation.

IV. *Application of policy*. This policy applies only to bodily injury or property damage (1) which is caused during the policy period by the nuclear energy hazard and (2) which is discovered and for which written claim is made against the insured, not later than two years after the end of the policy period.

Exclusions

This policy does not apply:

(a) To any obligation for which the insured or any carrier as his insurer may be held liable under any workmen's compensation, unemployment compensation or disability benefits law, or under any similar law;

(b) Except with respect to liability of another assumed by the insured under contract, to bodily injury to any employee of the insured arising out of and in the course of his employment by the insured; but this exclusion does not apply to bodily injury to any person who is not employed at and in connection with the facility if the insured has complied with the requirements of the applicable workmen's compensation or occupational disease law respecting the securing of compensation benefits thereunder to his employees;

(c) To liability assumed by the insured under contract, other than an assumption in a contract with another of the liability of any person or organization which would be imposed by law on such person or organization in the absence of an express assumption of liability;

(d) To bodily injury or property damage due to the manufacturing, handling or use at the location designated in Item 3 of the declarations, in time of peace or war, of any nuclear weapon or other instrument of war utilizing special nuclear material or byproduct material;

(e) To bodily injury or property damage due to war, whether or not declared, civil war, insurrection, rebellion or revolution, or to any act or conditions incident to any of the foregoing;

(f) To property damage to any property at the location designated in Item 3 of the declarations, other than aircraft, watercraft or vehicles licensed for highway use, provided such aircraft, watercraft or vehicles are not used in connection with the operation of the facility;

(g) To property damage to nuclear material in the course of transportation to or from the facility including handling or storage incidental thereto;

(h) Under Coverage B, to property damage due to neglect of the insured to use all reasonable means to save and preserve the property after knowledge of the occurrence resulting in such property damage.

Conditions

1. *Premium*--(1) *Definitions*. With reference to the premium for this policy: advance premium, for any calendar year, is the estimated standard premium for that calendar year;

Standard premium, for any calendar year, is the premium for that calendar year computed in accordance with the companies' rules, rates, rating plans (other than the Industry Credit Rating Plan), premiums and minimum premiums applicable to this insurance;

Reserve premium means that portion of the standard premium paid to the companies and specifically allocated under the Industry Credit Rating Plan for incurred losses. The amount of the reserve premium for this policy for any calendar year during which this policy is in force is the amount designated as such in the Standard Premium Endorsement for that calendar year;

Industry reserve premium, for any calendar year, is the sum of the reserve premiums for that calendar year for all Nuclear Energy Liability

Policies issued by the Nuclear Energy Liability Insurance Association and Mutual Atomic Energy Liability Underwriters and subject to the Industry Credit Rating Plan;

Policy refund ratio, for any calendar year, is the ratio of the named insured's reserve premium for that calendar year to the industry reserve premium for that calendar year;

Incurred losses means the sum of:

(1) All losses and expenses by Nuclear Energy Liability Insurance Association and Mutual Atomic Energy Liability Underwriters, and

(2) All reserves for unpaid losses and expenses as estimated by Nuclear Energy Liability Insurance Association and Mutual Atomic Energy Liability Underwriters because of obligations assumed and the expenses incurred in connection with such obligations by members of Nuclear Energy Liability Insurance Association and Mutual Atomic Energy Liability Underwriters under all Nuclear Energy Liability Policies issued by Nuclear Energy Liability Insurance Association and Mutual Atomic Energy Liability Underwriters and subject to the Industry Credit Rating Plan;

Reserve for refunds, at the end of any calendar year, is the amount by which (1) the sum of all industry reserve premiums for the period from January 1, 1957 through the end of such calendar year exceeds (2) the total for the same period of (a) all incurred losses, valued as of the next following July 1, and (b) all reserve premium refunds made under the Industry Credit Rating Plan by members of Nuclear Energy Liability Insurance Association and Mutual Atomic Energy Liability Underwriters;

Industry reserve premium refund, for any calendar year, is determined by multiplying the reserve for refunds at the end of the ninth calendar year thereafter by the ratio of the industry reserve premium for the calendar year for which the premium refund is being determined to the sum of such amount and the total industry reserve premiums for the next nine calendar years thereafter, provided that the industry reserve premium refund for any calendar year shall in no event be greater than the industry reserve premium for such calendar year.

(2) *Payment of advance and standard premiums*. The named insured shall pay the companies the advance premium stated in the declarations, for the period from the effective date of this policy through December 31 following. Thereafter, at the beginning of each calendar year while this policy is in force, the named insured shall pay the advance premium for such year to the companies. The advance premium for each calendar year shall be stated in the Advance Premium Endorsement for such calendar year issued to the named insured as soon as practicable prior to or after the beginning of such year.

As soon as practicable after each December 31 and after the termination of this policy, the standard premium for the preceding calendar year shall be finally determined and stated in the Standard Premium Endorsement for that calendar year. If the standard premium so determined exceeds the advance premium previously paid for such calendar year, the named insured shall pay the excess to the companies; if less, the companies shall return to the named insured the excess portion paid by such insured.

The named insured shall maintain records of the information necessary for premium computation and shall send copies of such records to the companies as directed, at the end of each calendar year, at the end of the policy period and at such other times during the policy period as the companies may direct.

(3) *Use of reserve premiums*. All reserve premiums paid or payable for this policy may be used by the members of Nuclear Energy Liability Insurance Association or Mutual Atomic Energy Liability Underwriters to discharge their obligations with respect to incurred losses whether such losses are incurred under this policy or under any other policy issued by the Nuclear Energy Liability Insurance Association or Mutual Atomic Energy Liability Underwriters.

(4) *Reserve premium refunds*. A portion of the reserve premium for this policy for the first calendar year of any group of ten consecutive calendar years shall be returnable to the named insured provided there is a reserve for refunds at the end of the tenth calendar year.

(5) *Computation of reserve premium refunds*. The reserve premium refund due the named insured for any calendar year shall be determined by multiplying any industry reserve premium refund for such calendar year by the policy refund ratio for such calendar year. The reserve premium refund for any calendar year shall be finally determined as soon as practicable after July 1 of the tenth calendar year thereafter.

(6) *Final premium*. The final premium for this policy shall be the sum of the standard premiums for each calendar year, or portion thereof, during which this policy remains in force less the sum of all refunds of reserve premiums due the named insured under the provisions of this Condition 1.

(7) *Reserve premium refund agreement*. Each member of Nuclear Energy Liability Insurance Association or Mutual Atomic Energy Liability Underwriters subscribing this policy for any calendar year, or portion thereof, thereby agrees for itself, severally and not jointly, and in the respective proportion of its liability assumed under this policy for that calendar year, to return to the named insured that portion of any reserve premium refund due the named insured for that calendar year, determined in accordance with the provisions of this Condition 1.

2. *Inspection; suspension*. The companies shall be permitted to inspect the facility and to examine the insured's books and records at any time, as far as they relate to the subject-matter of this insurance.

If a representative of the companies discovers a condition which he believes to be unduly dangerous with respect to the nuclear energy hazard, a representative of the companies may request that such condition be corrected without delay. In the event of noncompliance with such request, a representative of the companies may, by notice to the named insured, to any other person or organization considered by the companies to be responsible for the continuance of such dangerous condition, and to the United States Atomic Energy Commission,

suspend the insurance with respect to the named insured and such other person or organization effective 12:00 midnight of the next business day of such Commission following the date that such Commission receives such notice. The period of such suspension shall terminate as of the time stated in a written notice from the companies to the named insured and to each such person or organization that such condition has been corrected.

3. *Limit of liability; termination of policy upon exhaustion of limit*. Regardless of the number of persons and organizations who are insureds under this policy, and regardless of the number of claims made and suits brought against any or all insureds because of one or more occurrences resulting in bodily injury or property damage caused during the policy period by the nuclear energy hazard, the limit of the companies' liability stated in the declarations is the total liability of the companies for their obligations under this policy and the expenses incurred by the companies in connection with such obligations, including.

(a) Payments in settlement of claims and in satisfaction of judgments against the insureds for damages because of bodily injury or property damage, payments made under parts (2), (3) and (4) of Coverage A and payments made in settlement of claims under Coverages B and C;

(b) Payments for expenses incurred in the investigation, negotiation, settlement and defense of any claim or suit, including, but not limited to, the cost of such services by salaried employees of the companies, fees and expenses of independent adjusters, attorneys' fees and disbursements, expenses for expert testimony, inspection and appraisal of property, examination, X-ray or autopsy or medical expenses of any kind;

(c) Payments for expenses incurred by the companies in investigating an occurrence resulting in bodily injury or property damage or in minimizing its effects.

Each payment made by the companies in discharge of their obligations under this policy or for expenses incurred in connection with such obligations shall reduce by the amount of such payment the limit of the companies' liability under this policy.

If, during the policy period or subsequent thereto, the total of such payments made by the companies shall exhaust the limit of the companies' liability under this policy, all liability and obligations of the companies under this policy shall thereupon terminate and shall be conclusively presumed to have been discharged. This policy, if not theretofore canceled, shall thereupon automatically terminate.

Regardless of the number of years this policy shall continue in force and the number of premiums which shall be payable or paid, the limit of the companies' liability stated in the declarations shall not be cumulative from year to year.

4. *Limitation of liability; common occurrence*. Any occurrence or series of occurrences resulting in bodily injury or property damage arising out of the radioactive, toxic, explosive or other hazardous properties of

(a) Nuclear material discharged or dispersed from the facility over a period of days, weeks, months or longer and also arising out of such properties of other nuclear material so discharged or dispersed from one or more other nuclear facilities insured by the companies under a Nuclear Energy Liability Policy (Facility Form), or

(b) Source material, special nuclear material, spent fuel or waste in the course of transportation for which insurance is afforded under this policy and also arising out of such properties of other source material, special nuclear material, spent fuel or waste in the course of transportation for which insurance is afforded under one or more other Nuclear Energy Liability Policies (Facility Form) issued by the companies, shall be deemed to be a common occurrence resulting in bodily injury or property damage caused by the nuclear energy hazard.

With respect to such bodily injury and property damage (1) the total aggregate liability of the companies under all Nuclear Energy Liability Policies (Facility Form), including this policy, applicable to such common occurrence shall be the sum of the limits of liability of all such policies, the limit of liability of each such policy being as determined by Condition 3 thereof, but in no event shall such total aggregate liability of the companies exceed $-------- ;[1] (2) the total liability of the companies under this policy shall not exceed that proportion of the total aggregate liability of the companies, as stated in clause (1) above, which (a) the limit of liability of this policy, as determined by Condition 3, bears to (b) the sum of the limits of liability of all such policies issued by the companies, the limit of liability of each such policy being as determined by Condition 3, thereof.

The provisions of this condition shall not operate to increase the limit of the companies' liability under this policy.

5. *Notice of occurrence, claim, or suit*. In the event of bodily injury or property damage to which this policy applies or of an occurrence which may give rise to claims therefor, written notice containing particulars sufficient to identify the insured and also reasonably obtainable information with respect to the time, place and circumstances thereof, and the names and addresses of the injured and of available witnesses, shall be given by or for the insured to---------- or the companies as soon as practicable. If claim is made or suit is brought against the insured, he shall immediately forward to----------or the companies every demand, notice, summons or other process received by him or his representative.

6. *Assistance and cooperation of the insured*. The insured shall cooperate with the companies and, upon the companies' request, attend hearings and trials and assist in making settlements, securing and giving evidence, obtaining the attendance of witnesses and in the conduct of any legal proceedings in connection with the subject matter of this insurance. The insured shall not, except at his own cost, make any payment, assume any obligation or incur any expense.

7. *Action against companies--Coverages A and C*. No action shall lie against the companies or any of them unless, as a condition precedent thereto, the insured shall have fully complied with all the terms of this policy, nor until the amount of the insured's obligation to pay shall have been finally determined either by judgment against the insured after actual trial or by written agreement of the insured, the claimant and the companies.

Any person or organization or the legal representative thereof who has secured such judgment or written agreement shall thereafter be entitled to recover under this policy to the extent of the insurance afforded by this policy. No person or organization shall have any right under this policy to join the companies or any of them as parties to any action against the insured to determine the insured's liability, nor shall the companies or any of them be impleaded by the insured or his legal representative. Bankruptcy or insolvency of the insured or of the insured's estate shall not relieve the companies of any of their obligations hereunder.

8. *Action against companies--Coverage B*. No suit or action on this policy for the recovery of any claim for property damage to which Coverage B applies shall be sustainable in any court of law or equity unless all the requirements of this policy shall have been complied with and unless commenced within two years after the occurrence resulting in such property damage.

9. *Insured's duties when loss occurs--Coverage B*. In the event of property damage to which Coverage B applies, the insured shall furnish a complete inventory of the property damage claimed, showing in detail the amount thereof. Within ninety-one days after the occurrence resulting in such property damage, unless such time is extended in writing by the companies, the insured shall render to the companies a proof of loss, signed and sworn to by the insured, stating the knowledge and belief of the insured as to the following: identification of such occurrence; the interest of the insured in the property destroyed or damaged, and the amount of each item of property damage claimed; all encumbrances on such property; and all other contracts of insurance, whether valid or not, covering any of such property. The insured shall include in the proof of loss a copy of all descriptions and schedules in all policies. Upon the companies' request, the insured shall furnish verified plans and specifications of any such property. The insured, as often as may be reasonably required, shall exhibit to any person designated by the companies any of such property, and submit to examinations under oath by any person named by the companies and subscribe the same; and, as often as may be reasonably required, shall produce for examination all books of account, records, bills, invoices and other vouchers, or certified copies thereof if originals be lost, at such reasonable time and place as may be designated by the companies or their representatives, and shall permit extracts and copies thereof to be made.

10. *Appraisal--Coverage B*. In case the insured and the companies shall fail to agree as to the amount of property damage, then, on the written demand of either, each shall select a competent and disinterested appraiser and notify the other of the appraiser selected within twenty days of such demand. The appraisers shall first select a competent and disinterested umpire and, failing for fifteen days to agree upon such umpire, then, on request of the insured or the companies, such umpire shall be selected by a judge of a court of record in the state in which the property is located. The appraisers shall then appraise each item of property damage and, failing to agree, shall submit their differences only to the umpire. An award in writing, so itemized, of any two when filed with the companies shall determine the amount of property damage. Each appraiser shall be paid by the party selecting him and the expenses of the appraisal and umpire shall be paid by the parties equally. The companies shall not be held to have waived any of their rights by any act relating to appraisal.

11. *Subrogation*. In the event of any payment under this policy, the companies shall be subrogated to all the insured's rights of recovery therefor against any person or organization, and the insured shall execute and deliver instruments and papers and do whatever else is necessary to secure such rights. Prior to knowledge of bodily injury or property damage caused by the nuclear energy hazard the insured may waive in writing any right or recovery against any person or organization, but after such knowledge the insured shall not waive or otherwise prejudice any such right of recovery.

The companies hereby waive any rights of subrogation acquired against the United States of America or any of its agencies by reason of any payment under this policy.

The companies do not relinquish, by the foregoing provisions, any right to restitution from the insured out of any recoveries made by the insured on account of a loss covered by this policy of any amounts to which the companies would be entitled had such provisions, or any of them, not been included in this policy.

12. *Other insurance*. If the insurance afforded by this policy for loss or expense is concurrent with insurance afforded for such loss or expense by a Nuclear Energy Liability Policy (Facility Form) issued to the named insured by----------hereinafter called "concurrent insurance," the companies shall not be liable under this policy for a greater proportion of such loss or expense than the limit of liability stated in the declarations of this policy bears to the sum of such limit and the limit of liability stated in the declarations of such concurrent policy.

If the insured has other valid and collectible insurance (other than such concurrent insurance or any other nuclear energy liability insurance issued by the companies or----------to any person or organization) applicable to loss or expense covered by this policy, the insurance afforded by this policy shall be excess insurance over such other insurance; provided, with respect to any person who is not employed at and in connection with the facility, such insurance as is afforded by this policy for bodily injury to an employee of the insured arising out of and in the course of his employment shall be primary insurance under such other insurance.

13. *Changes*. Notice to any agent or knowledge possessed by any agent or by any other person shall not effect a waiver or a change in any part of this policy or stop the companies from asserting any right under the terms of this policy; nor shall the terms of this policy be waived or changed except by endorsement issued to form a part of this policy executed by----------on behalf of the companies.

14. *Assignment*. Assignment of interest by the named insured shall not bind the companies until their consent is endorsed hereon; if, however, the named insured shall die or be declared bankrupt or insolvent, this policy shall cover such insured's legal representative, receiver or trustee as an insured under this policy, but only with respect to his liability as such, and then only provided written notice of his appointment as legal representative, receiver or trustee is given to the companies within ten days after such appointment.

15. *Cancellation*. This policy may be canceled by the named insured by mailing to the companies and the United States Nuclear Regulatory Commission written notice stating when, not less than thirty days thereafter, such cancellation shall be effective. This policy may be canceled by the companies by mailing to the named insured at the address shown in this policy and to the United States Nuclear Regulatory Commission written notice stating when, not less than ninety days thereafter, such cancellation shall be effective; provided in the event of non-payment of premium or if the operator of the facility, as designated in the declarations, is replaced by another person or organization, this policy may be canceled by the companies by mailing to the named insured at the address shown in this policy and to the United States Nuclear Regulatory Commission written notice stating when, not less than thirty days thereafter, such cancellation shall be effective. The

mailing of notice as aforesaid shall be sufficient proof of notice. The effective date and hour of cancellation stated in the notice shall become the end of the policy period. Delivery of such written notice either by the named insured or by the companies shall be equivalent to mailing.

Upon termination or cancellation of this policy, other than as of the end of December 31 in any year, the earned premium for the period this policy has been in force since the preceding December 31 shall be computed in accordance with the following provisions:

(a) If this policy is terminated, pursuant to Condition 3, by reason of the exhaustion of the limit of the companies' liability, all premium theretofore paid or payable shall be fully earned;

(b) If the named insured cancels, the earned premium for such period shall be computed in accordance with the customary annual short rate table and procedure, provided if the named insured cancels after knowledge of bodily injury or property damage caused by the nuclear energy hazard, all premiums theretofore paid or payable shall be fully earned;

(c) If the companies cancel, the earned premium for such period shall be computed pro rata.

Premium adjustment, if any, may be made either at the time cancellation is effected or as soon as practicable after cancellation becomes effective, but payment or tender of unearned premium is not a condition of cancellation.

16. *Company representation*. (a) Any notice, sworn statement or proof of loss which may be required by the provisions of this policy may be given to any one of the companies, and such notice, statement or proof of loss so given shall be valid and binding as to all companies.

(b) In any action or suit against the companies, service of process may be made on any one of them, and such service shall be deemed valid and binding service on all companies.

(c)----------is the agent of the companies with respect to all matters pertaining to this insurance. All notices or other communications required by this policy to be given to the companies may be given to such agent, at its office at----------with the same force and effect as if given directly to the companies. Any requests, demands or agreements made by such agent shall be deemed to have been made directly by the companies.

17. *Authorization of named insured*. Except with respect to compliance with the obligations imposed on the insured by Conditions 5, 6, 7, 8, 9, 10 and 11 of this policy, the named insured is authorized to act for every other insured in all matters pertaining to this insurance.

18. *Changes in subscribing companies and in their proportionate liability*. By acceptance of this policy the named insured agrees that the members of----------liable under this policy, and the proportionate liability of each such member, may change from year to year, and further agrees that regardless of such changes:

(1) Each company subscribing this policy upon its issuance shall be liable only for its stated proportion of any obligation assumed or expense incurred under this policy because of bodily injury or property damage caused, during the period from the effective date of this policy to the close of December 31 next following, by the nuclear energy hazard; for each subsequent calendar year, beginning January 1 next following the effective date of this policy, the subscribing companies and the proportionate liability of each such company shall be stated in an endorsement issued to form a part of this policy, duly executed and attested by the----------of---------- on behalf of each such company, and mailed or delivered to the named insured;

(2) This policy shall remain continuously in effect from the effective date stated in the declarations until terminated in accordance with Condition 3 or Condition 15;

(3) Neither the liability of any company nor the limit of liability stated in the declarations shall be cumulative from year to year.

19. *Declarations*. By acceptance of this policy the named insured agrees that the statements in the declarations are the agreements and representations of the named insured, that this policy is issued in reliance upon the truth of such representations and that this policy embodies all agreements between the named insured and the companies or any of their agents relating to this insurance.

In Witness Whereof, each of the subscribing companies has caused this policy to be executed and attested on its behalf by the-------- of---------- and duly countersigned on the declarations page by an authorized representative.

For the subscribing companies.

By----------

Subscribing Companies Proportion of 100%

Nuclear Energy Liability Policy No.-------- (Facility Form)

Declarations

Item 1. Named Insured---------- .

Address---------- .

(No. Street Town or City State)

Item 2. Policy Period: Beginning at 12:01 a.m. on the---- day of----------, 19--, and continuing through the effective date of the cancellation or termination of this policy, standard time at the address of the named insured as stated herein.

Item 3. Description of the Facility:

Location

Type

The Operator of the facility is-------- .

Item 4. The limit of the companies' liability is $------subject to all the terms of this policy having reference thereto.

Item 5. Advance Premium $------.

Item 6. These declarations and the schedules forming a part hereof give a complete description of the facility, insofar as it relates to the nuclear energy hazard, except as noted----------

Date of Issue---------- , 19--.

Countersigned by----------

(Authorized representative)

Nuclear Energy Liability Policy

(Facility Form)

Amendment of Transportation Coverage (Indemnified Nuclear Facility)

It is agreed that the definition of *insured shipment* in Insuring Agreement III is amended to read: *insured shipment* means a shipment of source material, special nuclear material, spent fuel or waste, herein called *material*, (1) to the facility from any location except an indemnified nuclear facility, but only if the transportation of the material is not by predetermination to be interrupted by removal of the material from a transporting conveyance for any purpose other than the continuation of its transportation, or (2) from the facility to any other location, but only until the material is removed from a transporting conveyance for any purpose other than the continuation of its transportation.

Effective date of this endorsement------to form a part of Policy No.------.

Issued to----------

Date of Issue---------- .

For the subscribing companies.

By----------

Countersigned by----------

Endorsement No.----------.

Optional Amendatory Endorsement

(Facility Form)

It is agreed that:

I. The first sentence of the definition of nuclear facility is amended to read:

nuclear facility means *the facility* as defined in any Nuclear Energy Liability Policy (Facility Form) issued by----------or by---------- .

II. The definition of *indemnified nuclear facility* is replaced by the following:

indemnified nuclear facility means

(1) *the facility* as defined in any Nuclear Energy Liability Policy (Facility Form) issued by-------- or by-------- or

(2) any other nuclear facility,

if financial protection is required pursuant to the Atomic Energy Act of 1954, or any law amendatory thereof; with respect to any activities or operations conducted thereat:

III. Condition 4 is replaced by the following:

Limitation of liability; common occurrence. Any occurrence or series of occurrences resulting in bodily injury or property damage arising out of the radioactive, toxic, explosive, or other hazardous properties of

(a) nuclear material discharged or dispersed from the facility over a period of days, weeks, months or longer and also arising out of such properties of other nuclear material so discharged or dispersed from one or more other nuclear facilities insured under any Nuclear Energy Liability Policy (Facility Form) issued by---------- or,

(b) source material, special nuclear material, spent fuel or waste in the course of transportation for which insurance is afforded under this policy and also arising out of such properties of other source material, special nuclear material, spent fuel or waste in the course of transportation for which insurance is afforded under one or more other Nuclear Energy Liability Policies (Facility Form) issued by---------- .

shall be deemed to be a common occurrence resulting in bodily injury or property damage caused by the nuclear energy hazard.

With respect to such bodily injury and property damage (1) the total aggregate liability of the members of-------- , under all Nuclear Energy Liability Policies (Facility Form), including this policy, applicable to such common occurrence shall be the sum of the limits of liability of all such policies, the limit of liability of each such policy being as determined by Condition 3 thereof, but in no event shall such total aggregate liability of such members exceed $-------- ;[1] (2) the total liability of the companies under this policy shall not exceed that proportion of the total aggregate liability of the members of--------, as stated in clause (1) above, which (a) the limit of liability of this policy, as determined by Condition 3, bears to (b) the sum of the limits of liability of all such policies issued by such members the limit of liability of eachsuch policy being as determined by Condition 3 thereof.

The provisions of this condition shall not operate to increase the limit of the companies' liability under this policy.

IV. The second paragraph of Condition 12 *Other Insurance* is amended to read:

If the insured has other valid and collectable insurance (other than such concurrent insurance or any other nuclear energy liability insurance issued by---------- or to any person or organization) applicable to loss or expense covered by this policy the insurance afforded by this policy shall be excess insurance over such other insurance; provided, with respected to any person who is not employed at and in connection with the facility, such insurance as is afforded by this policy for bodily injury to an employee of the insured arising out of and in the course of his employment shall be primary insurance under such other insurance.

Nuclear Energy Liability Policy.

(Facility Form)

Restoration of Limit of Liability Endorsement

It is agreed that:

1. Payments made by the companies under this policy have reduced the limit of the companies' liability, stated in Item 4 of the declarations, to $----------.

2. Such reduced limit is restored to the amount stated in Item 4 of the declarations. Such restored limit applies to obligations assumed or expenses incurred because of bodily injury or property damage caused during the period from the effective date of this endorsement to the termination of the policy, by the nuclear energy hazard.

Note: When the reduction of the limit of liability results from a clearly identifiable nuclear event and restoration is offered retroactive to the effective date of the policy for claims other than those resulting from said event, above paragraph 2 will be replaced by the following:

2. Such reduced limit is restored to the amount stated in Item 4 of the declarations, except with respect to bodily injury or property damage resulting from (describe nuclear event).

3. The reduced limit of liability stated in paragraph 1 above, and the limit of liability stated in Item 4 of the declarations, as restored by this endorsement, shall not be cumulative; and each payment made by the companies after the effective date of this endorsement for any loss or expense covered by the policy shall reduce by the amount of such payment both the reduced limit of liability stated in paragraph 1 above and the limit of liability stated in Item 4 of the declarations, as restored by this endorsement, regardless of which limit of liability applies with respect to bodily injury or property damage out of which such loss or expense arises.

Effective date of this endorsement----------to form a part of Policy No.----------

Issued to----------.

Date of Issue----------.

For the subscribing companies

By----------

Countersigned by----------

Endorsement No.----------.

Nuclear Energy Liabilty Policy

(Facility Form)

Amendatory Endorsement

This policy does not apply to bodily injury or property damage with respect to which the insured is entitled to indemnity from the United States Nuclear Regulatory Commission under the provisions of Indemnity Agreement No.----------between the United States Nuclear Regulatory Commission and----------, dated----------, as now in effect or as hereafter amended.

* * * * *

Effective Date of this endorsement to form Policy No.

Issued to----------.

Date of Issue----------.

For the subscribing companies

By----------

Countersigned by----------

Endorsement No.----------.

Nuclear Energy Liability Policy

(Facility Form)

Waiver of Defenses Endorsement

(*Extraordinary Nuclear Occurrence*)

The named insured, acting for himself and every other insured under the policy, and the members of----------agree as follows:

1. With respect to any extraordinary nuclear occurrence to which the policy applies as proof of financial protection and which--

(a) Arises out of or results from or occurs in the course of the construction, possession, or operation of the facility, or

(b) Arises out of or results from or occurs in the course of the transportation of nuclear material to or from the facility, the insureds and the companies agree to waive

(1) Any issued or defense as to the conduct of the claimant or the fault of the insureds, including, but not limited to:

(i) Negligence,

(ii) Contributory negligence,

(iii) Assumption of risk, and

(iv) Unforsseeable intervening causes whether involving the conduct of a third person or an Act of God,

(2) Any issue of defense as to charitable or governmental immunity, and

(3) Any issue or defense based on any statute of limitations if suit is instituted within 3 years from the date on which the claimant first knew, or reasonably could have known, of his bodily injury or property damage thereof, but in no event more than 10 years after the date of the nuclear incident.

The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action.

2. The waivers set forth in paragraph 1 above do not apply to

(a) Bodily injury or property damage which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant;

(b) Bodily injury sustained by any claimant who is employed at the site of and in connection with the activity where the extraordinary nuclear occurrence takes place if benefits therefor are either payable or required to be provided under any workmen's compensation or occupational disease law;

(c) Any claim for punitive or exemplary damages, provided, with respect to any claim for wrongful death under State law which provides for damages only punitive in nature, this exclusion does not apply to the extent that the claimant has sustained damages, measured by the pecuniary injuries resulting from such death but do not exceed the maximum amount otherwise recoverable by law.

3. The waivers set forth in paragraph 1 above shall be effective only with respect to bodily injury or property damages to which the policy applies under its terms other than this endorsement.

Such waivers shall not apply to, or prejudice the prosecution or defense of any claim or portion of claim which is not within the protection afforded under--

(1) The provisions of the policy applicable to the financial protection required of the named insured,

(2) The agreement of indemnification between the named insured and the Nuclear Regulatory Commission made pursuant to Section 170 of the Atomic Energy Act of 1952, as amended, and

(3) The limit of liability provisions of subsection 170 e. of the Atomic Energy Act of 1954, as amended.

Such waivers shall not preclude a defense based upon the failure of the claimant to take reasonable steps to mitigate damages.

4. Subject to all of the limitations stated in this endorsement and in the Atomic Energy Act of 1954, as amended, the waivers set forth in paragraph 1 above shall be judicially enforceable in accordance with their terms against any insured in an action to recover damages because of bodily injury or property damage to which the policy applies as proof of financial protection.

5. As used herein:

Extraordinary nuclear occurrence means an event which the Nuclear Regulatory Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, as amended, *financial protection* and *nuclear incident* have the meanings given them in the Atomic Energy Act of 1954, as amended.

Claimant means the person or organization actually sustaining the bodily injury or property damage and also his assignees, legal representatives and other persons or organizations entitled to bring an action for damages on account of such injury or damage.

Nuclear Energy Liability Policy

(Facility Form)

Amendatory Endorsement

(*Application of Policy*)

It is agreed that insuring agreement IV of the policy, captioned *Application of Policy* is amended to read as follows: Application of Policy. This policy applies only to bodily injury or property damage:

(1) Which is caused during the policy period by the nuclear energy hazard, and (2) which is discovered and for which written claim is made against the insured, not later than 10 years after the end of the policy period.

Nuclear Energy Liability Policy

(Facility Form)

Waiver of Defenses Endorsement

(Extraordinary Nuclear Occurrence)

The named insured, acting for himself and every other insured under the policy, and the members of---------- agree as follows:

1. With respect to any extraordinary nuclear occurrence to which the policy applies as proof of financial protection and which--

(a) Arises out of or results from or occurs in the course of the construction, possession, or operation of the facility, or

(b) Arises out of or results from or occurs in the course of the transportation of nuclear material to or from the facility, the insureds and the companies agree to waive

(1) Any issue or defense as to the conduct of the claimant or the fault of the insureds, including, but not limited to:

(i) Negligence,

(ii) Contributory negligence,

(iii) Assumption of risk, and

(iv) Unforeseeable intervening causes whether involving the conduct of a third person or an act of God,

(2) Any issue or defense as to charitable or governmental immunity, and

(3) Any issue or defense based on any statue of limitations if suit is instituted within 3 years from the date on which the claimant first knew, or reasonably could have known, of his bodily injury or property damage and the cause thereof, but in no event more than 10 years after the date of the nuclear incident.

The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action.

2. The waivers set forth in paragraph 1 above do not apply to

(a) Bodily injury or property damage which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant;

(b) Bodily injury sustained by any claimant who is employed at the site of and in connection with the activity where the extraordinary nuclear occurrence takes place if benefits therefor are either payable or required to be provided under any workmen's compensation or occupational disease law;

(c) Any claim for punitive or exemplary damages, provided, with respect to any claim for wrongful death under any State law which provides for damages only punitive in nature, this exclusion does not apply to the extent that the claimant has sustained actual damages, measured by the pecuniary injuries resulting from such death but not to exceed the maximum amount otherwise recoverable under such law.

3. The waivers set forth in paragraph 1 above shall be effective only with respect to bodily injury or property damage to which the policy applies under its terms other than this endorsement; provided, however, that with respect to bodily injury or property damage resulting from an extraordinary nuclear occurrence. Insuring Agreement IV, "Application of Policy," shall not operate to bar coverage for bodily injury or property damage (a) which is caused during the policy period by the nuclear energy hazard and (b) which is discovered and for which written claim is made against the insured not later than twenty (20) years after the date of the extraordinary nuclear occurrence.

Such waivers shall not apply to, or prejudice the prosecution or defense of any claim or portion of claim which is not within the protection afforded under

(1) The provisions of the policy applicable to the financial protection required of the named insured,

(2) The agreement of indemnification between the named insured and the Nuclear Regulatory Commission made pursuant to section 170 of the Atomic Energy Act of 1954, as amended, and

(3) The limit of liability provisions of subsection 170 e. of the Atomic Energy Act of 1954, as amended.

Such waivers shall not preclude a defense based upon the failure of the claimant to take reasonable steps to mitigate damages.

4. Subject to all of the limitations stated in this endorsement and in the Atomic Energy Act of 1954, as amended, the waivers set forth in paragraph 1 above shall be judicially enforceable in accordance with their terms against any insured in an action to recover damages because of bodily injury or property damage to which the policy applies as proof of financial protection.

5. As used herein:

Extraordinary nuclear occurrence means an event which the Nuclear Regulatory Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, as amended, financial protection and nuclear incident have the meanings given them in the Atomic Energy Act of 1954, as amended.

Claimant means the person or organization actually sustaining the bodily injury or property damage and also includes his assignees, legal representatives and other persons or organizations entitled to bring an action for damages on account of such injury or damage.

Nuclear Energy Liability Policy

(Facility Form)

Amendatory Endorsement

(*Application of Policy*)

It is agreed that insuring agreement IV of the policy, captioned Application of Policy is amended to read as follows: Application of Policy. This policy applies only to bodily injury or property damage: (1) Which is caused during the policy period by the nuclear energy hazard, and (2) which is discovered and for which written claim is made against the insured, not later than 10 years after the end of the policy period.

Nuclear Energy Liability Policy

(Facility Form)

Waiver of Defense Endorsement

(Extraordinary Nuclear Occurrence)

The named insured, acting for himself and every other insured under the policy, and the members of

agree as follows:

1. With respect to any extraordinary nuclear occurrence to which the policy applies as proof of financial protection and which

(a) Arises out of or results from or occurs in the course the construction, possession, or operation of the facility, or

(b) Arises out of or results from or occurs in the course of the transportation of nuclear material to or from the facility.

the insured and the companies agree to waive.

(1) Any issue or defense as to the conduct of the claimant or the fault of the insureds, including but not limited to:

(i) Negligence,

(ii) Contributory negligence,

(iii) Assumption of risk, and

(iv) Unforeseeable intervening causes, whether involving the conduct of a third person, or an act of God,

(2) Any issue or defense as to charitable or governmental immunity, and

(3) Any issue or defense based on any statute of limitations if suit is instituted within three (3) years from the date on which the claimant first knew, or reasonably could have known, of his bodily injury or property damage and the cause thereof, but in no event more than twenty (20) years after the date of the nuclear incident.

The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed

jurisdictional or relating to an element in the cause of action.

2. The waivers set forth in paragraph 1. above do not apply to

(a) Bodily injury or property damage which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant;

(b) Bodily injury sustained by any claimant who is employed at the site of and in connection with the activity where the extraordinary nuclear occurrence takes place if benefits therefor are either payable or required to be provided under any workmen's compensation or occupational disease law;

(c) Any claim for punitive or exemplary damages, provided, with respect to any claim for wrongful death under any State law which provides for damages only punitive in nature, this exclusion does not apply to the extent that the claimant has sustained actual damages, measured by the pecuniary injuries resulting from such death but not to exceed the maximum amount otherwise recoverable under such law.

3. The waivers set forth in paragraph 1. above shall be effective only with respect to bodily injury or property damage to which the policy applies under its terms other than this endorsement; provided, however, that with respect to bodily injury or property damage resulting from an extraordinary nuclear occurrence. Insuring Agreement IV, "Application of Policy," shall not operate to bar coverage for bodily injury or property damage (a) which is caused during the policy period by the nuclear energy hazard and (b) which is discovered and for which written claim is made against the insured not later than twenty (20) years after the date of the extraordinary nuclear occurrence.

Such waivers shall not apply to, or prejudice the prosecution or defense of any claim or portion of claim which is not within the protection afforded under

(a) The provisions of the policy applicable to the financial protection required of the named insured;

(b) The agreement of indemnification between the named insured and the Nuclear Regulatory Commission made pursuant to section 170 of the Atomic Energy Act of 1954, as amended; and

(c) The limit of liability provisions of Subsection 170e. of the Atomic Energy Act of 1954, as amended.

Such waivers shall not preclude a defense based upon the failure of the claimant to take reasonable steps to mitigate damages.

4. Subject to all of the limitations stated in this endorsement and in the Atomic Energy Act of 1954, as amended, the waivers set forth in paragraph 1. above shall be judicially enforceable in accordance with their terms against any insured in an action to recover damages because of bodily injury or property damage to which the policy applies as proof of financial protection.

5. As used herein:

Extraordinary nuclear occurrence means an event which the Nuclear Regulatory Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, as amended.

Financial protection and *nuclear incident* have the meanings given them in the Atomic Energy Act of 1954, as amended.

Claimant means the person or organization actually sustaining the bodily injury or property damage and also includes his assignees, legal representatives and other persons or organizations entitled to bring an action for damages on account of such injury or damage.

Effective date of this endorsement---------- to form a part of Policy No.----------,

12:01 A.M. Standard Time

Issued to----------.

Date of issue----------.

Endorsement No.----------.

For the subscribing companies:

By----------,

General Manager

Countersigned by---------- .

Supplementary Endorsement Waiver of Defenses

Reactor Construction at the Facility

It is agreed that in construing the application of paragraph 2.(b) of the Waiver of Defenses Endorsement (NE-33a) with respect to an extraordinary nuclear occurrence occurring at the facility, a claimant who is employed at the facility in connection with the construction of a nuclear reactor with respect to which no operating license has been issued by the Nuclear Regulatory Commision shall not be considered as employed in connection with the activity where the extraordinary nuclear occurrence takes place if:

(1) The claimant is employed exclusively in connection with the construction of a nuclear reactor, including all related equipment and installations at the facility and

(2) No operating license has been issued by the Nuclear Regulatory Commission with respect to the nuclear reactor, and

(3) The claimant is not employed in connection with the possession, storage, use or transfer of nuclear material at the facility.

Effective date of this endorsement---------- to form a part of Policy No.----------.

12:01 A.M. Standard Time

Issued to----------.

Date of issue----------.

Endorsement No----------.

For the subscribing companies:

By----------,

General Manager

Countersigned by----------.

Nuclear Energy Liability Policy

(Facility Form)

Amendment of Definition of *Nuclear Energy Hazard* (Indemnified Nuclear Facility)

It is agreed that: 1. Solely with respect to an *insured shipment* to which the policy applies as proof of financial protection required by the Nuclear Regulatory Commission, subdivision (2) of the definition of *nuclear energy hazard* is amended to read:

(2) The nuclear material is in an insured shipment which is away from any other nuclear facility and is in the course of transportation, including handling and temporary storage incidental thereto, within

(a) The territorial limits of the United States of America, its territories or possessions, Puerto Rico or the Canal Zone; or

(b) International waters or airspace, provided that the nuclear material is in the course of transportation between two points located within the territorial limits described in (a) above and there are no deviations in the course of the transportation for the purpose of going to any other country, state or nation, except a deviation in the course of said transportation for the purpose of going to or returning from a port or place of refuge as the result of an emergency.

2. As used herein, *financial protection* has the meaning given it in the Atomic Energy Act of 1954, as amended.

Instructions--This form is to be used to modify all Nuclear Energy Liability Facility Forms in force on January 1, 1977 which were issued to become effective prior to January 1, 1977 and which are offered by the named insured as proof of financial protection being maintained as required by the Atomic Energy Act of 1954, as amended.

Effective date of this Endorsement---------- To form a part of Policy No.----------.

12:01 A.M. Standard Time

Issued to----------

Date of issue----------.

Endorsement No.----------.

For the subscribing companies:

By----------,

General Manager

Countersigned by---------- .

Nuclear Energy Liability Policy

(Facility Form)

Amendment of Definitions of *Nuclear Energy Hazard* and *Insured Shipment* (Indemnified Nuclear Facility)

It is agreed that: I. In Insuring Agreement III, *DEFINITIONS*

A. Solely with respect to an *insured shipment* to which this policy applies as proof of financial protection required by the Nuclear Regulatory Commission, Subdivision (2) of the definition of *nuclear energy hazard* is amended to read:

(2) The nuclear material is in an insured shipment which is away from any other nuclear facility and is in the course of transportation, including the handling and temporary storage incidental thereto, within

(a) The territorial limits of the United States of America, its territories or possessions, Puerto Rico or the Canal Zone; or

(b) International waters or airspace, provided that the nuclear material is in the course of transportation between two points located within the territorial limits described in (a) above and there are no deviations in the course of the transportation for the purpose of going to any other country, state or nation, except for a deviation in the course of said transportation for the purpose of going to or returning from a port or place of refuge as the result of an emergency.

B. The definition of *insured shipment* is replaced with the following:

Insured shipment means a shipment of source material, special nuclear material, spent fuel or waste, herein called *material*, (1) to the facility from any location except an indemnified nuclear facility, but only if the transportation of the material is not by predetermination to be interrupted by removal of the material from a transporting conveyance for any purpose other than the continuation of its transportation, or (2) from the facility to any other location, but only until the material is removed from a transporting conveyance for any purpose other than the continuation of its transportation.

II. As used herein, *financial protection* has the meaning given it in the Atomic Energy Act of 1954, as amended.

Instructions--This form is to be used to modify all Nuclear Energy Liability Facility Forms which are issued to become effective on or after January 1, 1977 and which are offered by the named insured as proof of financial protection being maintained as required by the Atomic Energy Act of 1954, as amended.

Effective date of this endorsement---------- To form a part of Policy No.----------.

12:01 A.M. standard time

Issued to---------- .

Date of issue----------.

Endorsement No.----------.

For the subscribing companies:

By---------- ,

General Manager.

Countersigned by----------.

NE-50 (1/1/80), Amendatory Endorsement

(Indemnified Nuclear Facility)

It is agreed that:

I. In Insuring Agreement III:

DEFINITIONS

A. The first sentence of the definition of *nuclear facility* is amended to read: *nuclear facility* means *the facility* as defined in any Nuclear Energy Liability Policy (Facility Form) issued by Nuclear Energy Liability Insurance Association or by Mutual Atomic Energy Liability Underwriters.

B. The definition of *indemnified nuclear facility* is replaced by the following: *indemnified nuclear facility* means

(1) *the facility* as defined in any Nuclear Energy Liability Policy (Facility Form) issued by Nuclear Energy Liability Insurance Association or by Mutual Atomic Energy Liability Underwriters, or

(2) any other nuclear facility, if financial protection is required pursuant to the Atomic Energy Act of 1954, or any law amendatory thereof, with respect to any activities or operations conducted thereat;

C. Solely with respect to an *insured shipment* to which this policy applies as proof of financial protection required by the Nuclear Regulatory Commission. Subdivision (2) of the definition of *nuclear energy hazard* is amended to read:

(2) The nuclear material is in an insured shipment which is away from any other nuclear facility and is in the course of transportation, including the handling and temporary storage incidental thereto, within

(a) The territorial limits of the United States of America, its territories or possessions, or Puerto Rico; or Canal Zone; or

(b) International waters or airspace, provided that the nuclear material is in the course of transportation between two points located within the territorial limits described in (a) above and there are no deviations in the course of the transportation for the purpose of going to any other country, state or nation, except a deviation in the course of said transportation for the purpose of going to or returning from a port or place of refuge as the result of an emergency.

D. The definition of *insured shipment* is replaced with the following:

insured shipment means shipment of source material, special nuclear material, spent fuel or waste, or tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, herein called *material*, (1) to the facility from any location except an indemnified nuclear facility, but only if the transportation of the material is not by predetermination to be interrupted by removal of the material from a transporting conveyance for any purpose other than the continuation of its transportation, or (2) from the facility to any other location, but only until the material is removed from a transporting conveyance for any purpose other than the continuation of its transportation.

E. As used herein, *financial protection* has the meaning given it in the Atomic Energy Act of 1954, as amended.

II. Insuring Agreement IV is replaced by the following:

IV. APPLICATION OF POLICY. This policy applies only to bodily injury or property damage (1) which is caused during the policy period by the nuclear energy hazard and (2) which is discovered and for which written claim is made against the insured, not later than ten years after the end of the policy period.

III. Condition 2 is replaced by the following:

2. INSPECTION: SUSPENSION. The companies shall at any time be permitted but not obligated to inspect the facility and all operations relating thereto and to examine the insured's books and records as far as they relate to the subject of this insurance and any property insurance afforded the insured through American Nuclear Insurers. If a representative of the companies discovers a condition which he believes to be unduly dangerous with respect to the nuclear energy hazard, a representative of the companies may request that such condition be corrected without delay. In the event of noncompliance with such request, a representative of the companies may, by notice to the named insured, to any other person or organization considered by the companies to be responsible for the continuation of such dangerous condition, and to the United States Nuclear Regulatory Commission, suspend this insurance with respect to named insured and such other person or organization effective 12:00 midnight of the next business day of such Commission following the date that such Commission receives such notice. The period of such suspension shall terminate as of the time stated in a written notice from the companies to the named insured and to each such person or organization that such condition has been corrected.

Neither the right to make such inspections and examinations nor the making thereof nor any advice or report resulting therefrom shall constitute an undertaking, on behalf of or for the benefit of the insured or others, to determine or warrant that such facility or operations are safe or healthful, or are in compliance with any law, rule or regulation. In consideration of the issuance or continuation of this policy, the insured agrees that neither the companies nor any pesons or organizations making such inspections or exminations on their behalf shall be liable with respect to injury to or destruction of property at the facility, or any consequential loss or expense resulting therefrom, or any loss resulting from interruption of business or manufacture, arising out of the making of or a failure to make any such inspection or examination, or any report thereon, or any such suspension of insurance, but this provision does not limit the contractual obligations of the companies under this policy or any policy affording the insured property insurance through American Nuclear Insurers.

IV. Condition 4 is replaced by the following:

4. LIMITATION OF LIABILITY: COMMON OCCURRENCE. Any occurrence or series of occurrences resulting in bodily injury or property damage arising out of the radioactive, toxic, explosive or other hazardous properties of

(a) nuclear material discharged or dispersed from the facility over a period of days, weeks, months or longer and also arising out of the properties of other nuclear material so discharged or dispersed from one or more other nuclear facilities insured under any Nuclear Energy Liability Policy (Facility Form) issued by Nuclear Energy Liability Insurance Association, or

(b) source material, special nuclear material, spent fuel or waste in the course of transportation for which insurance is afforded under this policy and also arising out of such properties of other source material, special nuclear material, spent fuel or waste in the course of transportation for which insurance is afforded under one or more other Nuclear Energy Liability Policies (Facility Form) issued by Nuclear Energy Liability Insurance Association, shall be deemed to be a common occurrence resulting in bodily injury or property damage caused by the nuclear energy hazard.

With respect to such bodily injury and property damage (1) the total aggregate liability of the members of the Nuclear Energy Liability Insurance Association under all Nuclear Energy Liability Policies (Facility Form), including this policy, applicable to such common occurrence shall be the sum of the limits of liability of all such policies, the limit of liability of each such policy being as determined by Condition 3 thereof, but in no event shall such total aggregate liability of such members exceed $124,000,000; (2) the total liability of the companies under this policy shall not exceed that proportion of the total aggregate liability of the members of Nuclear Energy Liability Insurance Association, as stated in clause (1) above, which (a) the limit of liability of this policy, as determined by Condition 3, bears to (b) the sum of the limits of liability of all such policies issued by such members, the limit of liability of each such policy being as determined by Condition 3 thereof.

The provisions of this condition shall not operate to increase the limit of the companies' liability under this policy.

V. The second paragraph of Condition 12, *Other Insurance*, is amended to read:

If the insured has other valid and collectible insurance (other than such concurrent insurance or any other nuclear energy liability insurance issued by Nuclear Energy Liability Insurance Association or Mutual Atomic Energy Liability Underwriters to any person or organization) applicable to loss or expense covered by this policy, the insurance afforded by this policy shall be excess insurance over such other insurance; provided, with respect to any person who is not employed at and in connection with the facility, such insurance as is afforded by this policy for bodily injury to an employee of the insured arising out of and in the course of his employment shall be primary insurance under such other insurance.

VI. Paragraph (c) of Condition 16, *Company Representation*, is amended to read:

(c) Nuclear Energy Liability Insurance Association is the agent of the companies with respect to all matters pertaining to this insurance. All notices or other communications required by this policy to be given to the companies may be given to such agent, at its office at the Exchange, Suite 245, 270 Farmington Avenue, Farmington, Connecticut 06032, with the same force and effect as if given directly to the companies. Any requests, demand or agreements made by such agent shall be deemed to have been made directly by the companies.

Effective Date of this Endorsement-------- 12:01 a.m. Standard Time to form a part of policy No.------.

Issued to-------- For the subscribing companies.

Date of Issue-------- .

By-------- General Manager.

Endorsement No.

NE-50 (1/1/81)

NE-51 (1/1/81)--Amendment of Definition of Condition 2 *Inspection*; *Suspension* and *Insured Shipment*

(Indemnified Nuclear Facility)

It is agreed that:

(1) Condition 2 *Inspection*; *Suspension* is replaced by the following:

2. Inspection; Suspension. The companies shall at any time be permitted but not obligated to inspect the facility and all operations relating thereto and to examine the insured's books and records as far as they relate to the subject of this insurance and any property insurance afforded the insured through American Nuclear Insurers. If a representative of the companies discovers a condition which he believes to be unduly dangerous with respect to the nuclear energy hazard, a representative of the companies may request that such conditions be corrected without delay. In the event of noncompliance with such requests, a representative of the companies may, by notice to the named insured, to any other person or organization considered by the companies to be responsible for the continuation of such dangerous condition, and to the United States Nuclear Regulatory Commission, suspend this insurance with respect to the named insured and such other person or organization effective 12:00 midnight of the next business day of such Commission following the date that such Commission receives such notice. The period of such suspension shall terminate as of the time stated in a written notice from the

companies to the named insured and to each such person or organization that such condition has been corrected.

Neither the right to make such inspections and examinations nor the making thereof nor advice or report resulting therefrom shall constitute an undertaking, on behalf of or for the benefit of the insured or others, to determine or warrant that such facility or operations are safe or healthful, or are in compliance with any law, rule or regulation. In consideration of the issuance or continuation of this policy, the insured agrees that neither the companies nor any persons or organizations making such inspections or examinations on their behalf shall be liable with respect to injury to or destruction of property at the facility, or any consequential loss or expense resulting therefrom, or any loss resulting from interruption of business or manufacture, arising out of the making of or a failure to make any such inspection or examination, or any report thereon, or any such suspension of insurance, but this provision does not limit the contractual obligations of the companies under this policy or any policy affording the insured property insurance through American Nuclear Insurers.

(2) The definition of *insured shipment* in Insuring Agreement III, Definitions, is replaced by the following: *insured shipment* means a shipment of source material, special nuclear material, spent fuel, waste, or tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content herein called *material*, (1) to the facility from any location except an indemnified nuclear facility, but only if the transportation of the material is not by predetermination to be interrupted by removal from a transporting conveyance for any purpose other than the continuation of its transportation, or (2) from the facility to any other location, but only until the material is removed from a transporting conveyance for any purpose other than the continuation of its transportation.

Effective Date of this Endorsement-------- 12:01 a.m. Standard Time to form a part of Policy No.------

Issued to-------- For the subscribing companies.

Date of Issue-------- .

By-------- General Manager.

Endorsement No.

NE-51 (1/1/81)

Amendment of Coverage Endorsement for Workers Claims

(Facility Form)

NE-64(1/1/88)

Preamble

1. The insurance and rating plan presently used by Nuclear Energy Liability Insurance Association (*NELIA*) and Mutual Atomic Energy Liability Underwriters (*MAELU*) do not make a distinction between workers claims arising from catastrophic events and those arising from lesser events;

2. NELIA and MAELU believe that the lack of such a distinction will adversely affect their ability to continue to attract from world markets very large amounts of nuclear energy liability insurance for the nuclear industry;

3. NELIA and MAELU want to avoid this potential loss of capacity and to continue to provide nuclear energy liability insurance for workers claims. Accordingly NELIA and MAELU desire to restructure their present insurance programs, including this policy, effective January 1, 1988.

Now, Therefore, the Named Insured and the companies do hereby agree as follows:

1. Definitions

When used in reference to this endorsement:

This policy means the policy of which this endorsement forms a part;

Nuclear related employment means all work performed at one or more than one nuclear facility in the United States of America or in connection with the transportation of nuclear material to or from any such facility. All of a worker's nuclear related employment shall be considered as having begun on the first day of such employment, regardless of the number of employers involved or interruptions in such employment;

Worker refers to a person who is or was engaged in nuclear related employment;

Workers claims means claims for damages because of bodily injury to a worker caused by the radioactive, toxic, explosive or other hazardous properties of nuclear material and arising out of or in the course of the worker's nuclear related employment;

Extraordinary nuclear occurrence means an event which the United States Nuclear Regulatory Commission has determined to be an *extraordinary nuclear occurrence* as defined in the Atomic Energy Act of 1954, or in any law amendatory thereof.

2. Application of This Endorsement

This endorsement applies only to such insurance as is afforded by this policy for workers claims which do not arise in whole or in part out of an extraordinary nuclear occurrence.

3. Exclusion of New Workers Claims

This policy does not apply to bodily injury to a worker which arises in whole or in part out of nuclear related employment that begins on or after January 1, 1988.

4. Application of Policy to Workers Claims Not Excluded

With respect to such insurance as is afforded by this policy for workers claims which are not excluded, Insuring Agreement IV does not apply and the following Insuring Agreement IV-A does apply:

IV-A Application of Policy to Workers Claims. This policy applies only to bodily injury (1) which is caused during the policy period by the nuclear energy hazard and (2) which is discovered and for which written claim is made against the insured not later than the close of December 31, 1997.

5. Availability of Supplemental Insurance

NELIA and MAELU are offering to make insurance under one or more Master Worker Policies available to all holders of Nuclear Energy Liability Policies (Facility Form). *This offer is contingent on sufficient support from policy holders, and may be withdrawn or modified by Nelia or Maelu as they deem necessary or appropriate*.

The Master Workers Policies will provide, under their separate terms and conditions, coverage for new workers claims. Premiums will be subject to a separate Industry Retrospective Rating Plan.

Coverage under the new master worker policies is not automatic. A written request must be submitted to Nelia or Maelu through regular market channels.

It is understood and agreed that all of the provisions of this endorsement shall remain in full force and effect without regard to this section 5, and without regard to whether or not the Named Insureds become insureds under the Master Worker Policies, or whether or not NELIA or MAELU terminate such policies or withdraw or modify their offer to underwrite such policies.

Executed for the companies

Date----------

By----------

(Signature or Authorized Officer)

(Print or Type Name and Title of Officer)

Executed for the Named Insured

(Named Insured--Type or Print)

Date----------

By----------

(Signature of Authorized Officer)

(Print or Type Name and Title of Officer)

Effective Date of this Endorsement

12:01 a.m. Standard Time

To form a part of Policy No.----------

Issued to----------

Date of Issue----------

For the subscribing companies

By----------

General Manager

Endorsement No.

Countersigned by----------

AMENDMENT OF COVERAGE ENDORSEMENT FOR WORKERS CLAIMS (Facility Form) NE-66(1/1/88)

It is agreed that:

1. *Definitions*

When used in reference to this endorsement:

This policy means the policy of which this endorsement forms a part;

Nuclear related employment means all work performed at one or more than one nuclear facility in the United States of America or in connection with the transportation of nuclear material to or from any such facility. All of a worker's nuclear related employment shall be considered as having begun on the first day of such employment, regardless of the number of employers involved or interruptions in such employment;

Worker refers to a person who is or was engaged in nuclear related employment;

Workers claims means claims for damages because of bodily injury to a worker caused by the radioactive, toxic, explosive or other hazardous properties of nuclear material and arising out of or in the course of the worker's nuclear related employment;

Extraordinary nuclear occurrence means an event which the United States Nuclear Regulatory Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, or in any law amendatory thereof.

2. *Application of This Endorsement*

This endorsement applies only to such insurance as is afforded by this policy for workers claims which do not arise in whole or in part out of an extraordinary nuclear occurrence.

3. *Exclusion of New Workers Claims*

This policy does not apply to bodily injury to a worker which arises in whole or in part out of nuclear related employment that begins on or after January 1, 1988.

4. *Application of Policy To Workers Claims Not Excluded*

With respect to such insurance as is afforded by this policy for workers claims which are not excluded, Insuring Agreement IV does not apply and the following Insuring Agreement IV-A does apply:

IV-A Application of Policy To Workers Claims

This policy applies only to bodily injury (1) which is caused during the policy period by the nuclear energy hazard and (2) which is discovered and for which written claim is made against the insured not later that the close of December 31, 1997.

5. *Availability of Supplemental Insurance*

NELIA and MAELU are offering to make insurance under one or more Master Worker Policies available to all holders of Nuclear Energy Liability Policies (Facility Form). *This offer is contingent on sufficient support from policyholders, and may be withdrawn or modified by NELIA or MAELU as they deem necessary or appropriate*.

The Master Worker Policies will provide, under their separate terms and conditions, coverage for new workers claims. Premiums will be subject to a separate Industry Retrospective Rating Plan.

Coverage under the new master worker policies is not automatic. A written request must be submitted to NELIA or MAELU through regular market channels.

It is understood and agreed that all of the provisions of this endorsement shall remain in full force and effect without regard to this Section 5, and without regard to whether or not the Named Insureds become insureds under the Master Worker Policies, or whether or not NELIA or MAELU terminate such policies or withdraw or modify their offer to underwrite such policies.

Explanation of Use of This Endorsement: This endorsement is a mandatory endorsement which is to be attached to new Facility Form Policies issued on or after January 1, 1988.

Effective Date of this Endorsement

12:01 a.m. Standard Time

To form a part of Policy No.----------

Issued to----------

Date of Issue----------

For the subscribing companies

By----------

General Manager

Endorsement No.

Countersigned by----------

NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION

Nuclear Energy Liability Policy

Facility Worker Form, herein called Master Worker Policy, NMWP-1(1/1/88)

The undersigned members of Nuclear Energy Liability Insurance Association, hereinafter called the companies, each itself severally and not jointly, and in the respective proportion hereinafter set forth, agree with the insureds named in Item 1 of the Declarations of each Certificate, hereinafter called the Named Insureds, in consideration of the payment of the premium, and subject to all of the provisions of the applicable Certificate and of this policy, as follows:

I--Relation Between the Master Worker Policy and Certificates

No insurance is provided by this policy except through a Certificate issued to form a part hereof. The insurance then applies separately to the persons and organizations who are defined in Section IV as insureds under each such Certificate, except with respect to the Amount of Insurance Available.

The Amount of Insurance Available through such a Certificate to any person or organization who is an insured thereunder is limited as provided in Section VIII of this policy.

II--Definitions

When used in reference to this policy:

Bodily injury means bodily injury, sickness or disease, including death resulting therefrom;

Byproduct material has the meaning given in the Atomic Energy Act of 1954, or in any law amendatory thereof;

Certificate, unless qualified, refers to a Certificate of Insurance (including Declarations and endorsements forming a part thereof) issued to form a part of this policy or of a MAELU Policy;

Claims costs means, with reference to claims or suits the companies have the right and duty to defend under this policy;

(1) Cost taxed against the insured in such suits and interest on any judgments therein;

(2) Premiums on appeal bonds and on bonds to release attachments in such suits (but the companies have no obligation to apply for or furnish such bonds;

(3) Reasonable expenses, other than loss of earnings, incurred by the insured at the companies' request;

(4) Payments for expenses incurred in the investigation, negotiation, settlement and defense of such claims or suits, including, but not limited to, the cost of such allocated claims services by employees of the companies, fees and expenses of independent adjusters, attorneys' fees and disbursements, expenses for expert testimony, examination, x-ray or autopsy or medical expenses of any kind;

(5) Payments for expenses incurred by the companies in investigating an occurrence resulting in bodily injury or in minimizing its effects;

Discovery period means the period defined in Section VI B hereof;

Extraordinary nuclear occurrence means an event which the United States Nuclear Regulatory Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, or in any law amendatory thereof;

Insured contract means that part of a contract or agreement made prior to bodily injury to a new worker under which the insured assumes the tort liability of a third person to pay damages because of such bodily injury. Tort liability means a liability that would be imposed by law on the third person in the absence of an express assumption of liability by the third person;

Insured facility means a facility with respect to which insurance is provided through a Certificate;

Insured shipment means a shipment of source material, special nuclear material, spent fuel or waste (herein called *material*):

(1) To the facility from any location other than an insured facility, but only if the transportation of the material is not by predetermination to be interrupted by removal of the material from a transporting conveyance for any purpose other than the continuation of its transportation; or

(2) From the facility to any other location, but only until the material is removed from a transporting conveyance for any purpose other than the continuation of its transportation;

MAELU means Mutual Atomic Energy Liability Underwriters;

MAELU Policy means a Nuclear Energy Liability Policy (Facility Worker Form) written by members of MAELU;

NELIA means Nuclear Energy Liability Insurance Association;

New worker refers to a person who is or was engaged in nuclear related employment that begins on or after January 1, 1988;

New worker's claim means a claim for damages because of bodily injury to a new worker caused by the radioactive, toxic, explosive or other hazardous properties of nuclear material and arising out of or in the course of the new worker's nuclear related employment;

Non-ratable incurred losses has the meaning given in Attachment 1 to this policy;

Nuclear energy hazard means the radioactive, toxic, explosive or other hazardous properties of nuclear material which is:

(1) At the facility as described in the applicable Certificate issued to form a part of this policy or has been discharged or dispersed therefrom without intent to relinquish possession of custody thereof to any other person or organization; or

(2) In an insured shipment that is away from any other insured nuclear facility and is in the course of transportation, including handling and temporary storage incidental thereto within:

(a) The territorial limits of the United States of America, its territories or possessions or Puerto Rico; or

(b) International waters or airspace, provided that:

(i) The nuclear material is in the course of transportation between two points located within the territorial limits described in (a) above; and

(ii) There are no deviations in the course of the transportation for the purpose of going to any other country, state or nation, except to a port or place of refuge in an emergency;

Nuclear facility means any of the following and includes the site on which any of them is located, all operations conducted on such site and all premises used for such operations:

(1) The facility as described in any Certificate;

(2) Any nuclear reactor;

(3) Any equipment or device designed or used for:

(a) Separating the isotopes of uranium or plutonium;

(b) Processing or utilizing spent fuel; or

(c) Handling, processing or packaging waste;

(4) Any equipment or device used for the processing, fabricating or alloying of special nuclear material if at any time the total amount of such material in the custody of the insured at the premises where such equipment of device is located consists of or contains more than 25 grams of plutonium or uranium 233 or any combination thereof, or more than 250 grams of uranium 235;

(5) Any structure, basin, excavation, premises or place prepared or used for the storage or disposal of waste;

Nuclear material means source material, special nuclear material or byproduct material;

Nuclear reactor means any apparatus designed or used to sustain nuclear fission in a self-supporting chain reaction or to contain a critical mass of fissionable material;

Nuclear related employment means all work performed at one or more than one nuclear facility in the United States of America or in connection with the transportation of nuclear material to or from any such facility.

All of a new worker's nuclear related employment shall be considered as having begun on the first day of such employment, regardless of the number of employers involved or interruptions in such employment;

Policy period means the period defined in Section VI A hereof;

Ratable incurred losses has the meaning given in Attachment 1 to this policy;

Source material has the meaning given in the Atomic Energy Act of 1954, or in any law amendatory thereof, and also includes tailings or wastes produced by the extraction of uranium or thorium from ore processed primarily for its source material content;

Special nuclear material has the meaning given in the Atomic Energy Act of 1954, or in any law amendatory thereof;

Spent fuel means any fuel element or fuel component, solid or liquid, which has been used or exposed to radiation in any nuclear reactor;

The facility refers to the facility described in the Declarations of a Certificate. It includes the location described in Item 3 thereof and all property and operations at such location;

Waste means any waste material that contains byproduct material and results from the operation by any person or organization of:

(1) Any nuclear reactor; or

(2) Any equipment or device designed or used for:

(a) Separating the isotopes of uranium or plutonium;

(b) Processing or utilizing spent fuel; or

(c) Handling, processing or packaging such waste material.

III--Coverage

In the event that a new worker's claim is made against a person or organization who is an insured under a Certificate issued to form a part of this policy:

(1) The companies shall pay on behalf of the insured all sums which the insured shall become legally obligated to pay as damages because of bodily injury to which this policy applies, sustained by a new worker and caused by the nuclear energy hazard.

The companies shall have the right and duty to defend any suit against the insured alleging such injury and seeking damages payable under the terms of this policy. But the companies may make such investigation and settlement of any claim or suit seeking such damages as they deem appropriate.

(2) The companies shall also pay, as part of the Amount of Insurance Available under this policy, the claims costs relating to any such claim or suit.

(3) The companies' obligation to pay damages and claims costs, and to defend any claim and suit ends when the Policy Aggregrate Limit has been exhausted pursuant to the provisions of Section VIII.

IV--Definition of Insured

When used in reference to a Certificate issued to form a part of this policy, the unqualified word insured means:

(1) each insured named in Item 1 of the Declarations of the Certificate; and

(2) any other person or organization with respect to legal responsibility for damages because of bodily injury to a new worker caused by the nuclear energy hazard applicable to the Certificate. This subsection (2) does not include as an insured the United States of America or any of its agencies except the Tennessee Valley Authority.

V--Exclusions

This policy does not apply:

(1) To any obligation for which the insured or any carrier as his insurer may be held liable under any worker's compensation, unemployment compensation or disability benefits law, or under any similar law;

(2) To bodily injury to any employee of the insured arising out of or in the course of employment by the insured; but this exclusion (2) does not apply to liability assumed by the insured under an insured contract;

(3) To liability assumed by the insured under contract, other than an insured contract;

(4) To bodily injury to a new worker due to the manufacturing, handling or use at the location designated in Item 3 of the Declarations of any Certificate, in time of peace or war, of any nuclear weapon or other instrument of war utilizing special nuclear material or byproduct material;

(5) To bodily injury to a new worker due to war, whether or not declared, civil war, insurrection, rebellion or revolution, or to any act or condition incident to any of the foregoing;

(6) To bodily injury to a new worker arising in whole or in part out of an extraordinary nuclear occurrence.

VI--Policy Period; Discovery Period; Application of Policy

A. Policy Period

The policy period of this policy begins at 12:01 a.m. on January 1, 1988 and ends at the close of December 31, 1992, Eastern Standard Time, or when all Certificates issued to form a part hereof have been cancelled, whichever first occurs.

B. Discovery Period

The discovery period for claims made under this policy begins at 12:01 a.m. on January 1, 1988 and ends at the close of December 31, 1997, Eastern Standard Time.

C. Application of Policy

This policy applies only to bodily injury to a new worker (1) which is caused during the policy period by the nuclear energy hazard and (2) which is discovered and for which written claim is first made against the insured within the discovery period.

VII--Other Insurance

A. This insurance is primary insurance under any insurance afforded by a Master Policy-Nuclear Energy Liability Insurance (Secondary Financial Protection) issued by NELIA or MAELU.

B. If an insured has other valid and collectible insurance, except under a MAELU Policy, for loss or expense covered by this policy, this shall be excess insurance over such other insurance. If the insured has insurance under a MAELU Policy, whether the insurance is collectible or not, the companies shall then be liable under this policy only for such proportion of loss or expense as the amount stated as the Policy Aggregate Limit in Section VIII of this policy bears to the sum of such amount and the corresponding amount stated in the MAELU Policy.

VIII--Amount of Insurance Available

A. Policy Aggregate Limit

1. The Policy Aggregate Limit is $124 million. This limit is not cumulative from year to year. The limit applies to all new worker's claims that qualify for coverage under this policy (herein called qualified claims).

2. The Policy Aggregate Limit applies collectively to all new worker's claims. Such claims may be paid by NELIA on behalf of the companies as the claims, in NELIA's discretion, become ready for disposition, and claims costs may be paid as they become due, all without regard to the order in which such claims were made and without any obligation to maintain, reserve or use any portion of the Policy Aggregate Limit for claims reported under any particular Certificate.

B. Limitation of the Companies' Liability

1. Regardless of the number of (a) Certificates issued to form a part of this policy, (b) persons and organizations who are insureds under such Certificates, (c) qualified claims, or (d) years this policy or any such Certificates shall continue in force, the Policy Aggregate Limit is the total liability of the companies for all of their obligations under this policy, including the defense of suits and the payment of damages and claims costs.

2. This policy provides for certain automatic reinstatements of the Policy Aggregate Limit. Regardless of such provision, if, during the policy period or thereafter, the total payments of the companies for

(a) Non-ratable incurred losses, and

(b) Those ratable incurred losses for which the companies have not been reimbursed under the Industry Retrospective Rating Plan Premium Endorsement described in Attachment 1 to this policy,

equal $124 million, the Policy Aggregate Limit shall be deemed to be exhausted, and shall not be further reinstated except by an endorsement issued to form a part of this policy for additional premium as determined by the companies.

C. Reduction and Reinstatement of the Policy Aggregate Limit

1. Each payment made by the companies in discharge of their obligations under this policy shall reduce the Policy Aggregate Limit by the amount of such payment.

2. The companies shall, however, automatically reinstate the policy aggregate limit until the total amount of such reinstatements equals $124 million, but in no event shall there be any automatic reinstatements after the Policy Aggregate Limit is exhausted pursuant to the provisions of subsection B.2. above. Thereafter, there shall be no further reinstatement of the Policy Aggregate Limit except by an endorsement issued to form a part of this policy for additional premium as determined by the companies.

3. It is a condition of this insurance that the companies shall have the right to reimburse themselves, as a matter of first priority, from funds held by NELIA in the Special Reserve Account described in Attachment 1 to this policy or from retrospective premiums received by NELIA for this insurance. The amount of reimbursement shall be equal to 95% of each payment made by the companies with respect to their obligations under this policy.

IX--Insured's Duties in Case of Claims or Suits

A. Notice of Claims or Suits

In the event of any claim or suit involving bodily injury to which a Certificate issued to form a part of this policy applies, written notice containing particulars sufficient to identify the insured and also reasonably obtainable information with respect to the time, place and circumstances thereof shall be given by or for the insured to the companies as soon as practicable. The insured shall immediately forward to the companies every demand, notice, summons or other process received relating to claims or suits against the insured.

B. Assistance and Cooperation

The insured shall cooperate with the companies and, upon their request, shall:

(1) Attend hearings and trials; and

(2) Assist in making settlements, securing and giving evidence, obtaining the attendance of witnesses and in the conduct of any legal proceedings in connection with the subject matter of this insurance.

The insured shall not, except at the insured's own cost, make any payment, assume any obligation or incur any expense.

X--Subrogation

In the event of any payment through a Certificate to form a part of this policy, the companies shall be subrogated to all the insured's rights

of recovery therefor against any person or organization, and the insured shall execute and deliver instruments and papers, and so whatever else is necessary to secure such rights. Prior to knowledge of bodily injury caused by the nuclear energy hazard the insured may waive in writing any or all right of recovery against any person or organization, but after such knowledge the insured shall not waive or otherwise prejudice any such right of recovery.

The companies hereby waive any right of subrogation against (1) any other insured of (2) the United States of America or any of its agencies acquired by reason of any payment under this policy.

It is a condition of this policy that if an insured makes a recovery on account of any such injury, the insured shall repay to the companies the amount to which the companies would have been entitled had the foregoing provisions, or any of them, not been included in the policy.

XI--Inspection and Suspension

The companies shall be permitted, but not obligated, to inspect at any time the facility as described in any Certificate and all books, records and operation relating thereto, both with respect to this insurance, and any other nuclear energy liability insurance and property insurance also afford with respect thereto by members of NELIA, American Nuclear Insurers, MAELU or MAERP Reinsurance Association.

If a representative of the companies discovers a condition which he or she believes to be unduly dangerous with respect to the risks insured under the Certificate, a representative of the companies may request such condition to be corrected without delay. In the event of noncompliance with the request, an officer of NELIA may, by written notice mailed or delivered to the first Named Insured, with similar notice to the United States Nuclear Regulatory Commission, suspend the insurance afforded by a Certificate issued by NELIA effective 12:00 midnight of the next business day of such Commission following the date that such Commission receives such notice. The period of such suspension shall terminate as of the time stated in a written notice from NELIA to the first Named Insured that such condition has been corrected.

Neither the right to make such inspections or suspensions nor the making thereof nor any advice or report resulting therefrom shall constitute an undertaking, on behalf of or for the benefit of the Named Insureds or others to determine or warrant that the facility or operations relating thereto are safe or healthful, or are in compliance with any law, rule or regulation.

In consideration of the issuance or continuation of a Certificate, the Named Insureds agree that neither the companies nor any persons or organizations making such inspections on their behalf shall be liable for damage to the facility or any consequential damage or cost resulting therefrom, including but not limited to any such damage or cost relating to interruption of business or manufacture, arising out of the making of or failure to make any such inspection of the facility, any report thereon, or any such suspension of insurance, but this provision does not limit the companies' contractual obligations under a Certificate issued by NELIA or any policy issued by NELIA or American Nuclear Insurers affording the insured nuclear energy liability or property insurance.

XII--Cancellation of Certificates

The first Named Insured designated in a Certificate issued to from a part of this policy any cancel such Certificate by mailing to the companies and the United States Nuclear Regulatory Commission written notice stating when, not less than 30 days thereafter, such cancellation shall be effective.

The companies may cancel any such Certificate by mailing to the first Named Insured designated therein at the address shown in such Certificate and to the United States Nuclear Regulatory Commission written notice, stating when, not less than 90 days thereafter, such cancellation shall be effective; provided in the event of non-payment of premium, or if the operator of the facility, as designated in the Declarations of the Certificate, is replaced by another person or organization, such Certificate may be cancelled by the companies by mailing to the first Named Insured at the address shown therein and to the United States Nuclear Regulatory Commission written notice, stating when, not less than 30 days thereafter, such cancellation shall be effective.

The mailing of notice as aforesaid shall be sufficient proof of notice. The effective date and hour of cancellation stated in the notice shall become the end of the Certificate period. Delivery of such written notice either by the first Named Insured or the companies shall be equivalent to mailing.

Upon cancellation of a Certificate, other than as of the end of December 31 in any year, the earned standard premium for the period such Certificate has been in force since the preceding December 31 shall be computed in accordance with the following provisions:

(1) If the first Named Insured cancels, the earned standard premium for such period shall be computed in accordance with the customary annual short rate table and procedure; provided, however, that if the first Named Insured cancels after knowledge of bodily injury caused by the nuclear energy hazard, all premiums theretofore paid or payable shall be fully earned;

(2) If the companies cancel, the earned standard premium for such period shall be computed pro rata.

Premium adjustment, if any, may be made either at the time of cancellation or as soon as practicable after cancellation becomes effective, but payment of tender of unearned premium is not a condition of cancellation.

Cancellation of a Certificate shall not affect the rights and obligations of the Named Insureds under the Insureds under the Industry Retrospective Rating Plan Premium Endorsement forming a part of the Certificate.

XIII--General Conditions

A. Premium

The Named Insureds designated in a Certificate issued by NELIA shall pay the companies the premiums for the Certificate in accordance with the provisions of the Industry Retrospective Rating Plan Premium Endorsement described in Attachment 1 to this policy.

B. Modifications, Waiver

The provisions of this policy or a Certificate issued to form a part hereof shall not be changed or waived except by an endorsement issued by the companies to form a part of the policy or Certificate.

C. Assignment

Assignment of interest under a Certificate issued to form a part of this policy shall not bind the companies until their consent is endorsed thereon. If, however, a Named Insured shall die or be declared bankrupt or insolvent, the Certificate shall cover the Named Insured's legal representative, receiver or trustee as an insured, but only with respect to liability as such, and then only provided written notice of the appointment as legal representative, receiver or trustee is given to the companies within 10 days after such appointment.

D. Suit

No suit or action on a Certificate issued to form a part of this policy shall lie against the companies or any of them unless, as a condition precedent thereto, the insured shall have fully complied with all the terms of the policy, nor until the amount of the insured's obligation to pay shall have been finally determined either by judgment against the insured after actual trial or by written agreement of the insured, the claimant and the companies.

Any person or organization or the legal representative thereof who has secured such judgment of written agreement shall thereafter be entitled to recover under the Certificate to the extent of the insurance afforded by this policy through the Certificate. No person or organization shall have any right under the Certificate to join the companies or any of them as parties to any action against the insured to determine the insured's liability, nor shall the companies or any of them be impleaded by the insured or the insured's legal representative.

Bankruptcy or insolvency of the insured or the insured's estate shall not relieve the companies of any of their obligations under this policy.

E. Authorization of The First Named Insured

Except with respect to compliance with the obligations imposed on the insured by the Sections of this policy entitled *Insured's Duties in Case of Claims or Suits*, Subrogation and *Suit*, the first Named Insured designated in the Declarations of a Certificate issued to form a part of this policy is authorized to act for every other insured in all matters pertaining to this insurance.

F. Insured Representation

Any notice, sworn statement of proof of Loss which may be required by the provisions of this policy may be given to any one of the companies specified in the Schedule of Subscribing Companies attached hereto. Such notice, statement or proof of Loss so given shall be valid and binding on all such companies.

In any action or suit against such companies, service of process may be made on any one of them and such service shall be valid and binding service on all such companies.

Nuclear Energy Liability Insurance Association is the agent of the companies with respect to all matters pertaining to this insurance. All notices or other communications required by this policy may be given to such agent at its office at: Nuclear Energy Liability Insurance Association, The Exchange, Suite 245, 270 Farmington Avenue, Farmington, Connecticut 06032, with the same force and effect as if given directly to the companies. Any requests, demands or agreements made by such agent shall be deemed to have been made directly by the companies.

G. Changes in Subscribing Companies and Their Proportionate Liability

By acceptance of this policy the Named Insureds agree that the members of Nuclear Energy Liability Insurance Association liable under this policy, and the proportionate liability of each such member, may change from year to year, and further agree that regardless of such changes:

(1) Each company subscribing this policy upon its issuance shall be liable only for its stated proportion of any obligation assumed or expense incurred under this policy because of bodily injury to new workers caused, during the period from the effective date of this policy to the close of December 31 next following, by the nuclear energy hazard; for each subsequent calendar year, beginning January 1 next following the effective date of this policy, any change in the subscribing companies and the proportionate liability of each such company shall be stated in an endorsement issued to form a part of this policy, duly executed and attested by the President of Nuclear Energy Liability Insurance Association on behalf of each such company, and a copy of which will be mailed or delivered to the first Named Insured of each Certificate.

(2) The liability of any subscribing company shall not be cumulative from year to year.

H. Declarations

By acceptance of this Master Worker Policy, the Named Insureds designated in a Certificate agree that the statements in such Certificate are their agreements and representations, that this Master Worker Policy and such Certificate are issued in reliance upon the truth of such representations and that this Master Worker Policy and such Certificate embody all agreements between such Named Insureds and the companies or any of their agents relating to this insurance.

In Witness Whereof, the companies subscribing this policy have caused the policy to be executed and attested on their behalf by the President of Nuclear Energy Liability Insurance Association and duly countersigned by an authorized representative, but this policy shall be binding on each company only to the extent of its designated proportion of any obligation assumed or expense incurred under this policy.

For the Subscribing Companies:

Date of Issue: _____ 19___

Countersigned by: (Authorized Representative)

NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION

Nuclear Energy Liability Policy

(Facility Worker Form) herein called the Master Worker Policy

Certificate of Insurance, NMWPC-1(1/1/88)

Certificate No. _____

This is to certify that the insured named in Item 1 of the Declarations hereof, hereinafter called the *Named Insureds*, have obtained insurance under the Master Worker Policy issued by Nuclear Energy Liability Insurance Association on behalf of its members. The insurance is subject to all of the provisions of the *Certificate* and the Master Worker Policy.

1--Declarations

Item 1.--Named Insureds and Addresses:

Item 2.--Certificate Coverage Period:

Beginning at 12:01 a.m. January 1, 1988 and ending at the close of December 31, 1992, Eastern Standard Time, or at the time and date this Certificate is cancelled or terminated, whichever first occurs.

Item 3.--Description of the Facility:

Location:
Type:
Operator of the Facility:

Item 4.--Amount of Insurance Available:

The amount of insurance afforded by the Master Worker Policy through this Certificate shall be determined by Section VIII of the Master Worker Policy and all of the other provisions of the policy relating thereto.

Item 5.--Advance Premium: $

2--Application of Certificate

This Certificate applies only to bodily injury to a new worker (1) which is caused, during the Certificate Coverage Period, by the nuclear energy hazard and (2) which is discovered and for which written claim is first made against an insured under the Certificate within the discovery period of the Master Worker Policy.

3--Industry Retrospective Rating Plan

All insurance under the Master Worker Policy is subject to the Industry Retrospective Rating Plan in use by the companies. No insurance is provided under this Certificate unless and until the first Named Insured has accepted in writing the Industry Retrospective Rating Plan Premium Endorsement and a copy of the signed endorsement has been issued by the companies to form a part of this Certificate.

In Witness Whereof, the companies subscribing the Master Worker Policy have caused this Certificate to be executed and attested on their behalf by the President of Nuclear Energy Liability Insurance Association and duly countersigned by an authorized representative.

For the Subscribing Companies:

Date of Issue ____ 19 __

Countersigned by:

(Authorized Representative)

NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION

Nuclear Energy Liability Insurance

Industry Retrospective Rating Plan Premium Endorsement, NE-W-1(1/1/88)

It is agreed that:

1. Definitions

With reference to the premium for the Certificate of which this endorsement forms a part:

Master Worker Policy means the Master Worker Policy issued by NELIA;

Certificate Holder means the first Named Insured in a Certificate issued to form a part of the Master Worker Policy;

Advance premium, for any calendar year, is the estimated standard premium for that calendar year;

Standard premium, for any calendar year, is the premium for that calendar year computed in accordance with the companies' rules, rates, rating plans (other than the Industry Retrospective Rating Plan), premiums and minimum premiums applicable to this insurance. Standard premium includes elements for premium taxes, expenses, profit and contingencies, guaranteed cost insurance and estimated reserve premium. The elements of standard premium, other than for premium taxes and estimated reserve premium, are not subject to retrospective adjustment;

Reserve premium means that portion of the premium for a Certificate (including reserve premium charges paid) that is specifically allocated under the Industry Retrospective Rating Plan for ratable incurred losses;

Industry reserve premium, for any period, is the sum of the reserve premiums for that period for all Certificates issued to form a part of the Master Worker Policy;

Retrospective adjustment ratio, for any period, is the ratio of the reserve premium for this Certificate for that period to the industry reserve premium for the same period;

Incurred losses means the sum of all:

(1) Losses and expenses paid by NELIA, and

(2) Reserves for losses and expenses as estimated by NELIA, because of obligations assumed and expenses incurred in connection with such obligations by the members of NELIA under the Master Worker Policy;

Ratable incurred losses means 95% of incurred losses. Ratable incurred losses are the portion of incurred losses which are not covered by the guaranteed cost insurance element of standard premiums;

Non-ratable incurred losses means 5% of incurred losses. Nonratable incurred losses are the portion of incurred losses which are covered by the guaranteed cost insurance element of standard premiums;

Reserve for refunds, as of any date, is the algebraic difference between:

(1) All industry reserve premium for the period from January 1, 1988 through such date, minus

(2) The total for the same period of (a) all ratable incurred losses and (b) all industry reserve premium refunds made under the Industry Retrospective Rating Plan by members of NELIA;

Industry reserve premium charge, for any period, means the amount determined pursuant to the provisions of Section 4 of this endorsement for payment by the Named Insureds under Certificates;

Reserve premium charge means the portion of an industry reserve premium charge payable by the Named Insureds under Certificates;

Industry reserve premium refund for any period, means the amount determined pursuant to the provisions of Section 4 of this endorsement for return to the Named Insureds under Certificates;

Reserve premium refund means the portion of an industry reserve premium refund returnable to the Named Insureds under this Certificate.

2. Payment of Advance and Standard Premiums

The Named Insureds shall pay the companies the advance premium stated in the declarations, for the period from the effective date of this Certificate through December 31 following. Thereafter, at the beginning of each calendar year while this Certificate is in force, the Named Insureds shall pay the advance premium for such year to the companies.

The advance premium for each calendar year shall be stated in the Advance and Standard Premium Endorsement for the year issued by the companies as soon as practicable prior to or after the beginning of the year.

As soon as practicable after the end of a calendar year or the Certificate Coverage Period, the standard premium for the preceding year shall be finally determined and stated in the Advance and Standard Premium Endorsement for that year. If the Standard Premium exceeds the Advance Premium paid for that year, the Named Insureds shall pay the excess to the companies; if less, the companies shall return to the Named Insureds the excess portion paid.

The Named Insureds shall maintain records of the information necessary for premium computation and shall send copies of such records to the companies as directed, at the end of each calendar year, at the end of the Certificate Coverage Period and at such other times as the companies may direct.

3. Special Reserve Account; Use of Reserve Premiums

NELIA shall maintain on behalf of its members a Special Reserve Account for holding collectively all reserve premiums paid for all Certificates issued to form a part of the Master Worker Policy. Such premiums, together with any undistributed net income realized thereon after taxes and investment expenses, shall be used for the following purposes only:

(1) To pay ratable incurred losses or, in the event ratable incurred losses are paid under the Master Worker Policy from funds advanced by the members of NELIA subscribing the policy, to reimburse such members as a matter of first priority for the funds advanced;

(2) To refund any amounts so held to the Named Insureds, as provided in Section 4.

No members of NELIA and no Named Insureds shall have any individual interest in or claim upon amounts held in the special Reserve Account, except to participate proportionally in any refund or reimbursement provided for above.

All reserve premiums paid or payable for this certificate may be used by NELIA to discharge the obligations of its members under the Master Worker Policy with respect to the above purposes and arising out of claims made under any Certificate issued to form a part of the Master Worker Policy.

4. Payment of Reserve Premium Charges and Refunds

As soon as practicable after each December 31 the companies will review the status of the reserve for refunds and report their findings to all Certificate Holders.

If, at any time, the companies find that there is negative balance in the reserve for refunds and that such condition is likely to prevail, they shall determine an appropriate industry reserve premium charge. Similarly, if the companies find that there is a surplus positive balance, they shall determine an appropriate industry reserve premium refund.

The portion of an industry reserve premium charge or an industry reserve premium refund that is:

(1) Payable by the Named Insureds as a reserve premium charge, or

(2) Due such insureds as reserve premium refund, shall be determined by multiplying the industry reserve premium charge or the industry reserve premium refund by the retrospective adjustment ratio applicable to this Certificate.

The amount of any reserve premium charge shall be stated in a Retrospective Reserve Premium Charge Endorsement. The charge shall be paid promptly after receipt of the endorsement.

When all claims covered by the Master Worker Policy are closed the companies shall make a final review and report, and shall determine a final industry reserve premium charge or industry reserve premium refund equal to the amount of the balance.

5. Final Premium

The final premium for this Certificate shall be (a) the sum of the standard premiums for each calendar year, or portion thereof, during which

the Certificate remains in force plus (b) the sum of all reserve premiums, including all reserve premium charges, minus (c) the sum of all reserve premium refunds.

6. Reserve Premium Charge Agreement

In consideration of (a) the participation of Named Insureds in other Certificates subject to the Industry Retrospective Rating Plan, (b) the undertaking of such Named Insureds to pay their appropriate share of any industry reserve premium charge and (c) the obligations assumed by the members of NELIA under the Master Worker Policy, the Named Insureds, by acceptance of the Master Worker Policy, agree:

(1) That the insurance provided by the Master Policy applies collectively to all claims covered by the policy through any and all Certificates issued to form a part of the policy.

(2) That the right of each Named Insured under a Certificate to receive reserve premium refunds and the obligation of each such insured to pay reserve premiums charges applies to all claims covered by the Master Worker Policy and continues until all such claims are closed, whether or not such claims were before the inception of the Certificate or after its termination.

(3) To pay all reserve premium charges due promptly after receipt of the Retrospective Reserve Premium Charge Endorsement, whether or not the Certificate is terminated. Any reserve premium charge shall be overdue if not paid within 60 days of the date of the invoice for the charge.

Overdue reserve premium charges shall bear interest from the due date until paid at an annual rate equal to the sum of (a) 3% plus (b) a rate of interest equal to Moody's Average Public Utility Bond Yield described in the issue of Moody's Bond Survey current on the due date. Any reserve premium refund due to Named Insureds under a Certificate shall be used to pay any overdue reserve premium charges to such Named Insureds.

7. Reserve Premium Refund Agreement

Each member of NELIA subscribing the Master Worker Policy for any calendar year, or portion thereof, with respect to which an industry reserve premium refund is determined to be payable thereby agrees for itself, severally and not jointly, and in the respective proportion of its liability assumed under the Master Worker Policy for that calendar year, to return promptly to the Named Insureds that portion of such refund due such Insureds, as determined in accordance with the provisions of this endorsement.

Accepted and agreed by the first Named Insured in behalf of itself and every other Named Insured stated in the Declarations of the Certificate of which this endorsement forms a part.

(First Named Insured--Type or Print

Date----------

By----------

(Signature of Authorized Officer)

(Type of Print Named and Title of Officer)

Effective Date of this Endorsement----------

12:01 a.m. Standard Time

To form a part of Policy No----------

Issued to----------

Date of Issue----------

For the subscribing companies:

By----------

General Manager

Endorsement No:

Countersigned by----------

NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION

Nuclear Energy Liability Insurance

Advance Premium and Standard Premium Endorsement, NE-W-2(1/1/88)

Calendar Year 1988

1. Advance Premium

It is agreed that the Advance Premium due the companies for the period designated above is:

$----------

2. Standard Premium and Reserve Premium

In the absence of a change in the Advance Premium indicated above, it is agreed that, subject to the previsions of the Industry Retrospective Rating Plan, the Standard Premium is said Advance Premium and the estimated reserve Premium element of the Standard Premium is:

$----------

Explanation of Use of this Endorsement: This endorsement will be used in the first year of the Master Worker Policy. It states the Advance Premium and the estimated Reserve Premium for the year for the Certificate to which the endorsement is attached.

Effective Date of this Endorsement----------

12:01 a.m. Standard Time

To form a part of Policy No----------

Issued to----------

Date of Issue----------

For the subscribing companies:

By----------

General Manager

Endorsement No:

Countersigned by----------

NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION

Nuclear Energy Liability Insurance

Advance Premium and Standard Premium Endorsement, NE-W-3 (1/1/88)

Calendar Year ____

It is agreed that Items 1 and 2 of Endorsement No. are amended to read:

1. Advance Premium

It is agreed that the Advance Premium due the companies for the period designated above is:

$----------

2. Standard Premium and Reserve Premium

In the absence of a change in the advance premium indicated above, it is agreed that, subject to the provisions of the Industry Retrospective Rating Plan, the Standard Premium is said Advance Premium and the estimated Reserve Premium element of the Standard Premium is:

$----------

Explanation of Use of this Endorsement: This endorsement will be used for calendar years of the Master Worker Policy after the 1988 calendar year. It states the Advance Premium and the estimated Reserve Premium for the year for the Certificate to which the endorsement is attached.

Effective Date of this Endorsement----------

12:01 a.m. Standard Time

To form a part of Policy No----------

Issued to----------

Date of Issue----------

For the subscribing companies:

By----------

General Manager

Endorsement No.----------

Countersigned by----------

NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION

Nuclear Energy Liability Insurance

Retrospective Reserve Premium Charge Endorsement, NE-W-5 (1/1/88)

1. Industry Reserve Premium Charge

In accordance with Section 4 of the Industry Retrospective Rating Plant Premium Endorsement attached to each Certificate to this policy, the companies have reviewed the status of the reserve for refunds, found that there is a negative balance in the reserve for refunds and have determined that an industry reserve premium charge, as indicated below, is appropriate:

$----------

2. Retrospective Adjustment Ratio

The portion of the industry reserve premium charge payable by the Named Insureds under this Certificate is determined by multiplying such charge by this Certificate's retrospective adjustment ratio, which is:

3. Reserve Premium Charge

The Named Insureds' portion of the industry reserve premium charge, as calculated above, is:

$----------

Explanation of Use of this Endorsement: This endorsement will be issued by the companies under the Master Worker Policy after an industry reserve premium charge has been determined because there is a negative balance in the reserve for refunds. It states the reserve premium charge applicable to the Certificate to which the endorsement is attached.

Effective Date of this Endorsement----------

12:01 a.m. Standard Time

To form a part of Policy No.----------

Issued to----------

Date of Issue----------

For the subscribing companies

By----------

General Manager

Endorsement No.----------

Countersigned by----------

[25 FR 2948, Apr. 7, 1960]

Editorial Note: For Federal Register citations affecting § 140.91, see the List of CFR Sections Affected in the Finding Aids section of this volume.

[1] For policies issued by Nuclear Energy Liability-Property Insurance Association the amount will be "$124,000,000," for policies issued by Mutual Atomic Energy Liability Underwriters, the amount will be "$36,000,000."

§ 140.92 Appendix B--Form of indemnity agreement with licensees furnishing insurance policies as proof of financial protection.

[Top of File]

This indemnity agreement-------- is entered into by and between the-------- (hereinafter referred to as the *licensee*) and the United States Nuclear Regulatory Commission (hereinafter referred to as the *Commission*) pursuant to subsection 170c of the Atomic Energy Act of 1954, as amended (hereinafter referred to as *the Act*).

Article I

As used in this agreement,

1. *Nuclear reactor, byproduct material, person, source material, special nuclear material, and precautionary evacuation* shall have the meanings given them in the Atomic Energy Act of 1954, as amended, and the regulations issued by the Commission.

2.(a) For facilities designed for producing substantial amounts of electricity and having a rated capacity of 100,000 electrical kilowatts or more, and except when otherwise specifically provided, *amount of financial protection* means the amount specified in Item 2a. and b. of the Attachment annexed hereto, as modified by paragraph 8, Article II, with respect to common occurrences, and the amount available as secondary financial protection (in the form of private liability insurance available under an industry retrospective rating plan for deferred retrospective premium charges).

(b) For all other facilities, and except where otherwise specifically provided, *amount of financial protection* means the amount specified in Item 2a. and b., of the Attachment annexed hereto, as modified by paragraph 8, Article II, with respect to common occurrences.

3. (a) *Nuclear incident* means any occurrence including an extraordinary nuclear occurrence or series of occurrences at the location or in the course of transportation causing bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of the radioactive material.

(b) Any occurrence including an extraordinary nuclear occurrence or series of occurrences causing bodily injury, sickness, disease or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive or other hazardous properties of

i. The radioactive material discharged or dispersed from the location over a period of days, weeks, months or longer and also arising out of such properties of other material defined as *the radioactive material* in any other agreement or agreements entered into by the Commission under subsection 170 c or k of the Act and so discharged or dispersed from *the location* as defined in any such other agreement, or

ii. The radioactive material in the course of transportation and also arising out of such properties of other material defined in any other agreement entered into by the Commission pursuant to subsection 170 c or k of the Act as *the radioactive material* and which is in the course of transportation, shall be deemed to be a common occurrence. A common occurrence shall be deemed to constitute a single nuclear incident.

4. *Extraordinary nuclear occurrence* means an event which the Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, as amended.

5. *In the course of transportation* means in the course of transportation within the United States, or in the course of transportation outside the United States and any other nation, and moving from one person licensed by the Commission to another person licensed by the

Commission, including handling or temporary storage incidental thereto, of the radioactive material to the location or from the location provided that:

(a) With respect to transportation of the radioactive material to the location, such transportation is not by pre-determination to be interrupted by the removal of the material from the transporting conveyance for any purpose other than the continuation of such transportation to the location or temporary storage incidental thereto;

(b) The transportation of the radioactive material from the location shall be deemed to end when the radioactive material is removed from the transporting conveyance for any purpose other than the continuation of transportation or temporary storage incidental thereto;

(c) *In the course of transportation* as used in this agreement shall not include transportation of the radioactive material to the location if the material is also *in the course of transportation* from any other *location* as defined in any other agreement entered into by the Commission pursuant to subsection 170 c or k of the Act.

6. *Person indemnified* means the licensee and any other person who may be liable for public liability.

7. *Public liability* means any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation (including all reasonable additional costs incurred by a State, or a political subdivision of a State, in the course of responding to a nuclear incident or precautionary evacuation), except (1) claims under State or Federal Workmen's Compensation Acts of employees of persons indemnified who are employed (a) at the location or, if the nuclear incident occurs in the course of transportation of the radioactive material, on the transporting vehicle, and (b) in connection with the licensee's possession, use or transfer of the radioactive material; (2) claims arising out of an act of war; and (3) claims for loss of, or damage to, or loss of use of (a) property which is located at the location and used in connection with the licensee's possession, use, or transfer of the radioactive material, and (b) if the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle, containers used in such transportation, and the radioactive material.

8. *The location* means the location described in Item 4 of the Attachment hereto.

9. *The radioactive material* means source, special nuclear, and byproduct material which (1) is used or to be used in, or is irradiated or to be irradiated by, the nuclear reactor or reactors subject to the license or licenses designated in the Attachment hereto, or (2) which is produced as the result of operation of said reactor(s).

10. *United States* when used in a geographical sense includes Puerto Rico and all territories and possessions of the United States.

Article II

1. At all times during the term of the license or licenses designated in Item 3 of the Attachment hereto, the licensee will maintain financial protection in the amount specified in Item 2 of the Attachment and in the form of the nuclear energy liability insurance policy designated in the Attachment. If more than one license is designated in Item 3 of the Attachment, the licensee agrees to maintain such financial protection until the end of the term of that license which will be the last to expire. The licensee shall, notwithstanding the expiration, termination, modification, amendment, suspension or revocation of any license or licenses designated in Item 3 of the Attachment, maintain such financial protection in effect until all the radioactive material has been removed from the location and transportation of the radioactive material from the location has ended as defined in paragraph 5(b), Article I of this section, or until the Commission authorizes the termination or the modification of such financial protection. The Commission will not unreasonably withhold such authorization.

2. In the event of any payment by the insurer or insurers under a policy or policies specified in Item 5 of the Attachment hereto which reduces the aggregate limit of such policy or policies below the amount of financial protection, the licensee will promptly apply to his insurers for reinstatement of the amount specified in Item 2a of the Attachment (without reference to paragraph b of Item 2) and will make all reasonable efforts to obtain such reinstatement. In the event that the licensee has not obtained reinstatement of such amount within ninety days after the date of such reduction, and in the absence of good cause shown to the contrary, the Commission may issue an order requiring the licensee to furnish financial protection for such amount in another form.

3. Any obligations of the licensee under subsection 53e(8) of the Act to indemnify the United States and the Commission from public liability, together with any public liability satisfied by the insurers under the policy or policies designated in the Attachment hereto, shall not in the aggregate exceed the amount of financial protection with respect to any nuclear incident, including the reasonable costs of investigating and settling claims and defending suits for damage.

4. With respect to any extraordinary nuclear occurrence to which this agreement applies, the Commission, and the licensee on behalf of itself and other persons indemnified, insofar as their interests appear, each agree to waive:

(a) Any issue or defense as to the conduct of the claimant or fault of persons indemnified, including, but not limited to:

(1) Negligence;

(2) Contributory negligence;

(3) Assumption of the risk;

(4)Unforeseeable intervening causes, whether involving the conduct of a third person or an act of God.

As used herein, conduct of the claimant includes conduct of persons through whom the claimant derives his cause of action;

(b) Any issue or defense as to charitable or governmental immunity;

(c) Any issue or defense based on any statute of limitations if suit is instituted within 3 years from the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause thereof.

The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action. The waivers shall be judicially enforceable in accordance with their terms by the claimant against the person indemnified.

5. The waivers set forth in paragraph 4 of this article:

(a) Shall not preclude a defense based upon a failure to take reasonable steps to mitigate damages;

(b) Shall not apply to injury or damage to a claimant or to a claimant's property which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant;

(c) Shall not apply to injury to a claimant who is employed at the site of and in connection with the activity where the extraordinary nuclear occurrence takes place if benefits therefore are either payable or required to be provided under any workmen's compensation or occupational disease law: *Provided*, *however*, That with respect to an extraordinary nuclear occurrence occurring at the facility, a claimant who is employed at the facility in connection with the construction of a nuclear reactor with respect to which no operating license has been issued by the Nuclear Regulatory Commission shall not be considered as employed in connection with the activity where the extraordinary nuclear occurrence takes place if:

(1) The claimant is employed exclusively in connection with the construction of a nuclear reactor, including all related equipment and installations at the facility, and

(2) No operating license has been issued by the NRC with respect to the nuclear reactor, and

(3) The claimant is not employed in connection with the possession, storage, use or transfer of nuclear material at the facility;

(d) Shall not apply to any claim for punitive or exemplary damages, provided, with respect to any claim for wrongful death under any State law which provides for damages only punitive in nature, this exclusion does not apply to the extent that the claimant has sustained actual damages, measured by the pecuniary injuries resulting from such death but not to exceed the maximum amount otherwise recoverable under such law;

(e) Shall be effective only with respect to those obligations set forth in this agreement;

(f) Shall not apply to, or prejudice the prosecution or defense of, any claim or portion of claim which is not within the protection afforded under (1) the limit of liability provisions under subsection 170(e) of the Atomic Energy Act of 1954, as amended, and (2) the terms of this agreement and the terms of the nuclear energy liability insurance policy or policies designated in the attachment hereto.

6. The obligations of the licensee under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

7. Upon the expiration or revocation of any license designated in Item 3 of the Attachment, the Commission will enter into an appropriate amendment of this agreement with the licensee reducing the amount of financial protection required under this Article; provided, that the licensee is then entitled to a reduction in the amount of financial protection under applicable Commission regulations and orders.

8. With respect to any common occurrence,

(a) If the sum of limit of liability of any Nuclear Energy Liability Insurance Association policy designated in Item 5 of the Attachment and the limits of liability of all other nuclear energy liability insurance policies (facility form) applicable to such common occurrence and issued by Nuclear Energy Liability Insurance Association exceeds $155,000,000 the amount of financial protection specified in Item 2 a and b of the Attachment shall be deemed to be reduced by that proportion of the difference between said sum and $155,000,000 as the limit of liability of the Nuclear Energy Liability Insurance Association policy designated in Item 5 of the Attachment bears to the sum of the limits of liability of all nuclear energy liability insurance policies (facility form) applicable to such common occurrence and issued by Nuclear Energy Liability Insurance Association;

(b) If the sum of the limit of liability of any Mutual Atomic Energy Liability Underwriters policy designated in Item 5 of the Attachment and the limits of liability of all other nuclear energy liability insurance policies (facility form) applicable to such common occurrence and issued by Mutual Atomic Energy Liability Underwriters exceeds $45,000,000, the amount of financial protection specified in Item 2 a and b of the Attachment shall be deemed to be reduced by that proportion of the difference between said sum and $45,000,000 as the limit of liability of the Mutual Atomic Energy Liability Underwriters policy designated in Item 5 of the Attachment bears to the sum of the limits of liability of all nuclear energy liability insurance policies (facility form) applicable to such common occurrence and issued by Mutual Atomic Energy Liability Underwriters;

(c) If any of the other applicable agreements is with a person who has furnished financial protection in a form other than a nuclear energy liability insurance policy (facility form) issued by Nuclear Energy Liability Insurance Association or Mutual Atomic Energy Liability Underwriters, and if also the sum of the amount of financial protection established under this agreement and the amounts of financial

protection established under all other applicable agreements exceeds an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection, the obligations of the licensee shall not exceed a greater proportion of an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection, than the amount of financial protection established under this agreement bears to the sum of such amount and the amounts of financial protection established under all other applicable agreements.

(d) As used in this paragraph 8., Article II, and in Article III, *other applicable agreements* means each other agreement entered into by the Commission pursuant to subsection 170(c) of the Act in which agreement the nuclear incident is defined as a *common occurrence*. As used in this paragraph 8., Article II, *the obligations of the licensee* means the obligations of the licensee under subsection 53e(8) of the Act to indemnify the United States and the Commission from public liability, together with any public liability satisfied by the insurers under the policy or policies designated in the Attachment, and the reasonable costs incurred by the insurers in investigating and settling claims and defending suits for damage.

9. The obligations of the licensee under this Article shall not be affected by any failure or default on the part of the Commission or the Government of the United States to fulfill any or all of its obligations under this agreement. Bankruptcy or insolvency of any person indemnified other than the licensee, or the estate of any person indemnified other than the licensee, shall not relieve the licensee of any of his obligations hereunder.

Article III

1. The Commission undertakes and agrees to indemnify and hold harmless the licensee and other persons indemnified, as their interest may appear from public liability.

2. With respect to damage caused by a nuclear incident to property of any person legally liable for the nuclear incident, the Commission agrees to pay to such person those sums which such person would have been obligated to pay if such property had belonged to another; provided, that the obligation of the Commission under this paragraph 2 does not apply with respect to:

(a) Property which is located at the location described in Item 4 of the Attachment or at the location described in Item 3 of the declarations attached to any nuclear energy liability insurance policy designated in Item 5 of the Attachment;

(b) Property damage due to the neglect of the person indemnified to use all reasonable means to save and preserve the property after knowledge of a nuclear incident;

(c) If the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle and containers used in such transportation;

(d) The radioactive material.

3. [Reserved]

4.(a) The obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed the amount of financial protection.

(b) With respect to a common occurrence, the obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed whichever of the following is lower: (1) The sum of the amounts of financial protection established under this agreement and all other applicable agreements; or (2) an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection.

5. The obligations of the Commission under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

6. The obligations of the Commission under this and all other agreements and contracts to which the Commission is a party shall not with respect to any nuclear incident, in the aggregate exceed whichever of the following is the lowest: (a) $500,000,000; (b) $560,000,000 less the amount of financial protection required under this agreement; or (c) with respect to a common occurrence, $560,000,000 less the sum of the amounts of financial protection established under this agreement and all other applicable agreements.

7. The obligations of the Commission under this agreement, except to the licensee for damage to property of the licensee, shall not be affected by any failure on the part of the licensee to fulfill its obligations under this agreement. Bankruptcy or insolvency of the licensee or any other person indemnified or of the estate of the licensee or any other person indemnified shall not relieve the Commission of any of its obligations hereunder.

Article IV

1. When the Commission determines that the United States will probably be required to make indemnity payments under the provisions of this agreement, the Commission shall have the right to collaborate with the licensee and other persons indemnified in the settlement and defense of any claim (provided that no government indemnity that would otherwise be available to pay public liability claims is used for these purposes) and shall have the right (a) to require the prior approval of the Commission for the settlement or payment of any claim or action asserted against the licensee or other person indemnified for public liability or damage to property of persons legally liable for the nuclear incident which claim or action the licensee or the Commission may be required to indemnify under this agreement; and (b) to appear through the Attorney General of the United States on behalf of the licensee or other person indemnified, take charge of such action

and settle or defend any such action. If the settlement or defense of any such action or claim is undertaken by the Commission, the licensee shall furnish all reasonable assistance in effecting a settlement or asserting a defense.

2. Neither this agreement nor any interest therein nor claim thereunder may be assigned or transferred without the approval of the Commission.

Article V

The parties agree that they will enter into appropriate amendments of this agreement to the extent that such amendments are required pursuant to the Atomic Energy Act of 1954, as amended, or licenses, regulations or orders of the Commission.

Article VI

The licensee agrees to pay to the Commission such fees as are established by the Commission pursuant to regulations or orders of the Commission.

Article VII

The term of this agreement shall commence as of the date and time specified in Item 6 of the Attachment and shall terminate at the time of expiration of that license specified in Item 3 of the Attachment, which is the last to expire; provided that, except as may otherwise be provided in applicable regulations or orders of the Commission, the term of this agreement shall not terminate until all the radioactive material has been removed from the location and transportation of the radioactive material from the location has ended as defined in paragraph 5(b), Article I of this section. Termination of the term of this agreement shall not affect any obligation of the licensee or any obligation of the Commission under this agreement with respect to any nuclear incident occurring during the term of this agreement.

Article VIII

The following provisions are applicable to each licensee operating a facility designed for producing substantial amounts of electricity and having a rated capacity of 100,000 electrical kilowatts or more;

1. Each licensee is required to have and maintain financial protection in an amount specified in Item 2 a and b of the Attachment annexed hereto, and the amount available as secondary financial protection (in the form of private liability insurance available under an industry retrospective rating plan providing for deferred premium charges); Provided, however, That under such a plan for deferred premium charges, such charges for each nuclear reactor which is licensed to operate shall not exceed $63,000,000 with respect to any single nuclear incident (plus any surcharge assessed under subsection 170o.(1)(E) of the Act) nor exceed $10,000,000 per incident within one calendar year. If the licensee fails to pay assessed deferred premiums, the Commission reserves the right to pay those premiums on behalf of the licensee and to recover the amount of such premiums from the licensee.

2. The Commission shall require the immediate submission of financial statements by those licensees who indicate, after an assessment of the retrospective premium by the insurance pools, that they will not pay the assessment. Such financial statements shall include, as a minimum, exhibits indicating internally generated funds from operations and accumulated retained earnings. Subsequent submission of financial statements by such licensees may be requested by the Commission, as required.

3. If premiums are paid by the Commission as provided in paragraph 1, payment by the Commission shall create a lien in the amount paid in favor of the United States upon all property and rights to property, whether real or personal, belonging to such licensee. The lien shall arise at the time payment is made by the Commission and shall continue until the liability for the amount (or a judgment against the licensee arising out of such liability) is satisfied or becomes unenforceable. The Commission will issue a certificate of release of any such lien if it finds that the liability for the amount has been fully satisfied or has become legally unenforceable.

4. If the Commission determines that the licensee is financially able to reimburse the Commission for a deferred premium payment made in its behalf, and the licensee, after notice of such determination by the Commission fails to make such reimbursement within 120 days, the Commission will take appropriate steps to suspend the license for 30 days. The Commission may take any further action as necessary if reimbursement is not made within the 30-day suspension period including, but not limited to termination of the operating license.

United States Nuclear Regulatory Commission

Indemnity Agreement No.----------

Item 1--Licensee----------

Address----------

Item 2--a. Amount of financial protection----------

b. With respect to any nuclear incident, the amount specified in Item 2a of this Attachment shall be deemed to be (i) reduced to the extent that any payment made by the insurer or insurers under a policy or policies specified in Item 5 of this Attachment reduces the aggregate amount of such insurance policies below the amount specified in Item 2a and (ii) restored to the extent that, following such reduction, the aggregate amount of such insurance policies is reinstated.

Item 3--License number or numbers----------

Item 4--Location----------

Item 5--Insurance Policy No.(s)----------

Item 6--The indemnity agreement designated above, of which this Attachment is a part, is effective as of--m., on the--day of---------- , 19--.

For the United States Nuclear Regulatory Commission.

By----------

For the----------

(Name of licensee)

By----------

Dated at Bethesda, MD, the-------- day of---------- , 19--.

[26 FR 3457, Apr. 22, 1961]

Editorial Note: For Federal Register citations affecting § 140.92, see the List of CFR Sections affected in the Finding Aids section of this volume.

§ 140.93 Appendix C--Form of indemnity agreement with licensees furnishing proof of financial protection in the form of licensee's resources.

[Top of File]

This indemnity agreement No.----------is entered into by and between the-------- (hereinafter referred to as the *licensee*) and the United States Nuclear Regulatory Commission (hereinafter referred to as the *Commission* pursuant to subsection 170(c) of the Atomic Energy Act of 1954, as amended (hereinafter referred to as *the Act*).

Article I

As used in this agreement,

1. *Nuclear reactor, byproduct material, person, source material, special nuclear material, and precautionary evacuation* shall have the meanings given them in the Atomic Energy Act of 1954, as amended, and the regulations issued by the Commission.

2.(a) For facilities designed for producing substantial amounts of electricity and having a rated capacity of 100,000 electrical kilowatts or more, and except where otherwise specifically provided, *amount of financial protection* means the amount specified in Item 2 of the Attachment annexed hereto, as modified by paragraph 8, Article II, with respect to common occurrences, and the amount available as secondary financial protection (in the form of private liability insurance available under an industry retrospective rating plan providing for deferred retrospective premium charges).

(b) For all other facilities, and except where otherwise specifically provided, *amount of financial protection* means the amount specified in Item 2 of the Attachment annexed hereto, as modified by paragraph 8, Article II, with respect to common occurrences.

3. (a) *Nuclear incident* means any occurrence including an extraordinary nuclear occurrence or series of occurrences at the location or in the course of transportation causing bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of the radioactive material.

(b) Any occurrence including an extraordinary nuclear occurrence or series of occurrences causing bodily injury, sickness, disease or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive or other hazardous properties of--

i. The radioactive material discharged or dispersed from the location over a period of days, weeks, months or longer and also arising out of such properties of other material defined as *the radioactive material* in any other agreement or agreements entered into by the Commission under subsection 170(c) or (k) of the Act and so discharged or dispersed from *the location* as defined in any such other agreement; or

ii. The radioactive material in the course of transportation and also arising out of such properties of other material defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act as *the radioactive material* and which is in the course of transportation shall be deemed to be a common occurrence. A common occurrence shall be deemed to constitute a single nuclear incident.

4. *Extraordinary nuclear occurrence* means an event which the Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, as amended.

5. *In the course of transportation* means in the course of transportation within the United States, or in the course of transportation outside the United States and any other nation, and moving from one person licensed by the Commission to another person licensed by the Commission, including handling or temporary storage incidental thereto, of the radioactive material to the location or from the location provided that:

(a) With respect to transportation of the radioactive material to the location, such transportation is not by pre-determination to be interrupted by the removal of the material from the transporting conveyance for any purpose other than the continuation of such transportation to the location or temporary storage incidental thereto;

(b) The transportation of the radioactive material from the location shall be deemed to end when the radioactive material is removed from the transporting conveyance for any purpose other than the continuation of transportation or temporary storage incidental thereto;

(c) *In the course of transportation* as used in this agreement shall not include transportation of the radioactive material to the location if the material is also *in the course of transportation* from any other *location* as defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act.

6. *Person indemnified* means the licensee and any other person who may be liable for public liability.

7. *Public liability* means any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation (including all reasonable additional costs incurred by a State, or a political sudivision of a State, in the course of responding to a nuclear incident or precautionary evacuation), except (1) claims under State or Federal Workmen's Compensation Acts of employees of persons indemnified who are employed (a) at the location or, if the nuclear incident occurs in the course of transportation of the radioactive material, on the transporting vehicle, and (b) in connection with the licensee's possession, use, or transfer of the radioactive material; (2) claims arising out of an act of war; and (3) claims for loss of, or damage to, or loss of use of (a) property which is located at the location and used in connection with the licensee's possession, use or transfer of the radioactive material, and (b), if the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle, containers used in such transportation, and the radioactive material.

8. *The location* means the location described in Item 4 of the Attachment hereto.

9. *The radioactive material* means source, special nuclear, and byproduct material which (1) is used or to be used in, or is irradiated or to be irradiated by, the nuclear reactor or reactors subject to the license or licenses designated in the Attachment hereto, or (2) which is produced as the result of operation of said reactor(s).

10. *United States* when used in a geographical sense includes Puerto Rico and all territories and possessions of the United States.

Article II

1. The licensee undertakes and agrees to indemnify and hold harmless all persons indemnified, as their interest may appear, from public liability.

2. With respect to damage caused by a nuclear incident to property of any person legally liable for the incident, the licensee agrees to pay to such person those sums which such person would have been obligated to pay if such property had belonged to another, provided, that the obligation of the licensee under this paragraph 2 does not apply with respect to:

(a) Property which is located at the location and used in connection with the licensee's possession, use or transfer of the radioactive material;

(b) Property damage due to neglect of the person indemnified to use all reasonable means to save and preserve the property after knowledge of a nuclear incident;

(c) If the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle and containers used in such transportation; and

(d) The radioactive material.

3. Any obligations of the licensee under paragraphs 1 and 2 of this Article, and under subsection 53e(8) of the Act to indemnify the United States and the Commission from public liability shall not in the aggregate exceed the amount of financial protection with respect to any nuclear incident, including the reasonable costs of investigating and settling claims and defending suits for damage.

4. With respect to any extraordinary nuclear occurrence to which this agreement applies, the Commission, and the licensee on behalf of itself and other persons indemnified, insofar as their interests appear, each agree to waive:

(a) Any issue or defense as to the conduct of the claimant or fault of persons indemnified, including, but not limited to:

(1) Negligence;

(2) Contributory negligence;

(3) Assumption of the risk;

(4) Unforeseeable intervening causes, whether involving the conduct of a third person or an act of God.

As used herein, *conduct of the claimant* includes conduct of persons through whom the claimant derives his cause of action;

(b) Any issue or defense as to charitable or governmental immunity;

(c) Any issue or defense based on any statute of limitations if suit is instituted within 3 years from the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause thereof.

The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action. The waivers shall be judicially enforceable in accordance with their terms by the claimant against the person indemnified.

5. The waivers set forth in paragraph 4, of this article:

(a) Shall not preclude a defense based upon a failure to take reasonable steps to mitigate damages;

(b) Shall not apply to injury or damage to a claimant or to a claimant's property which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant;

(c) Shall not apply to injury to a claimant who is employed at the site of and in connection with the activity where the extraordinary nuclear occurrence takes place if benefits therefor are either payable or required to be provided under any workmen's compensation or occupational disease law: *Provided*, *however*, That with respect to an extraordinary nuclear occurrence occurring at the facility, a claimant who is employed at the facility in connection with the construction of a nuclear reactor with respect to which no operating license has been issued by the Nuclear Regulatory Commission shall not be considered as employed in connection with the activity where the extraordinary nuclear occurrence takes place if:

(1) The claimant is employed exclusively in connection with the construction of a nuclear reactor, including all related equipment and installations at the facility, and

(2) No operating license has been issued by the NRC with respect to the nuclear reactor, and

(3) The claimant is not employed in connection with the possession, storage, use or transfer of nuclear material at the facility;

(d) Shall not apply to any claim for punitive or exemplary damages, provided, with respect to any claim for wrongful death under any State law which provides for damages only punitive in nature, this exclusion does not apply to the extent that the claimant has sustained actual damages, measured by the pecuniary injuries resulting from such death but not to exceed the maximum amount otherwise recoverable under such law;

(e) Shall be effective only with respect to those obligations set forth in this agreement and in contracts or other proof of financial protection;

(f) Shall not apply to, or prejudice the prosecution or defense of, any claim or portion of claim which is not within the protection afforded under (1) the limit of liability provisions under subsection 170(e), of the Atomic Energy Act of 1954, as amended, and (2) the terms of this agreement and the terms of contracts or other proof of financial protection.

6. The obligations of the licensee under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

7. Upon the expiration or revocation of any license designated in Item 3 of the Attachment, the Commission will enter into an appropriate amendment of this agreement with the licensee reducing the amount of financial protection required under this Article; provided, that the licensee is then entitled to a reduction in the amount of financial protection under applicable Commission regulations and orders.

8. With respect to a common occurrence, if the sum of the amount of financial protection established under this agreement and the amount of financial protection established under all other applicable agreements exceeds an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection, the obligations of the licensee described in paragraph 3 of this Article shall not exceed a greater proportion of an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection than the amount of financial protection established under this agreement bears to the sum of such amount and the amounts of financial protection established under all other applicable agreements. As used in this paragraph, and in Article III, *other applicable agreements* means each other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act in which agreement the nuclear incident is defined as a *common occurrence*.

9. The obligations of the licensee under this Article shall not be affected by any failure or default on the part of the Commission or the Government of the United States to fulfill any or all of its obligations under this agreement. Bankruptcy or insolvency of any person indemnified other than the licensee, or the estate of any person indemnified other than the licensee, shall not relieve the licensee of any of his obligations hereunder.

Article III

1. The Commission undertakes and agrees to indemnify and hold harmless the licensee and other persons indemnified, as their interest may appear, from public liability.

2. With respect to damage caused by a nuclear incident to property of any person legally liable for the nuclear incident, the Commission agrees to pay to such person those sums which such person would have been obligated to pay if such property had belonged to another; provided, that the obligation of the Commission under this paragraph 2 does not apply with respect to:

(a) Property which is located at the location and used in connection with the licensee's possession, use or transfer of the radioactive material;

(b) Property damage due to the neglect of the person indemnified to use all reasonable means to save and preserve the property after knowledge of a nuclear incident;

(c) If the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle and containers used in such transportation;

(d) The radioactive material.

3. [Reserved]

4. (a) The obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed the amount of financial protection.

(b) With respect to a common occurrence, the obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to Paragraph 2 of this Article) as in the aggregate exceed whichever of the following is lower: (1) The sum of the amount of financial protection established under this agreement and to all other applicable agreements; or (2) an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection.

5. The obligations of the Commission under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

6. The obligations of the Commission under this and all other agreements and contracts to which the Commission is a party shall not with respect to any nuclear incident, in the aggregate exceed whichever of the following is the lowest: (a) $500,000,000; (b) $560,000,000 less the amount of financial protection required under this agreement; or (c) with respect to a common occurrence, $560,000,000 less the sum of the amounts of financial protection established under this agreement and all other applicable agreements.

7. The obligations of the Commission under this agreement, except to the licensee for damage to property of the licensee, shall not be affected by any failure on the part of the licensee to fulfill its obligations under this agreement. Bankruptcy or insolvency of the licensee or any other person indemnified shall not relieve the Commission of any of its obligations hereunder.

Article IV

1. When the Commission determines that the United States will probably be required to make indemnity payments under the provisions of this agreement, the Commission shall have the right to collaborate with the licensee and other persons indemnified in the settlement and defense of any claim (provided that no government indemnity that would otherwise be available to pay public liability claims is used for these purposes) and shall have the right (a) to require the prior approval of the Commission for the settlement or payment of any claim or action asserted against the licensee or other person indemnified for public liability or damage to property of persons legally liable for the nuclear incident which claim or action the licensee or the Commission may be required to indemnify under this agreement; and (b) to appear through the Attorney General of the United States on behalf of the licensee or other person indemnified, take charge of such action and settle or defend any such action. If the settlement or defense of any such action or claim is undertaken by the Commission, the licensee shall furnish all reasonable assistance in effecting a settlement or asserting a defense.

2. Neither this agreement nor any interest therein nor claim thereunder may be assigned or transferred without the approval of the Commission.

Article V

The parties agree that they will enter into appropriate amendments of this agreement to the extent that such amendments are required pursuant to the Atomic Energy Act of 1954, as amended, or licenses, regulations or orders of the Commission.

Article VI

The licensee agrees to pay to the Commission such fees as are established by the Commission pursuant to regulations or orders of the Commission.

Article VII

The term of this agreement shall commence as of the date and time specified in Item 6 of the attachment and shall terminate at the time of expiration of that license specified in Item 3 of the attachment, which is last to expire; provided that, except as may otherwise be provided in applicable regulations or orders of the Commission, the term of this agreement shall not terminate until all the radioactive material has been removed from the location and transportation of the radioactive material from the location has ended as defined in subparagraph 5(b), Article I. Termination of the term of this agreement shall not affect any obligation of the licensee or any obligation of the Commission under this agreement with respect to any nuclear incident occurring during the term of this agreement.

Article VIII

The following provisions are applicable to each licensee operating a facility designed for producing substantial amounts of electricity and having a rated capacity of 100,000 electrical kilowatts or more:

1. Each licensee is required to have and maintain financial protection in an amount specified in Item 2 annexed hereto, and the amount available as secondary financial protection (in the form of private liability insurance available under an industry retrospective rating plan providing for deferred premium charges): Provided, however, That under such a plan for deferred premium charges, such charges for each nuclear reactor which is licensed to operate shall not exceed $63,000,000 with respect to any single nuclear incident (plus any surcharge assessed under subsection 170o.(1)(E) of the Act) nor exceed $10,000,000 per incident within one calendar year. If the licensee fails to pay assessed deferred premiums, the Commission reserves the right to pay those premiums on behalf of the licensee and to recover the amount of such premiums from the licensee.

2. The Commission shall require the immediate submission of financial statements by those licensees who indicate, after an assessment of the restrospective premium by the insurance pools, that they will not pay the assessment. Such financial statements shall include, as a minimum, exhibits indicating internally generated funds from operations and accumulated retained earnings. Subsequent submission of financial statements by such licensees may be requested by the Commission, as required.

3. If premiums are paid by the Commission as provided in paragraph 1, payment by the Commission shall create a lien in the amount paid in favor of the United States upon all property and rights to property, whether real or personal, belonging to such licensee. The lien shall arise at the time payment is made by the Commission and shall continue until the liability for the amount (or a judgment against the licensee arising out of such liability) is satisfied or becomes unenforceable. The Commission will issue a certificate of release of any such lien if it finds that the liability for the amount has been fully satisfied or has become legally unenforceable.

4. If the Commission determines that the licensee is financially able to reimburse the Commission for a deferred premium payment made in its behalf, and the licensee, after notice of such determination by the Commission fails to make such reimbursement within 120 days, the Commission will take appropriate steps to suspend the license for 30 days. The Commission may take any further action as necessary if reimbursement is not made within the 30-day suspension period including, but not limited to, termination of the operating license or combined license.

United States Nuclear Regulatory Commission

Indemnity Agreement No.------

Attachment

Item 1--Licensee----------

Address----------

Item 2--Amount of financial protection----------

Item 3--License number or numbers----------

Item 4--Location----------

Item 5--The Indemnity Agreement designated above, of which this Attachment is a part, is effective as of------M., on the------day of----------, 19--.

For the United States Nuclear Regulatory Commission.

By----------

For the----------

(Name of licensee)

By----------

Dated at Bethesda, MD, the------day of----------, 19--.

[26 FR 3459, Apr. 22, 1961; 72 FR 49565, Aug. 28, 2007]

Editorial Note: For Federal Register citations affecting § 140.93, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 140.94 Appendix D--Form of indemnity agreement with Federal agencies.

[Top of File]

This indemnity agreement No. D-----is entered into by and between the-------- (hereinafter referred to as the *licensee*) and the United States Nuclear Regulatory Commission (hereinafter referred to as the *Commission*) pursuant to subsection 170(c) of the Atomic Energy Act of 1954, as amended (hereinafter referred to as *the Act*).

Article I

As used in this agreement,

1. *Nuclear reactor, byproduct material, person, source material, special nuclear material, and precautionary evacuation* shall have the meanings given them in the Atomic Energy Act of 1954, as amended, and the regulations issued by the Commission.

2. (a) *Nuclear incident* means any occurrence including an extraordinary nuclear occurrence or series of occurrences at the location or in the course of transportation causing bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of the radioactive material.

(b) Any occurrence including an extraordinary nuclear occurrence or series of occurrences causing bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive or other hazardous properties of

(i) The radioactive material discharged or dispersed from the location over a period of days, weeks, months or longer and also arising out of such properties of other material defined as *the radioactive material* in any other agreement or agreements entered into by the Commission under subsection 170(c) or (k) of the Act and so discharged or dispersed from *the location* as defined in any such other agreement, or

(ii) The radioactive material in the course of transportation and also arising out of such properties of other material defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act as *the radioactive material* and which is in the course of transportation shall be deemed to be a common occurrence. A common occurrence shall be deemed to constitute a single nuclear incident.

3. *Extraordinary nuclear occurrence* means an event which the Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, as amended.

4. *In the course of transportation* means in the course of transportation within the United States, or in the course of transportation outside the United States and any other nation, and moving from one person licensed by the Commission to another person licensed by the Commission, including handling or temporary storage incidental thereto, of the radioactive material to the location or from the location provided that:

(a) With respect to transportation of the radioactive material to the location, such transportation is not by predetermination to be interrupted by the removal of the material from the transporting conveyance for any purpose other than the continuation of such transportation to the location or temporary storage incidental thereto;

(b) The transportation of the radioactive material from the location shall be deemed to end when the radioactive material is removed from the transporting conveyance for any purpose other than the continuation of transportation or temporary storage incidental thereto;

(c) *In the course of transportation* as used in this agreement shall not include transportation of the radioactive material to the location if the material is also *in the course of transportation* from any other *location* as defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act.

5. *Person indemnified* means the licensee and any other person who may be liable for public liability.

6. *Public liability* means any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation (including all reasonable additional costs incurred by a State, or a political subdivision of a State, in the course of responding to a nuclear incident or precautionary evacuation), except (1) claims under State of Federal Workmen's Compensation Acts of employees of persons indemnified who are employed (a) at the location or, if the nuclear incident occurs in the course of transportation of the radioactive material, on the transporting vehicle, and (b) in connection with the licensee's possession, use, or transfer of the radioactive material; (2) claims arising out of an act of war; and (3) claims for loss of, or damage to, or loss of use of (a) property which is located at the location and used in connection with the licensee's possession, use, or transfer of the radioactive material, and (b) if the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle, containers used in such transportation, and the radioactive material.

7. *The location* means the location described in Item 3 of the Attachment hereto.

8. *The radioactive material* means source, special nuclear, and byproduct material which (1) is used or to be used in, or is irradiated or to be irradiated by, the nuclear reactor or reactors subject to the license or licenses designated in the Attachment hereto, or (2) is produced as the result of operation of said reactor(s).

9. *United States* when used in a geographical sense includes Puerto Rico and all territories and possessions of the United States.

Article II

1. The Commission undertakes and agrees to indemnify and hold harmless the licensee and other persons indemnified, as their interest may appear, from public liability.

2. With respect to damage caused by a nuclear incident to property of any person legally liable for the nuclear incident, the Commission agrees to pay to such person those sums which such person would have been obligated to pay if such property had belonged to another; provided, that the obligation of the Commission under this paragraph 2 does not apply with respect to:

(a) Property which is located at the location and used in connection with the licensee's possession, use or transfer of the radioactive material;

(b) Property damage due to the neglect of the person indemnified to use all reasonable means to save and preserve the property after knowledge of a nuclear incident;

(c) If the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle and containers used in such transportation;

(d) The radioactive material.

3. [Reserved]

4. With respect to any extraordinary nuclear occurrence to which this agreement applies, the Commission, and the licensee on behalf of itself and other persons indemnified, insofar as their interests appear, each agree to waive:

(a) Any issue or defense as to the conduct of the claimant or fault of persons indemnified, including, but not limited to:

(1) Negligence;

(2) Contributory negligence;

(3) Assumption of the risk;

(4) Unforeseeable intervening causes, whether involving the conduct of a third person or an act of God.

As used herein, *conduct of the claimant* includes conduct of persons through whom the claimant derives his cause of action;

(b) Any issue or defense as to charitable or governmental immunity;

(c) Any issue or defense based on any statute of limitations if suit is instituted within 3 years from the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause thereof.

The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action. The waivers shall be judicially enforceable in accordance with their terms by the claimant against the person indemnified.

5. The waivers set forth in paragraph 4 of this article:

(a) Shall not preclude a defense based upon a failure to take reasonable steps to mitigate damages;

(b) Shall not apply to injury or damage to a claimant or to a claimant's property which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant;

(c) Shall not apply to injury to a claimant who is employed at the site of and in connection with the activity where the extraordinary nuclear occurrence takes place if benefits therefor are either payable or required to be provided under any workmen's compensation or occupational disease law: *Provided*, *however*, That with respect to an extraordinary nuclear occurrence occurring at the facility, a claimant who is employed at the facility in connection with the construction of a nuclear reactor with respect to which no operating license has been issued by the Nuclear Regulatory Commission shall not be considered as employed in connection with the activity where the extraordinary nuclear occurrence takes place if:

(1) The claimant is employed exclusively in connection with the construction of a nuclear reactor, including all related equipment and

installations at the facility, and

(2) No operating license has been issued by the NRC with respect to the nuclear reactor, and

(3) The claimant is not employed in connection with the possession, storage, use or transfer of nuclear material at the facility;

(d) Shall not apply to any claim for punitive or exemplary damages, provided, with respect to any claim for wrongful death under any State law which provides for damages only punitive in nature, this exclusion does not apply to the extent that the claimant has sustained actual damages, measured by the pecuniary injuries resulting from such death but not to exceed the maximum amount otherwise recoverable under such law;

(e) Shall be effective only with respect to those obligations set forth in this agreement;

(f) Shall not apply to, or prejudice the prosecution or defense of, any claim or portion of claim which is not within the protection afforded under (1) the limit of liability provisions under subsection 170(e), of the Atomic Energy Act of 1954, as amended, and (2) the terms of this agreement.

6. With respect to a common occurrence, the obligations of the Commission under this Article shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed whichever of the following is lower: (1) The sum of the amount of financial protection established under all applicable agreements; or (2) an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection. As used in this Article *applicable agreements* means each agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act in which agreement the nuclear incident is defined as *common occurrence*.

7. The obligations of the Commission under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

8. The obligations of the Commission under this and all other agreements and contracts to which the Commission is a party shall not with respect to any nuclear incident, in the aggregate exceed whichever of the following is the lower: (a) $500,000,000 or (b) with respect to a common occurrence, $560,000,000 less the sum of the amounts of financial protection established under all applicable agreements.

9. Bankruptcy or insolvency of any person indemnified or of the estate of any person indemnified shall not relieve the Commission of any of its obligations hereunder.

Article III

1. When the Commission determines that the United States will probably be required to make indemnity payments under the provisions of this agreement, the Commission shall have the right to collaborate with the licensee and other persons indemnified in the settlement and defense of any claim (provided that no government indemnity that would otherwise be available to pay public liability claims is used for these purposes) and shall have the right (a) to require the prior approval of the Commission for the settlement or payment of any claim or action asserted against the licensee or other persons indemnified for public liability or damage to property of persons legally liable for the nuclear incident which claim or action the licensee or the Commission may be required to indemnify under this agreement; and (b) to appear through the Attorney General of the United States on behalf of the licensee or other person indemnified, take charge of such action and settle or defend any such action. If the settlement or defense of any such action or claim is undertaken by the Commission, the licensee shall furnish all reasonable assistance in effecting a settlement or asserting a defense.

2. Neither this agreement nor any interest therein nor claim thereunder may be assigned or transferred without the approval of the Commission.

Article IV

The parties agree that they will enter into appropriate amendments of this agreement to the extent that such amendments are required pursuant to the Atomic Energy Act of 1954, as amended, or licenses, regulations or orders of the Commission.

Article V

The licensee agrees to pay to the Commission such fees as are established by the Commission pursuant to regulations or orders of the Commission.

Article VI

The term of this agreement shall commence as of the date and time specified in Item 4 of the attachment and shall terminate at the time of expiration of that license specified in Item 2 of the Attachment, which is the last to expire; provided that, except as may otherwise be provided in applicable regulations or orders of the Commission, the term of this agreement shall not terminate until all the radioactive material has been removed from the location and transportation of the radioactive material from the location has ended as defined in paragraph 4(b), Article I of this section. Termination of the term of this agreement shall not affect any obligation of the licensee or any obligation of the Commission under this agreement with respect to any nuclear incident occurring during the term of this agreement.

United States Nuclear Regulatory Commission

Indemnity Agreement No. D-------

Attachment

Item 1--Licensee----------

Address----------

Item 2--License number or numbers----------

Item 3--Location----------

Item 4--The indemnity agreement designated above, of which this Attachment is a part, is effective as of------m., on the------day of----------, 19--.

For the United States Nuclear Regulatory Commission.

By----------

For the----------

(Name of licensee)

By----------

Dated at Bethesda, MD, the---- day of----------, 19--.

[27 FR 2886, Mar. 29, 1962]

Editorial Note: For Federal Register citations affecting § 140.94, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 140.95 Appendix E--Form of indemnity agreement with nonprofit educational institutions.

[Top of File]

This indemnity agreement No. E------- is entered into by and between the-------- (hereinafter referred to as the *licensee*) and the United States Nuclear Regulatory Commission (hereinafter referred to as the *Commission*) pursuant to subsection 170(k) of the Atomic Energy Act of 1954, as amended (hereinafter referred to as *the Act*).

Article I

As used in this agreement,

1. *Nuclear reactor, byproduct material, person, source material, special nuclear material, and precautionary evacuation* shall have the meanings given them in the Atomic Energy Act of 1954, as amended, and the regulations issued by the Commission.

2. (a) *Nuclear incident* means any occurrence including an extraordinary nuclear occurrence or series of occurrences at the location or in the course of transportation causing bodily injury, sickness, disease, or death, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of the radioactive material.

(b) Any occurrence including an extraordinary nuclear occurrence or series of occurrences causing bodily injury, sickness, disease or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of

i. The radioactive material discharged or dispersed from the location over a period of days, weeks, months or longer and also arising out of such properties of other material defined as *the radioactive material* in any other agreement or agreements entered into by the Commission under subsection 170(c) or (k) of the Act and so discharged or dispersed from *the location* as defined in any such other agreement; or

ii. The radioactive material in the course of transportation and also arising out of such properties of other material defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act as the radioactive material and which is in the course of transportation shall be deemed to be a common occurrence. A common occurrence shall be deemed to constitute a single nuclear incident.

3. *Extraordinary nuclear occurrence* means an event which the Commission has determined to be an extraordinary nuclear occurrence as defined in the Atomic Energy Act of 1954, as amended.

4. *In the course of transportation* means in the course of transportation within the United States, or in the course of transportation outside the United States and any other nation, and moving from one person licensed by the Commission to another person licensed by the Commission, including handling or temporary storage incidental thereto, of the radioactive material to the location or from the location provided that:

(a) With respect to transportation of the radioactive material to the location, such transportation is not by predetermination to be interrupted by the removal of the material from the transporting conveyance for any purpose other than the continuation of such transportation to the location or temporary storage incidental thereto;

(b) The transportation of the radioactive material from the location shall be deemed to end when the radioactive material is removed from the transporting conveyance for any purpose other than the continuation of transportation or temporary storage incidental thereto;

(c) *In the course of transportation* as used in this agreement shall not include transportation of the radioactive material to the location if the material is also *in the course of transportation* from any other *location* as defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act.

5. *Person indemnified* means the licensee and any other person who may be liable for public liability.

6. *Public liability* means are legal liability arising out of or resulting from a nuclear incident or precautionary evacuation (including all reasonable additional costs incurred by a State, or a political subdivision of a State, in the course of responding to a nuclear incident or precautionary evacuation), except (1) claims under State or Federal Workmen's Compensation Act of employees of persons indemnified who are employed (a) at the location or, if the nuclear incident occurs in the course of transportation of the radioactive material, or the transporting vehicle, and (b) in connection with the licensee's possession, use, or transfer of the radioactive material; (2) claims arising out of an act of war; and (3) claims for loss of, or damage to, or loss of use of (a) property which is located at the location and used in connection with the licensee's possession, use, or transfer of the radioactive material, and (b) if the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle, containers used in such transportation, and the radioactive material.

7. *The location* means the location described in Item 3 of the Attachment hereto.

8. *The radioactive material* means source, special nuclear, and byproduct material which (1) is used or to be used in, or is irradiated or to be irradiated by, the nuclear reactor or reactors subject to the license or licenses designated in the Attachment hereto, or (2) which is produced as the result of operation of said reactor(s).

9. *United States* when used in a geographical sense includes Puerto Rico and all territories and possessions of the United States.

Article II

1. Any obligations of the licensee under subsection 53e(8) of the Act to indemnify the United States and the Commission from public liability shall not in the aggregate exceed $250,000 with respect to any nuclear incident.

2. With respect to any extraordinary nuclear occurrence to which this agreement applies, the Commission, and the licensee on behalf of itself and other persons indemnified, insofar as their interests appear, each agree to waive:

(a) Any issue or defense as to the conduct of the claimant or fault of persons indemnified, including, but not limited to

(1) Negligence;

(2) Contributory negligence;

(3) Assumption of the risk;

(4) Unforeseeable intervening causes, whether involving the conduct of a third person or an act of God.

As used herein, *conduct of the claimant* includes conduct of persons through whom the claimant derives his cause of action;

(b) Any issue or defense as to charitable or governmental immunity:

(c) Any issue or defense based on any statute of limitations if suit is instituted within 3 years from the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause thereof.

The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action. The waivers shall be judicially enforceable in accordance with their terms by the claimant against the person indemnified.

3. The waivers set forth in paragraph 2 of this article:

(a) Shall not preclude a defense based upon a failure to take reasonable steps to mitigate damages;

(b) Shall not apply to injury or damage to a claimant or to a claimant's property which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant;

(c) Shall not apply to injury to a claimant who is employed at the site of and in connection with the activity where the extraordinary nuclear occurrence takes place if benefits therefor are either payable or required to be provided under any workmen's compensation or occupational disease law: *Provided*, *however*, That with respect to an extraordinary nuclear occurrence occurring at the facility, a claimant who is employed at the facility in connection with the construction of a nuclear reactor with respect to which no operating license has been issued by the Nuclear Regulatory Commission shall not be considered as employed in connection with the activity where the extraordinary nuclear occurrence takes place if:

(1) The claimant is employed exclusively in connection with the construction of a nuclear reactor, including all related equipment and installations at the facility, and

(2) No operating license has been issued by the NRC with respect to the nuclear reactor, and

(3) The claimant is not employed in connection with the possession, storage, use, or transfer of nuclear material at the facility;

(d) Shall not apply to any claim for punitive or exemplary damages, provided, with respect to any claim for wrongful death under any State law which provides for damages only punitive in nature, this exclusion does not apply to the extent that the claimant has sustained actual damages, measured by the pecuniary injuries resulting from such death but not to exceed the maximum amount otherwise recoverable under such law;

(e) Shall be effective only with respect to those obligations set forth in this agreement;

(f) Shall not apply to, or prejudice the prosecution or defense of, any claim or portion of claim which is not within the protection afforded under (1) the limit of liability provisions under subsection 170(e) of the Atomic Energy Act of 1954, as amended, and (b) the terms of this agreement.

Article III

1. The Commission undertakes and agrees to indemnify and hold harmless the licensee and other persons indemnified, as their interest may appear, from public liability.

2. With respect to damage caused by a nuclear incident to property of any person legally liable for the nuclear incident, the Commission agrees to pay to such person those sums which such person would have been obligated to pay if such property had belonged to another; provided, that the obligation of the Commission under this paragraph 2 does not apply with respect to:

(a) Property which is located at the location and used in connection with the licensee's possession, use or transfer of the radioactive material;

(b) Property damage due to the neglect of the person indemnified to use all reasonable means to save and preserve the property after knowledge of a nuclear incident;

(c) If the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle and containers used in such transportation;

(d) The radioactive material.

3. [Reserved]

4.(a) The obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed $250,000.

(b) With respect to a common occurrence, the obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed whichever of the following is lower: (1) The sum of the amounts of financial protection established under all applicable agreements; or (2) an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection. As used in this Article *applicable agreements* means each agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act in which agreement the nuclear incident is defined as a *common occurrence*.

5. The obligations of the Commission under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

6. The obligations of the Commission under this and all other agreements and contracts to which the Commission is a party shall not with respect to any nuclear incident, in the aggregate exceed which ever of the following is the lower: (a) $500,000,000 or (b) with respect to a common occurrence, $560,000,000 less the sum of the amounts of financial protection established under all applicable agreements.

7. If the licensee is immune from public liability because it is a state agency, the Commission shall make payments under the agreement in

the same manner and to the same extent as the Commission would be required to do if the licensee were not such a state agency.

8. The obligations of the Commission under this agreement, except to the licensee for damage to property of the licensee, shall not be affected by any failure on the part of the licensee to fulfill its obligations under this agreement. Bankruptcy or insolvency of the licensee or any other person indemnified or of the estate of the licensee or any other person indemnified shall not relieve the Commission of any of its obligations hereunder.

Article IV

1. When the Commission determines that the United States will probably be required to make indemnity payments under the provisions of this agreement, the Commission shall have the right to collaborate with the licensee and other persons indemnified in the settlement and defense of any claim including such legal costs of the licensee as are approved by the Commission and shall have the right (a) to require the prior approval of the Commission for the settlement or payment of any claim or action asserted against the licensee or other person indemnified for public liability or damage to property of persons legally liable for the nuclear incident which claim or action the licensee or the Commission may be required to indemnify under this agreement; and (b) to appear through the Attorney General of the United States on behalf of the licensee or other person indemnified, take charge of such action or defend any such action. If the settlement or defense of any such action or claim is undertaken by the Commission, the licensee shall furnish all reasonable assistance in effecting a settlement or asserting a defense.

2. Neither this agreement nor any interest therein nor claim thereunder may be assigned or transferred without the approval of the Commission.

Article V

The parties agree that they will enter into appropriate amendments of this agreement to the extent that such amendments are required pursuant to the Atomic Energy Act of 1954, as amended, or licenses, regulations or orders of the Commission.

Article VI

The licensee agrees to pay to the Commission such fees as are established by the Commission pursuant to regulations or orders of the Commission.

Article VII

The term of this agreement shall commence as of the date and time specified in Item 4 of the Attachment and shall terminate at the time of expiration of that license specified in Item 2 of the Attachment, which is the last to expire; provided that, except as may otherwise be provided in applicable regulations or orders of the Commission, the term of this agreement shall not terminate until all the radioactive material has been removed from the location and transportation of the radioactive material from the location has ended as defined in subparagraph 4(b), Article I. Termination of the term of this agreement shall not affect any obligation of the licensee or any obligation of the Commission under this agreement with respect to any nuclear incident occurring during the term of this agreement.

United States Nuclear Regulatory Commission

Indemnity Agreement No. E-----

Attachment

Item 1--Licensee----------

Address----------

Item 2--License number or numbers------

Item 3--Location----------

Item 4--The indemnity agreement designated above, of which this Attachment is a part, is effective as of------m., on the------day of---------- , 19--.

For the United States Nuclear Regulatory Commission.

By----------

For the----------

By----------

(Name of licensee)

Dated at Bethesda, MD, the---- day of---------- , 19--.

[27 FR 2887, Mar. 29, 1962]

Editorial Note: For Federal Register citations affecting § 140.95, see the List of CFR Sections Affected in the Finding Aids section of this volume.

§ 140.96 Appendix F--Indemnity locations.

[Top of File]

(a) *Geographical boundaries of indemnity locations*. (1) In every indemnity agreement between the Commission and a licensee which affords indemnity protection for the preoperational storage of fuel at the site of a nuclear power reactor under construction, the geographical boundaries of the indemnity location will include the entire construction area of the nuclear power reactor, as determined by the Commission. Such area will not necessarily be coextensive with the indemnity location which will be established at the time an operating license or combined license under 10 CFR part 52 is issued for such additional nuclear power reactors.

(2) In every indemnity agreement between the Commission and a licensee which affords indemnity protection for an existing nuclear power reactor, the geographical boundaries of the indemnity location shall include the entire construction area of any additional nuclear power reactor as determined by the Commission, built as part of the same power station by the same licensee. Such area will not necessarily be coextensive with the indemnity location which will be established at the time an operating license or combined license is issued for such additional nuclear power reactors.

(3) This section is effective May 1, 1973, as to construction permits issued before March 2, 1973, and, as to construction permits and combined licenses issued on or after March 2, 1973, the provisions of this section will apply no later than such time as a construction permit or combined license is issued authorizing construction of any additional nuclear power reactor.

[38 FR 2984, Jan. 31, 1973; 72 FR 49565, Aug. 28, 2007]

§ 140.107 Appendix G--Form of indemnity agreement with licensees processing plutonium for use in plutonium processing and fuel fabrication plants and furnishing insurance policies as proof of financial protection.

[Top of File]

This Indemnity Agreement No.------is entered into by and between----------(hereinafter referred to as the *licensee*) and the United States Nuclear Regulatory Commission (hereinafter referred to as the *Commission*) pursuant to subsection 170(c) of the Atomic Energy Act of 1954, as amended (hereinafter referred to as *the Act*), and section 201 of the Energy Reoganization Act of 1974, as amended.

Article I

As used in this agreement:

1. *By product material, person, source material, special nuclear material, precautionary evacuation, and extraordinary nuclear occurrence* shall have the meaning given them in the Atomic Energy Act of 1954, as amended, and the regulations issued by the Commission.

2. Except where otherwise specifically provided, *amount of financial protection* means the amount specified in Item 2a and b, of the Attachment annexed hereto as modified by paragraph 6, Article II, with respect to common occurrences.

3. (a) *Nuclear incident* means any occurrence including an extraordinary nuclear occurrence, or series of occurrences at the location or in the course of transportation causing bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of the radioactive material.

(b) Any occurrence, including an extraordinary nuclear occurrence, or series of occurrences causing bodily injury, sickness, disease or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of:

(i) The radioactive material discharged or dispersed from the location over a period of days, weeks, months or longer and also arising out of such properties of other material defined as *the radioactive material* in any other agreement or agreements entered into by the Commission under subsection 170(c) or (k) of the Act and so discharged or dispersed from *the location* as defined in any such other agreement, or

(ii) The radioactive material in the course of transportation and also arising out of such properties of other material defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act as *the radioactive material* and which is in the course of transportation shall be deemed to be a common occurrence. A common occurrence shall be deemed to constitute a single nuclear incident.

4. *In the course of transportation* means in the course of transportation within the United States, or in the course of transportation outside the United States and any other nation, and moving from one person licensed by the Commission to another person licensed by the

Commission, including handling or temporary storage incidental thereto, of the radioactive material to the location or from the location provided that:

(a) With respect to transportation of the radioactive material to the location, such transportation is not by predetermination to be interrupted by the removal of the material from the transporting conveyance for any purpose other than the continuation of such transportation to the location or temporary storage incidental thereto;

(b) The transportation of the radioactive material from the location shall be deemed to end when the radioactive material is removed from the transporting conveyance for any purpose other than the continuation of transportation or temporary storage incidental thereto;

(c) *In the course of transportation* as used in this agreement shall not include transportation of the radioactive material to the location if the material is also in the course of transportation from any other location as defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act.

5. *Person indemnified* means the licensee and any other person who may be liable for public liability.

6. *Public liability* means any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation (including all reasonable additional costs incurred by a State, or a political subdivision of a State, in the course of responding to a nuclear incident or precautionary evacuation), except (1) claims under State or Federal Workmen's Compensation Acts of employees of persons indemnified who are employed (a) at the location or, if the nuclear incident occurs in the course of transportation of the radioactive material, on the transporting vehicle, and (b) in connection with the licensee's possession, use or transfer of the radioactive material; (2) claims arising out of an act of war; and (3) claims for loss of or damage to, or loss of use of (a) property which is located at the location and used in connection with the licensee's possession, use, or transfer of the radioactive material, and (b) if the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle, containers used in such transportation, and the radioactive material.

7. *The location* means the location described in Item 4 of the Attachment hereto.

8. *The radioactive material* means (a) any source, special nuclear, or byproduct material which (1) is both used or to be used in, or is processed or to be processed by, the licensee's plutonium processing and fuel fabrication plant or plants and is subject to the license or licenses designated in the Attachment hereto, or (2) is produces as the result of the operation of said plant or plants or (b) any source, special nuclear, or byproduct material which is waste or contamination from material described in paragraph 8(a). The words used or to be used and processed or to be processed in this paragraph cover source, special nuclear or byproduct material which is in the course of transportation as used in the agreement or is received at the plant for use or processing in the plant but which is, in fact, for any reason, not so used or processed.

9. *United States* when used in a geographical sense includes Puerto Rico and all territories and possessions of the United States.

Article II

1. At all times during the term of the license or licenses designated in Item 3 of the Attachment hereto, the licensee will maintain financial protection in the amount specified in Item 2 of the Attachment and in the form of the nuclear energy liability insurance policy designated in the Attachment. If more than one license is designated in Item 3 of the Attachment, the licensee agrees to maintain such financial protection until the end of the term of that license which will be the last to expire. The licensee shall, notwithstanding the expiration, termination, modification, amendment, suspension of revocation of any license or licenses designated in Item 3 of the Attachment, maintain such financial protection in effect until all the radioactive material has been removed from the location and transportation of the radioactive material from the location has ended as defined in subparagraph 4(b), Article I, or until the Commission authorizes the termination or the modification of such financial protection. The Commission will not unreasonably withhold such authorization.

2. In the event of any payment by the insurer or insurers under a policy or policies specified in Item 5 of the Attachment hereto which reduces the aggregate limit of such policy or policies below the amount of financial protection, the licensee will promptly apply to his insurers for reinstatement of the amount specified in Item 2a of the Attachment (without reference to paragraph b of Item 2) and will make all reasonable efforts to obtain such reinstatement. In the event that the licensee has not obtained reinstatement of such amount within ninety days after the date of such reduction, and in the absence of good cause shown to the contrary, the Commission may issue an order requiring the licensee to furnish financial protection for such amount in another form.

3. Any obligations of the licensee under subsection 53e(8) of the Act to indemnify the United States and the Commission from public liability, together with any public liability satisfied by the insurers under the policy or policies designated in the Attachment hereto, shall not in the aggregate exceed the amount of financial protection with respect to any nuclear incident, including the reasonable costs of investigating and settling claims and defending suits for damage.

4. The obligations of the licensee under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

5. Upon the expiration or revocation of any license designated in Item 3 of the Attachment, the Commission will enter into an appropriate amendment of this agreement with the licensee reducing the amount of financial protection required under this Article: provided, that the licensee is then entitled to a reduction in the amount of financial protection under applicable Commission regulations and orders.

6. With respect to any common occurrence,

(a) If the sum of the limit of liability of any Nuclear Energy Liability-Property Insurance Association policy designated in Item 5 of the Attachment and the limits of liability of all other nuclear energy liability insurance policies (facility form) applicable to such common

occurrence and issued by Nuclear Energy Liability-Property Insurance Association exceeds $155,000,000, the amount of financial protection specified in Item 2 a and b of the Attachment shall be deemed to be reduced by that proportion of the difference between said sum and $155,000,000 as the limit of liability of the Nuclear Energy Liability-Property Insurance Association policy designated in Item 5 of the Attachment bears to the sum of the limits of liability of all nuclear energy liability insurance policies (facility form) applicable to such common occurrence and issued by Nuclear Energy Liability-Property Insurance Association;

(b) If the sum of the limit of liability of any Mutual Atomic Energy Liability Underwriters policy designated in Item 5 of the Attachment and the limits of liability of all other nuclear energy liability insurance policies (facility form) applicable to such common occurrence and issued by Mutual Atomic Energy Liability Underwriters exceeds $45,000,000, the amount of financial protection specified in Item 2 a and b of the Attachment shall be deemed to be reduced by that proportion of the difference between said sum and $45,000,000 as the limit of liability of the Mutual Atomic Energy Liability Underwriters policy designated in Item 5 of the Attachment bears to the sum of the limits of liability of all nuclear energy liability insurance policies (facility form) applicable to such common occurrence and issued by Mutual Atomic Energy Liability Underwriters;

(c) If any of the other applicable agreements is with a person who has furnished financial protection in a form other than a nuclear energy liability insurance policy (facility form) issued by Nuclear Energy Liability-Property Insurance Association or Mutual Atomic Energy Liability Underwriters, and if also the sum of the amount of financial protection established under this agreement and the amounts of financial protection established under all other applicable agreements exceeds an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection, the obligations of the licensee shall not exceed a greater proportion of an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection than the amount of financial protection established under this agreement bears to the sum of such amount and the amounts of financial protection established under all other applicable agreements.

(d) As used in this paragraph 6., Article II and in Article III, *other applicable agreements* means each other agreement entered into by the Commission pursuant to subsection 170(c). of the Act in which agreement the nuclear incident is defined as a *common occurrence*. As used in this paragraph 6., Article II, *the obligations of the licensee* means the obligations of the licensee under subsection 53e(8) of the Act to indemnify the United States and the Commission from public liability, together with any public liability satisfied by the insurers under the policy or policies designated in the Attachment, and the reasonable costs incurred by the insurers in investigating and settling claims and defending suits for damage.

7. The obligations of the licensee under this Article shall not be affected by any failure or default on the part of the Commission or the Government of the United States to fulfill any or all of its obligations under this agreement. Bankruptcy or insolvency of any person indemnified other than the licensee, or of the estate of any person indemnified other than the licensee, shall not relieve the licensee of any of its obligations hereunder.

Article III

1. The Commission undertakes and agrees to indemnify and hold harmless the licensee and other persons indemnified, as their interest may appear, from public liability.

2. With respect to damage caused by a nuclear incident to property of any person legally liable for the nuclear incident, the Commission agrees to pay to such person those sums which such person would have been obligated to pay if such property had belonged to another; provided, that the obligation of the Commission under this paragraph 2 does not apply with respect to:

(a) Property which is located at the location described in Item 4 of the Attachment or at the location described in Item 3 of the declarations attached to any nuclear energy liability insurance policy designated in Item 5 of the Attachment;

(b) Property damage due to the neglect of the person indemnified to use all reasonable means to save and preserve the property after knowledge of a nuclear incident;

(c) If the nuclear incident occurs in the course of transportation of the raidoactive material, the transporting vehicle and containers used in such transportation;

(d) The radioactive material.

3. [Reserved]

4.(a) The obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed the amount of financial protection.

(b) With respect to a common occurrence, the obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed $200,000,000.

5. The obligations of the Commission under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

6. The obligations of the Commission under this and all other agreements and contracts to which the Commission is a party shall not, with respect to any nuclear incident, in the aggregate exceed whichever of the following is the lowest: (a) $500,000,000; (b) $560,000,000 less the amount of financial protection required under this agreement; or (c) with respect to a common occurrence, $560,000,000 less the sum of the amounts of financial protection established under this agreement and all other applicable agreements.

7. The obligations of the Commission under this agreement, except to the licensee for damage to property of the licensee, shall not be affected by any failure on the part of the licensee to fulfill its obligations under this agreement. Bankruptcy or insolvency of the licensee or any other person indemnified, or of the estate of the licensee or any other person indemnified, shall not relieve the Commission of any of its obligations hereunder.

Article IV

1. When the Commission determines that the United States will probably be required to make indemnity payments under the provisions of this agreement, the Commission shall have the right to collaborate with the licensee and other persons indemnified in the settlement and defense of any claim (provided that no government indemnity that would otherwise be available to pay public liability claims is used for these purposes) and shall have the right (a) to require the prior approval of the Commission for the settlement or payment of any claim or action asserted against the licensee or other person indemnified for public liability or damage to property of persons legally liable for the nuclear incident which claim or action the licensee or the Commission may be required to indemnify under this agreement; and (b) to appear through the Attorney General of the United States on behalf of the licensee or other person indemnified, take charge of such action and settle or defend any such action. If the settlement or defense of any such action or claim is undertaken by the Commission, the licensee shall furnish all reasonable assistance in effecting a settlement or asserting a defense.

2. Neither this agreement nor any interest therein nor claim thereunder may be assigned or transferred without the approval of the Commission.

Article V

The parties agree that they will enter into appropriate amendments of this agreement to the extent that such amendments are required pursuant to the Atomic Energy Act of 1954, as amended, or licenses, regulations or orders of the Commission.

Article VI

The licensee agrees to pay the Commission such fees as are established by the Commission pursuant to regulations or others of the Commission.

Article VII

The term of this agreement shall commence as of the date and time specified in Item 6 of the Attachment and shall terminate at the time of expiration of that license specified in Item 3 of the Attachment, which is the last to expire; provided that, except as may otherwise be provided in applicable regulations or orders of the Commission, the term of this agreement shall not terminate until all the radioactive material has been removed from the location and transportation of the radioactive material from the location has ended as defined in paragraph 4(b), Article I. Termination of the term of this agreement shall not affect any obligation of the licensee or the Commission under this agreement with respect to any nuclear incident occurring during the term of this agreement.

United States Nuclear Regulatory Commission

Attachment

Indemnity Agreement No.----------

Item 1--Licensee.----------

Item 2--

a. Amount of financial protection--------

b. With respect to any nuclear incident, the amount specified in Item 2a of this Attachment shall be deemed to be (i) reduced to the extent that any payment made by the insurer or insurers under a policy or policies specified in Item 5 of this Attachment reduces the aggregate amount of such insurance policies below the amount specified in Item 2a and (ii) restored to the extent that, following such reduction, the aggregate amount of such insurance polices is reinstated.

Item 3--License number or numbers------

Item 4--Location----------

Item 5--Insurance Policy No.(s)----------

Item 6--The indemnity agreement designated above, of which this Attachment is a part, is effective as of 12:01 a.m., on the------day of--, 19--.

For the U.S. Nuclear Regulatory Commission.

For----------

By----------

Dated at Bethesda, MD, the--------

day of------19--.

[42 FR 51, Jan. 3, 1977, as amended at 42 FR 20141, Apr. 18, 1977; 44 FR 20633, Apr. 6, 1979; 44 FR 24045, Apr. 24, 1979; 45 FR 37410, June 3, 1980; 49 FR 11152, Mar. 26, 1984; 54 FR 24160, June 6, 1989]

§ 140.108 Appendix H--Form of indemnity agreement with licensees possessing plutonium for use in plutonium processing and fuel fabrication plants and furnishing proof of financial protection in the form of the licensee's resources.

[Top of File]

This Indemnity Agreement No.------is entered into by and between------(hereinafter referred to as the *licensee*) and the United States Nuclear Regulatory Commission (hereinafter referred to as the *Commission*) pursuant to subsection 170(c) of the Atomic Energy Act of 1954, as amended (hereinafter referred to as *the Act*), and Section 201 of the Energy Reorganization Act of 1974, as amended.

Article I

As used in this agreement:

1. *Byproduct material, person, source material, special nuclear material, precautionary evacuation, and extraordinary nuclear occurrence* shall have the meaning given them in the Atomic Energy Act of 1954, as amended, and the regulations issued by the Commission.

2. *Amount of financial protection* means the amount specified in Item 2 or the Attachment annexed hereto.

3. *Nuclear incident* means any occurrence including an extraordinary nuclear occurrence, or series of occurrences at the location or in the course of transportation causing bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of the radioactive material.

(b) Any occurrence, including an extraordinary nuclear occurrence of series of occurrences causing bodily injury, sickness, disease or death, or loss or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of

i. The radioactive material discharged or dispersed from the location over a period of days, weeks, months or longer and also arising out of such properties of other material defined as *the radioactive material* in any other agreement or agreements entered into by the Commission under subsection 170(c) or (k) of the Act and so discharged or dispersed from *the location* as defined in any such other agreement, or

ii. The radioactive material in the course of transportation and also arising out of such properties of other material defined in any other agreement entered into the Commission pursuant to subsection 170(c) or (k) of the Act as *the radioactive material* and which is in the course of transportation shall be deemed to be a common occurrence. A common occurrence whall be deemed to constitute a single nuclear incident.

4. *In the course of transportation* means in the course of transportation within the United States, or in the course of transportation outside the United States and any other nation, and moving from one person licensed by the Commission to another person licensed by the Commission, including handling or temporary storage incidental thereto, of the radioactive material to the location or from the location provided that:

(a) With respect to transportation of the radioactive material to the location, such transportation is not be predetermination to be interrupted by the removal of the material from the transporting conveyance for any purpose other than the continuation of such transportation to the location or temporary storage incidental thereto:

(b) The transportation of the radioactive material from the location shall be deemed to end when the radioactive material is removed from the transporting conveyance for any purpose other than the continuation of transportation or temporary storage incidental thereto:

(c) *In the course of transportation* as used in this agreement shall not include transportation of the radioactive material to the location if the material is also *in the course of transportaton* from any other *location* as defined in any other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act.

5. *Person indemnified* means the licensee and any other person who may be liable for public liability.

6. *Public liability* means any legal liability arising out of or resulting from a nuclear incident or precautionary evacuation (including all reasonable additional costs incurred by a State, or a political subdivision of a State, in the course of responding to a nuclear incident or precautionary evacuation), except (1) claims under State or Federal Workmen's Compensation Acts of employees of persons indemnified who are employed (a) at the location or, if the nuclear incident occurs in the course of transportation of the radioactive material, on the

transporting vehicle, and (b) in connection with the licensee's possession, use or transfer of the radioactive material; (2) claims arising out of an act of war; and (3) claims for loss of, or damage to, or loss of use of (a) property which is located at the location and used in connection with the licensee's possession, use, or transfer of the radioactive material, and (b) if the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle, containers used in such transportation, and the radioactive material.

7. *The location* means the location described in Item 4 of the Attachment hereto.

8. *The radioactive material* means (a) any source, special nuclear, or byproduct material which (1) is both used or to be used in, or is processed or to be processed by, the licensee's plutonium processing and fuel fabrication plant or plants and is subject to the license or licenses designated in the Attachment hereto, or (2) is produced as the result of the operation of said plant or plants or (b) any source special nuclear, or byproduct material which is waste or contamination from material described in paragraph 8(a). The words *used or to be used* and *processed or to be processed* in this paragraph cover source, special nuclear or byproduct material which is *in the course of transportation* as used in the agreement or is received at the plant for use or processing in the plant but which is, in fact, for any reason, not so used or processed.

9. *United States* when used in a geographical sense includes Puerto Rico and all territories and possessions of the United States.

Article II

1. The licensee undertakes and agrees to indemnify and hold harmless all persons indemnified, as their interest may appear, from public liability.

2. With respect to damage caused by a nuclear incident to property of any person legally liable for the incident, the licensee agrees to pay to such person those sums which such person would have been obligated to pay if such property had belonged to another; provided, that the obligation of the licensee under this paragraph 2 does not apply with respect to:

(a) Property which is located at the location and used in connection with the licensee's possession, use or transfer of the radioactive material;

(b) Property damage due to neglect of the person indemnified to use all reasonable means to save and preserve the property after knowledge of a nuclear incident;

(c) If the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle and containers used in such transportation; and

(d) The radioactive material.

3. Any obligations of the licensee under paragraphs 1 and 2 of this Article, and subsection 53e(8) of the Act to indemnify the United States and the Commission from public liability shall not in the aggregate exceed the amount of financial protection with respect to any nuclear incident.

4. The obligations of the licensee under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

5. Upon the expiration or revocation of any license designated in Item 3 of the Attachment, the Commission will enter into an appropriate amendment of this agreement with the licensee reducing the amount of financial protection required under this Article; provided, that the licensee is then entitled to a reduction in the amount of financial protection under applicable Commission regulations and orders.

6. With respect to any common occurrence, if the sum of the amount of financial protection established under this agreement and the amount of financial protection established under all other applicable agreements exceeds an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection, the obligations of the licensee described in paragraph 3 of this Article shall not exceed a greater proportion of an amount equal to the sum of $200,000,000 and the amount available as secondary financial protection than the amount of financial protection established under this agreement bears to the sum of such amount and the amounts of financial protection established under all other applicable agreements. As used in this paragraph, and in Article III, other applicable agreements means each other agreement entered into by the Commission pursuant to subsection 170(c) or (k) of the Act in which agreement the nuclear incident is defined as a common occurrence.

7. The obligations of the licensee under this Article shall not be affected by any failure or default on the part of the Commission or the Government or the United States to fulfill any or all of its obligations under this agreement. Bankruptcy or insolvency of any person indemnified other than the licensee, or of the estate of any person indemnified other than the licensee shall not relieve the licensee of any of its obligations hereunder.

Article III

1. The Commission undertakes and agrees to indemnify and hold harmless the licensee and other persons indemnified, as their interest may appear, from public liability.

2. With respect to damage caused by a nuclear incident to property of any person legally liable for the nuclear incident, the Commission agrees to pay to such person those sums which such person would have been obligated to pay if such property had belonged to another; provided, that the obligation of the Commission under this paragraph 2 does not apply with respect to:

(a) Property which is located at the location and used in connection with the licensee's possession, use or transfer of the radioactive material;

(b) Property damage due to the neglect of the person indemnified to use all reasonable means to save and preserve the property after knowledge of a nuclear incident;

(c) If the nuclear incident occurs in the course of transportation of the radioactive material, the transporting vehicle and containers used in such transportation;

(d) The radioactive material.

3. [Reserved]

4(a) The obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed the amount of financial protection.

(b) With respect to a common occurrence, the obligations of the Commission under this agreement shall apply only with respect to such public liability and such damage to property of persons legally liable for the nuclear incident (other than such property described in the proviso to paragraph 2 of this Article) as in the aggregate exceed $200,000,000.

5. The obligations of the Commission under this agreement shall apply only with respect to nuclear incidents occurring during the term of this agreement.

6. The obligations of the Commission under this and all other agreements and contracts to which the Commission is a party shall not, with respect to any nuclear incident, in the aggregate exceed whichever of the following is the lowest; (a) $500,000,000; (b) $560,000,000 less the amount of financial protection required under this agreement; or (c) with respect to a common occurrence, $560,000,000 less the sum of the amounts of financial protection established under this agreement and all other applicable agreements.

7. The obligations of the Commission under this agreement, except to the licensee for damage to property of the licensee, shall not be affected by any failure on the part of the licensee to fulfill its obligations under this agreement. Bankruptcy or insolvency of the licensee or any other person indemnified, or of the estate of the licensee or any other person indemnified shall not relieve the Commission of any of its obligations hereunder.

Article IV

1. When the Commission determines that the United States will probably be required to make indemnity payments under the provisions of this agreement, the Commission shall have the right to collaborate with the licensee and other persons indemnified in the settlement and defense of any claim (provided that no government indemnity that would otherwise be available to pay public liability claims is used for these purposes) and shall have the right (a) to require the prior approval of the Commission for the settlement or payment of any claim or action asserted against the licensee or other persons indemnified for public liability or damage to property of persons legally liable for the nuclear incident which claim or action the licensee or the Commission may be required to indemnify under this agreement; and (b) to appear through the Attorney General of the United States on behalf of the licensee or other person indemnified, take charge of such action and settle or defend any such action. If the settlement or defense of any such action or claim is undertaken by the Commission, the licensee shall furnish all reasonable assistance in effecting a settlement or asserting defense.

2. Neither this agreement nor any interest therein nor claim thereunder may be assigned or transferred without the approval of the Commission.

Article V

The parties agree that they will enter into appropriate amendments of this agreement to the extent that such amendments are required pursuant to the Atomic Energy Act of 1954, as amended, or licenses, regulations or orders of the Commission.

Article VI

The licensee agrees to pay the Commission such fees as are established by the Commission pursuant to regulations or orders of the Commission.

Article VII

The term of this agreement shall commence as of the date and time specified in Item 5 of the Attachment and shall terminate at the time of expiration of that license specified in Item 3 of the Attachment, which is the last to expire; provided that, except as may otherwise be provided in applicable regulations or orders of the Commission, the term of this agreement shall not terminate until all the radioactive material has been removed from the location and transportation of the radioactive material from the location has ended as defined in paragraph 4(b), Article I. Termination of the term of this agreement shall not affect any obligation of the licensee or the Commission under this agreement with respect to any nuclear incident occurring during the term of this agreement.

United States Nuclear Regulatory Commission

Attachment

Indemnity Agreement No.----------

Item 1--Licensee----------

Item 2--Amount of financial protection--

Item 3--License number or numbers------

Item 4--Location----------

Item 5--The indemnity agreement designated above, of which this Attachment is a part, is effective as of 12:01 a.m., on the------day of------19--.

Dated at Bethesda, MD, the------day of------19--.

For the U.S. Nuclear Regulatory Commission.

For----------

By----------

[42 FR 53, Jan. 3, 1977, as amended at 42 FR 20142, Apr. 18, 1977; 42 FR 23501, May 9, 1977; 44 FR 20633, Apr. 6, 1979; 44 FR 24045, Apr. 24, 1979; 45 FR 37410, June 3, 1980; 49 FR 11152, Mar. 26, 1984; 54 FR 24161, June 6, 1989]

§ 140.109 Appendix I.

[Top of File]

Nuclear Energy Liability Insurance Association

Master policy no.----

Nuclear Energy Liability Insurance

(Secondary Financial Protection)

Named Insured: Each person or organization designated in Item 1 of a *certificate*.

Policy Period: Beginning on the first day of August, 1977, and continuing to the effective date and time of the cancellation or other termination of this policy, eastern standard time.

Limits of Liability: The amount of retrospective premium actually received by the companies plus the amount of the companies' contingent liability, if any, pursuant to Conditions 2, 3, and 4.

Date of Issue----------

Authorized Representative----------

In consideration of the payment of the annual premium, in reliance upon the statements in the certificates and subject to the limits of liability, conditions and other terms of this Master Policy, the undersigned members of Nuclear Energy Liability Insurance Association (hereinafter called the companies), each for itself, severally and not jointly, and in the respective proportions herein set forth, and the insureds named in the certificates, agree as follows:

Insuring Agreements

I. Nuclear energy liability insurance

(*Secondary Financial Protection*)

To pay on behalf of or to the insured or to the *insured's* workers' compensation carrier all sums payable as *excess losses* to which this Master Policy applies.

II. *Definitions*

Bodily injury means bodily injury, sickness or disease, including death resulting therefrom, sustained by any person.

Certificate means a Certificate of Insurance, including Declarations and Bond for Payment of Retrospective Premiums, issued to be a part of this Master Policy.

Common nuclear occurrence means any occurrence or series of occurrences causing bodily injury or property damage arising out of the radioactive, toxic, explosive, or other hazardous properties of nuclear material

(a) Discharged or dispersed from a nuclear reactor described in Item 3 of a certificate over a period of days, weeks, months, or longer, or

(b) Discharged or dispersed from a nuclear reactor described in Item 3 of a certificate over a period of days, weeks, months or longer and also arising out of such properties of nuclear material so discharged or dispersed from one or more other nuclear reactors described in Item 3 of other certificates, or

(c) In the course of transportation for which protection is afforded (or would be afforded but for exhaustion of its limit of liability) under the *primary financial protection* described in Item 4 of a certificate and also arising out of such properties of nuclear material in the course of transportation for which protection is afforded (or would be afforded but for exhaustion of its limit of liability) under the *primary financial protection* described in Item 4 of one or more other certificates.

Damages and claim expenses includes sums estimated by the companies to be payable under this policy and payments made by the companies under this Master Policy:

(a) In settlement of claims and in satisfaction of judgments against the *insureds* for damages because of *bodily injury* or *property damage*;

(b) For (1) costs taxed against an *insured* in any suit against the insured seeking damages payable under the terms of this Master Policy and interest on any judgment therein, (2) premiums on appeal bonds and bonds to release attachments in any such suit and (3) reasonable expenses, other than loss of earnings, incurred by the *insured* at the companies' request;

(c) For expenses incurred in the investigation, negotiation, settlement and defense of any claim or suit including, but not limited to, the cost of such services by salaried employees of the companies, fees and expenses of independent adjusters, attorneys' fees and disbursements, expenses for expert testimony, inspection and appraisal of property, examination, X-ray or autopsy or medical expenses of any kind;

(d) For expenses incurred by the companies in investigating a *nuclear incident* or in minimizing its effects;

(e) For all other expenses of the companies in fulfilling their obligations under this Master Policy, provided that such expenses are reasonable and necessary.

Excess losses means all *damages and claim expenses*

(a) Because of *bodily injury* or *property damage* to which a *certificate* applies, and

(b) Which are excess of all sums paid or payable as estimated by the companies under all applicable *primary financial protection*.

Extraordinary nuclear occurrence has the meaning given it in the Atomic Energy Act of 1954, or in any law amendatory thereof.

Insured means any person or organization identified in Item 1 or 2 of a certificate.

Nuclear incident means

(a) An *extraordinary nuclear occurrence*, or

(b) A *common nuclear occurrence*, or if neither of these,

(c) An occurrence or series of occurrences, including continuous or repeated exposure to substantially the same general conditions, causing *bodily injury* or *property damage* arising out of the radioactive, toxic, explosive, or other hazardous properties of nuclear material.

Nuclear material means *source material*, *special nuclear material* or *byproduct material*.

Primary financial protection means the insurance policies or other contracts identified in Item 4 of a *certificate* and includes any amendment thereto which is consented to by the companies pursuant to Condition 6 of this Master Policy.

Property damage means physical injury to or destruction or radioactive contamination of property, and loss of use of property so injured, destroyed or contaminated, and loss of use of property while evacuated or withdrawn from use because possibly so contaminated or because of imminent danger of such contamination.

Source material, *special nuclear material*, and *byproduct material* have the meanings given them in the Atomic Energy Act of 1954, or in any law amendatory thereof.

III. Application of policy

Insurance is provided by this Master Policy only through a *certificate*. No insurance is afforded with respect to *bodily injury* or *property damage* caused prior to August 1, 1977 by a *nuclear incident*.

Conditions

1. Annual premium

The named insureds designated in a *certificate* shall pay to the companies the annual premium for each calendar year or part thereof.

Such annual premium shall be determined by the companies and stated in a written notice mailed to the first named insured shown in Item 1 of a *certificate*, and shall be due and payable as stated in such notice.

2. Retrospective premium

The named insureds designated in a *certificate* shall pay to the companies retrospective premium in the event of excess losses due to *bodily injury* or *property damage* caused during their *certificate* period by a *nuclear incident* arising out of or in connection with a nuclear reactor described in Item 3 of the *certificate* or in Item 3 of any other *certificate*. The amount of retrospective premium-due under each *certificate* shall be determined by multiplying such *excess losses* by the ratio of the maximum retrospective premium payable with respect to the *nuclear incident* under the *certificate* to the total of the maximum retrospective premiums payable with respect to the *nuclear incident* under all such *certificates*.

If any portion of the *bodily injury* or *property damage* to which this Master Policy applies is caused during any portion of a *certificate* period by a *nuclear incident*, the retrospective premium the named insureds designated in such *certificate* are obligated to pay shall be determined as if all *bodily injury* or *property damage* to which this Master Policy applies caused by the *nuclear incident* had been caused during the *certificate* period of such *certificate*.

The maximum retrospective premium that the named insureds designated in a *certificate* shall pay to the companies for all *excess losses* arising out of any one *nuclear incident* is the amount stated in Item 7 of their certificate.

In the event of two more *nuclear incidents*, the maximum amount of retrospective premium that shall be due from and payable by the named insureds in one calendar year shall not exceed twice the amount stated in Item 7 of their *certificate*. Any amount in excess thereof shall be paid in subsequent calendar years as billed by the companies.

In addition, an allowance for applicable premium taxes shall be determined by the companies and paid to them by the named insureds at the time retrospective premiums are due and payable.

After a *nuclear incident* resulting in *excess losses*, the companies shall mail to the first named insured designated in Item 1 of a *certificate* written notice of the retrospective premium and allowance for premium taxes then due under such certificate. Such notice shall also constitute notice to all other named insureds designated in such *certificate*. The named insureds shall pay directly to the Nuclear Energy Liability Insurance Association the retrospective premium and allowance for premium taxes stated in the notice. The notice shall specify a date no earlier than 60 days after mailing by which time payment is to be received by the Nuclear Energy Liability Insurance Association.

The companies shall at least annually review their estimate of *excess losses* arising out of the *nuclear incident* and shall adjust the retrospective premium and allowance for premium taxes accordingly. If the amount due from the named insureds is increased, written notice shall be mailed to the first named insured in accordance with the foregoing paragraph; if deceased the companies shall return the excess to the first named insured.

The obligation of the named insureds to pay retrospective premium and the allowance for premium taxes for *excess losses* arising out of a *nuclear incident* shall continue until the named insureds have paid the maximum retrospective premium stated in Item 7 of their *certificate* plus allowance for premium taxes.

The companies shall send to the Nuclear Regulatory Commission summaries of their estimates of *excess losses* arising out of the *nuclear incident* and their computations of retrospective premium and the allowance for premium taxes due.

All retrospective premium (but not the allowance for premium taxes) received by the companies is to be held by the companies separate from the companies' other assets and is to be used by the companies only for the purpose of paying *excess losses*. Any investment income received by the companies from such retrospective premium shall accrue to the benefit of the named insureds. This paragraph shall not apply to any retrospective premium received by the companies as reimbursement for any funds expended pursuant to Condition 4.

No commission will be paid with respect to retrospective premium and allowance for premium taxes.

3. Limit of liability

Regardless of the number of

(a) Persons or organizations who are *insureds* under this Master Policy, or

(b) Claims made and suits brought against any and all *insureds*, or

(c) Policies or contracts of *primary financial protection* or *certificates* which apply to the *nuclear incident*, or

(d) Years this Master Policy and any certificate shall continue in force,

The total liability of the companies under this Master Policy for all *excess losses* arising out of any *nuclear incident* shall not exceed the amount of retrospective premium actually received by the companies pursuant to Condition 2 with respect to such *nuclear incident* plus the companies' contingent liability, if any, as determined by Condition 4. Reimbursement of the companies for funds expended pursuant to Condition 4 shall not operate to increase the total liability of the companies.

4. Contingent liability of the companies

The companies have a contingent liability under this Master Policy for payment of *excess losses* but only if, and to the extent that, the retrospective premium due under one or more *certificates* is not paid. In the event of any such failure to pay retrospective premiums, the companies' obligations under this Condition 4 are limited as follows:

Regardless of the number of *nuclear incidents* which cause *bodily injury* or *property damage* to which this Master Policy applies, the number of years this Master Policy is in force, the number of *certificates* issued or in effect, or the number of annual premiums paid or payable.

(a) The total contingent liability of the companies for all *excess losses* arising out of two or more *nuclear incidents* shall not exceed $46,500,000;

(b) Subject to the above provision (a), the total contingent liability of the companies for all *excess losses* arising out of any one *nuclear incident* shall not exceed $23,250,000;

(c) Subject to the above provisions (a) and (b), the maximum amount to be paid by the companies in any one calendar year because of contingent liability for *excess losses* shall not exceed $23,250,000.

If a named insured designated in a *certificate* shall become insolvent or be adjudged bankrupt, the companies' obligation under this Condition 4 shall not apply to the failure of any named insured designated in such *certificate* to pay retrospective premium with respect to *excess losses* because of *bodily injury* or *property damage* caused after the date of such insolvency or bankruptcy.

5. Investigation, defense or settlement of claims or suits

Subject to the provisions of any written agreement between the companies and the Nuclear Regulatory Commission, the companies shall defend any claim or suit alleging *bodily injury* or *property damage* caused by a *nuclear incident* and seeking damages which are payable under this Master Policy, and may make such investigation and settlement of any claim or suit as they deem expedient. In no event shall the companies be obligated to pay any claim or judgment or to defend any claim or suit after the companies have paid the amount of retrospective premium actually received for *excess losses* arising out of the *nuclear incident* plus the amount of their contingent liability, if any.

6. Primary financial protection

Regardless of the number of policies or contracts of *primary financial protection* applicable to a *nuclear incident*, the limit of liability of all such policies or contracts shall be deemed to be exhausted when the sums paid under all such policies or contracts are equal to the lesser of (1) the sum of the limits of liability available under all such primary financial protection or (2) one hundred forty million dollars.

The named insured designated in a *certificate* shall maintain in full effect during the currency of such *certificate* the *primary financial protection* described therein, except for any reduction of the limit of liability of such *primary financial protection* solely as the result of sums paid thereunder. Failure of the named insureds to comply with the foregoing shall not invalidate this Master Policy, but in the event of such failure the companies shall be liable only to the extent that they would have been liable and the named insureds complied therewith.

In the event that the limit of liability of the *primary financial protection* is reduced, such names insureds shall immediately inform the companies thereof and make all reasonable efforts to reinstate such limit.

Upon the companies' request the named insureds shall provide the companies with a certified copy of any policy or other contract of *primary financial protection*. No amendment of the *primary financial protection* shall increase, extend or broaden the insurance provided by this Master Policy unless the companies agree to the amendment by an endorsement issued to form a part of this Master Policy.

7. Interest to be paid by named insured on retrospective premium and allowance for premium taxes in default

If retrospective premium or allowance for premium taxes is not paid when due by the named insureds designated in Item 1 of a *certificate*, such named insureds shall be obligated to pay, in addition to the amount in default, interest thereon during the period of default. Such interest shall be computed at an annual rate equal to the sum of (a) three percent plus (b) a rate of interest equal to Moody's Average Public Utility Bond Yield described in the issue of Moody's Bond Survey current on the date that the retrospective premium and allowance for premium taxes were due. The annual rate of interest shall be adjusted monthly during the period of default to reflect any revisions of Moody's Average Public Utility Bond Yield described in the issue of Moody's Bond Survey current on the first business day of each such month.

The interest so received shall be used to pay to the companies interest at the annual rate described above for any funds the companies have paid pursuant to Condition 4. Any balance remaining shall accrue to the benefit of named insureds not in default as if it were investment income on retrospective premium.

8. Notice of nuclear incident, claim or suit

In the event of *bodily injury* or *property damage* to which this Master Policy applies or of a *nuclear incident* which may give rise to claims therefor, written notice containing particulars sufficient to identify the *insured* and also reasonably obtainable information with respect to the time, place and circumstances thereof, and the names and addresses of the injured and of available witnesses, shall be given by or for the *insured* to Nuclear Energy Liability Insurance Association or the companies as soon as practicable. If claim is made or suit is brought against the *insured*, the *insured* shall immediately forward to Nuclear Energy Liability Insurance Association or the companies every demand, notice, summons or other process received by or on behalf of the *insured*.

9. Assistance and cooperation of the insured

The *insured* shall cooperate with the companies and, upon the companies' request, attend hearings and trials and assist in making settlements, in securing and giving evidence, in obtaining the attendance of witnesses and in the conduct of any legal proceedings in connection with the subject matter of this insurance. The *insured* shall not, except at the *insured's* own cost, make any payment, assume any obligation or incur any expense.

10. Action against companies

No action shall lie against the companies or any of them unless, as a condition precedent thereto, the *insured* shall have fully complied with all the terms of this Master Policy, nor until the amount of the *insured's* obligation to pay shall have been finally determined either by judgment against the *insured* after actual trial or by written agreement of the *insured*, the claimant and the companies.

Any person or organization or the legal representative thereof who has secured such judgment or written agreement shall thereafter be entitled to recover under this Master Policy to the extent of the insurance afforded by this Master Policy. No person or organization shall have any right under this Master Policy to join the companies or any of them as parties to any action against the *insured* to determine the *insured's* liability, nor shall the companies or any of them be impleaded by the *insured* or the *insured's* legal representative. Except as provided in Condition 4, bankruptcy or insolvency of the *insured* or of the *insured's* estate shall not relieve the companies of any of their obligations hereunder.

11. Subrogation

In the event of any payment under this Master Policy, the companies may participate with the *insured* and any underlying insurer in the exercise of all the *insured's* rights of recovery against any person or organization liable therefor. Prior to knowledge of *bodiliy injury* or *property damage* to which this Master Policy applies or of a *nuclear incident* which may give rise to claims therefor, the *insured* may waive in writing any right of recovery against any person or organization. After such knowledge, the *insured* shall not waive or otherwise prejudice any such right of recovery but shall do everything necessary to secure such rights. Recoveries shall be applied first to reimburse any person or organization (including the *insured*) that may have paid any amount with respect to liability in excess of the limit of the companies' liability hereunder; then to reimburse the companies up to the amount paid hereunder; and lastly to reimburse anyone entitiled to claim the residue, if any. A different apportionment maybe made by agreement signed by all parties affected.

Reasonable expenses incurred in the exercise of rights of recovery shall be apportioned in the ratio of the respective losses for which recovery is sought. The companies shall, after deducting all of their expenses in securing recovery, apply the net amount of recoveries made by the companies as a credit in determining the amount of *excess losses*.

12. Other insurance

This insurance shall be excess insurance over *primary financial protection*.

This insurance is concurrent with insurance afforded by a Master Policy--Nuclear Energy Liability Insurance (Secondary Financial Protection) issued to the named insured by Mutual Atomic Energy Liability Underwriters, hereinafter called *concurrent insurance*. The companies shall not be liable under this Master Policy for a greater proportion of *excess losses* than the applicable limit of liability described in Condition 3 bears to the sum of (a) such limit plus (b) the applicable limit of liability of such concurrent insurance.

If the *insured* has other valid and collectible insurance (other than *primary financial protection* or concurrent insurance) applicable to *excess losses* covered by this Master Policy, the insurance afforded by this Master Policy shall be primary insurance under such other insurance.

13. Changes

Notice to any agent or knowledge possessed by any agent or by any other person shall not effect a waiver or a change in any part of this Master Policy or estop the companies from asserting any right under the terms of this Master Policy; nor shall the terms of this Master Policy be waived or changed, except by endorsement executed by Nuclear Energy Liability Insurance Association on behalf of the companies and issued to form a part of this Master Policy.

14. Assignment

Assignment of interest by the named insured shall not bind the companies until their consent is endorsed hereon; if, however, the named insured shall die or be declared bankrupt or insolvent, this Master Policy shall cover such named insured's legal representative, receiver or trustee as an *insured* under this Master Policy, but only with respect to such legal representative's, receiver's or trustee's liability as such, and then only provided written notice of the legal representative's, receiver's or trustee's appointment as such is given to the companies within ten days after such appointment.

15. Custodian of the policy--nuclear regulatory commission

The named insureds have designated the Nuclear Regulatory Commission as the custodian of this Master Policy and any endorsements thereto.

16. Cancellation

The first named insured designated in Item 1 of a *certificate* may cancel such *certificate* by mailing to the companies and the Nuclear Regulatory Commission written notice stating when, not less than thirty days thereafter, such cancellation shall be effective.

The companies may cancel any *certificate* by mailing to the first named insured designated in Item 1 of such *certificate* written notice stating when, not less than ninety days thereafter, such cancellation shall be effective; provided that in the event of non-payment of any annual premium, retrospective premium or allowance for premium taxes due under a *certificate*, such *certificate* may be canceled by the companies by mailing to the first named insured designated therein written notice stating when, not less than thirty days thereafter, such cancellation shall be effective.

The mailing of notice as aforesaid shall be sufficient proof of notice. The effective date and time of cancellation stated in the notice shall become the end of the *certificate* period. Delivery of such written notice, either by the first named insured designated in Item 1 of a *certificate* or by the companies, shall be equivalent to mailing.

A copy of the companies' cancellation notice shall be mailed to the Nuclear Regulatory Commission, but mailing such copy is not a condition of cancellation.

If a *certificate* is canceled, the earned portion of the annual premium shall be computed pro-rata. Adjustment of the annual premium, if any, may be made either at the time cancellation is effective or as soon as practicable after cancellation becomes effective, but payment or tender of unearned premium is not a condition of cancellation.

Cancellation or termination of any *certificate* shall not terminate the obligation of a named insured to pay retrospective premium and the allowance for premium taxes as provided in such named insured's *certificate* and Condition 2 of this Master Policy.

This Master Policy shall terminate automatically on the effective date and time of cancellation or termination of the last *certificate* in effect.

17. Company representation

(a) Any notice, sworn statement or proof of loss which may be required by the provisions of this Master Policy may be given to any one of the companies, and such notice, statement or proof of loss so given shall be valid and binding as to all companies.

(b) In any action or suit against the companies, service of process may be made on any one of them and such service shall be deemed valid and binding service on all companies.

(c) Nuclear Energy Liability Insurance Association is the agent of the companies with respect to all matters pertaining to this insurance. All notices or other communications required by this Master Policy to be given to the companies may be given to such agent, at its office at The Exchange, Suite 245, 270 Farmington Avenue, Farmington, Connecticut--06032 with the same force and effect as if given directly to the companies. Any requests, demands or agreements made by such agent shall be deemed to have been made directly by the companies.

18. Authorization of first named insured

Except with respect to compliance with the obligations imposed on the *insured* by Conditions 8, 9, 10 and 11 of this Master Policy, the first named insured designated in Item 1 of a *certificate* is authorized to act for every other person and organization insured under such *certificate* in all matters pertaining to this insurance.

19. Changes in subscribing companies and in their proportionate liability

The members of Nuclear Energy Liability Insurance Association subscribing this Master Policy, and the proportionate liability of each, may change from time to time.

Each company subscribing this Master Policy upon its issuance shall be liable only for its stated proportion of any obligation assumed or expense incurred under this Master Policy because of *bodily injury* or *property damage* caused during the period from the effective date of this Master Policy to the close of December 31 next following. For each subsequent calendar year, beginning January 1 next following the effective date of this Master Policy, the subscribing companies and the proportionate liability of each such company shall be stated in an endorsement issued to form a part of this Master Policy, duly executed by the President of Nuclear Energy Liability Insurance Association on behalf of each such company, and mailed or delivered to the Nuclear Regulatory Commission.

20. Declarations

By acceptance of this Master Policy, the named insureds designated in a *certificate* agree that the statements in such *certificate* are their agreements and representations, that this Master Policy and such *certificate* are issued in reliance upon the truth of such representations and that this Master Policy and such *certificate* embody all agreements between such named insureds and the companies or any of their agents relating to this insurance.

In witness whereof each of the subscribing companies has caused this Master Policy to be executed on its behalf by the Nuclear Energy Liability Insurance Association and duly countersigned on the first page by an authorized representative.

For the Subscribing Companies of NUCLEAR ENERGY LIABILITY INSURANCE ASSOCIATION

By:

Burt C. Proom,

President.

Nuclear Energy Liability Insurance Association

Certificate No.

Forming Part of Master Policy No.

Certificate of insurance declarations and bond for payment of retrospective premiums

Certificate of Insurance

This is to certify that the persons and organizations designated in Item 1 of the Declarations are named insureds under the *Master Policy*--Nuclear Energy Liability Insurance (Secondary Financial Protection), herein called the Master Policy, issued by Nuclear Energy Liability Insurance Association.

Such insurance as is provided by the Master Policy applies, through this *certificate*, only:

(a) to the *insureds* identified in Items 1 and 2 of the Declarations,

(b) for the *certificate* period stated in Item 6 of the Declarations,

(c) to *bodily injury* or *property damage*

(1) with respect to which the *primary financial protection* described in Item 4 of the Declarations would apply but for exhaustion of its limit of liability as described in Condition 6 of the Master Policy, and

(2) which is caused during the *certificate* period stated in Item 6 of the Declarations by a *nuclear incident* arising out of or in connection with the nuclear reactor described in Item 3 of the Declarations, and

(3) which is discovered and for which written claim is made against the *injured* not later than ten years after the end of the *certificate* period stated in Item 6 of the Declarations. However, with respect to *bodily injury* or *property damage* caused by an *extraordinary nuclear occurrence* this subparagraph (3) shall not operate to bar coverage for *bodily injury* or *property damage* which is discovered and for which written claim is made against the *insured* not later than twenty years after the date of the *extraordinary nuclear occurrence*.

Declarations

Item 1. Named insureds and addresses:

(a)

(b)

Item 2. Additional *insureds*:

Any other person or organization who would be insured under the *primary financial protection* identified in Item 4 of the Declarations but for exhaustion of the limit of liability of such *primary financial protection*.

Item 3. Description and location of nuclear reactor:

Item 4. (a) Identification of *primary financial protection* applicable to the nuclear reactor and limit(s) of liability thereof:

Nuclear Energy Liability Insurance Association's Policy NF-$108,500,000

Mutual Atomic Energy Liability Underwriters' Policy MF-$31,500,000

(b) The following endorsements, attached to the *primary financial protection* policies listed in Item 4(a) also apply to the insurance afforded by the Master Policy through this *certificate* as though they were attached hereto:

(1) Waiver of Defense Endorsement (Extraordinary Nuclear Occurrence) and

(2) Supplementary Endorsement--Waiver of Defenses--Reactor Construction at the Facility,

(c) The limits of liability provided under the *primary financial protection* specified in Item 4(a) above are not shared with any other reactor except as follows:

Item 5. Limits of Liability: The amount of retrospective premium actually received by the companies plus the amount of the companies' contingent liability, if any, pursuant to Conditions 2, 3, and 4 of the Master Policy.

Item 6. *Certificate* Period: Beginning at 12:01 a.m. on---------- and continuing to the effective date and time of cancellation or termination of the Master Policy or this *certificate*, whichever first occurs, eastern standard time.

Item 7. Maximum retrospective premium (exclusive of allowance for premium taxes) payable pursuant to Condition 2 of the Master Policy with respect to each *nuclear incident*: $3,875,000.

Item 8. Premium payable pursuant to Condition 1 of the Master Policy for the period from---------- through December 31 following: $------.

Bond for Payment of Retrospective Premiums

Know All Men By These Presents, that the undersigned do hereby acknowledge that they are named insureds under the Master Policy described in the above Certificate of Insurance and Declarations. The named insureds do hereby convenant with and are held and are firmly bound to the members of Nuclear Energy Liability Insurance Association subscribing the Master Policy (hereinafter called the *companies*) to pay the companies all retrospective premiums and allowances for premium taxes which shall become due and payable in accordance with the Master Policy, as it may be changed from time to time, with interest on such premiums and allowances for taxes to be computed at the rate provided in the Master Policy from the date payment thereof is specified to be due the companies in written notice to the first named insured as provided in Condition 2 of the Master Policy until paid;

And it is hereby expressly agreed that copies of written notices of retrospective premiums and allowances for premium taxes due and payable or other evidence of such amounts due and payable sworn to by a duly authorized representative of the companies shall be prima facie evidence of the fact and extent of the liability of the named insureds for such amounts;

And it is further expressly agreed that the named insureds will indemnify the companies against any and all liability, losses and expenses of whatsoever kind or nature (including but not limited to interest, court cost, and counsel fees) which the companies may sustain or incur (1) by reason of the failure of the named insureds to comply with the covenants and provisions of this Bond and (2) in enforcing any of the covenants or provisions of this Bond, or any provisions of the Masters Policy relating to such covenants or provisions;

For the purpose of recording this agreement, a photocopy acknowledged before a Notary Public to be a true copy hereof shall be regarded as an original.

The preceding Certificate of Insurance, Declarations and Bond form a part of the Master Policy. Cancellation or termination of the Master Policy or the Certificate of Insurance shall not affect the named insured's obligations under the policy or the Bond to pay the retrospective premiums and allowances for premium taxes, as provided in this *Certificate* and Condition 2 of the Master Policy.

In witness whereof, the named insureds have caused the Declaration and the Bond for Payment of Retrospective Premiums to be signed and sealed by a duly authorized officer, to effective---------- eastern standard time.

Attest or Witness

Named Insureds:

By----------

(Seal)

(Signature of Officer)

(type or print Name & Title of Officer)

Date:----------

In witness whereof, the companies subscribing the Master Policy have caused the Certificate of Insurance and the Declarations to be signed on their behalf by the President of Nuclear Energy Liability Insurance Association to be effective---------- eastern standard time, and countersigned below by a duly authorized representative.

For the Subscribing Companies of Nuclear Energy Liability Insurance Association.

By: President----------

Countersigned by----------

(Authorized Representative)

[49 FR 11153, Mar. 26 1984]

PART 150--EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER SECTION 274

[Top of File]

General Provisions

[Top of File]

§ 150.1 Purpose.

The regulations in this part provide certain exemptions to persons in Agreement States from the licensing requirements contained in chapters 6, 7, and 8 of the Act and from the regulations of the Commission imposing requirements upon persons who receive, possess, use or transfer byproduct material, source, or special nuclear material in quantities not sufficient to form a critical mass; and to define activities in Agreement States and in offshore waters over which the regulatory authority of the Commission continues. The provisions of the Act, and regulations of the Commission apply to all persons in Agreement States and in offshore waters engaging in activities over which the regulatory authority of the Commission continues.

[46 FR 44151, Sept. 3, 1981]

§ 150.2 Scope.

[Top of File]

The regulations in this part apply to all States that have entered into agreements with the Commission or the Atomic Energy Commission pursuant to subsection 274b of the Act. This part also gives notice to all persons who knowingly provide to any licensee, applicant for a license or certificate or quality assurance program approval, holder of a certificate or quality assurance program approval, contractor, or subcontractor, any components, equipment, materials, or other goods or services that relate to a licensee's, certificate holder's, quality assurance program approval holder's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of §§ 30.10, 40.10, 70.10 and 71.11.

[63 FR 1901, Jan. 13, 1998]

§ 150.3 Definitions.

[Top of File]

As used in this part:

Act means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto;

Agreement State means any State with which the Commission or the Atomic Energy Commission has entered into an effective agreement under subsection 274b of the Act. Nonagreement State means any other State.

Byproduct material means—

(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(2) The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition; (3)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that—

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(4) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary

of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

Commission means the Nuclear Regulatory Commission or its duly authorized representatives.

Discrete source means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

Foreign obligations means the commitments entered into by the U.S. Government under Atomic Energy Act (AEA) section 123 agreements for cooperation in the peaceful uses of atomic energy. Imports and exports of material or equipment pursuant to such agreements are subject to these commitments, which in some cases involve an exchange of information on imports, exports, retransfers with foreign governments, peaceful end-use assurances, and other conditions placed on the transfer of the material or equipment. The U.S. Government informs the licensee of obligations attached to material.

Government agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

Offshore waters means that area of land and water, beyond Agreement States' Submerged Lands Act jurisdiction, on or above the U.S. Outer Continental Shelf.

Person means:

(1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, and State or any political subdivision of any political entity within a State, and any legal successor, representative, agent, or agency of the foregoing other than Government agencies.

Production facility means:

(1) Any equipment or device determined by rule of the Commission to be capable of the production of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public, including a uranium enrichment facility; or

(2) Any important component part especially designed for such equipment or device as determined by the Commission.

Reconciliation means the process of evaluating and comparing licensee reports required under this part to the projected material balances generated by the Nuclear Materials Management and Safeguards System. This process is considered complete when the licensee resolves any differences between the reported and projected balances, including those listed for foreign obligated materials.

Source material means: (1) Uranium, thorium, or any other material which is determined by the Commission pursuant to the provisions of section 61 of the Act to be source material; or (2) ores containing one or more of the foregoing materials, in such concentration as the Commission may by regulation determine from time to time;

Special nuclear material means: (1) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material, but does not include source material; or (2) any material artificially enriched by any of the foregoing but does not include source material;

State means any State, the District of Columbia, Puerto Rico, and any territory or possession of the United States.

Uranium enrichment facility means:

(1) Any facility used for separating the isotopes of uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for such equipment or device, capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

Utilization facility means: (1) Any equipment or device, except an atomic weapon, determined by rule of the Commission to be capable of making use of special nuclear material in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public, or peculiarly adapted for making use of atomic energy in such quantity as to be of significance to the common defense and security, or in such manner as to affect the health and safety of the public; or (2) any important component part especially designed for such equipment or device as determined by the Commission.

[27 FR 1352, Feb. 14, 1962, as amended at 31 FR 15145, Dec. 2, 1966; 40 FR 8794, Mar. 3, 1975; 44 FR 55327, Sept. 26, 1979; 45 FR 18906, Mar. 24, 1980; 46 FR 44152, Sept. 3, 1981; 57 FR 18394, Apr. 30, 1992; 68 FR 10365, Mar. 5, 2003; 72 FR 55934 Oct. 1, 2007; 73 FR 32464, Jun. 9, 2008]

§ 150.4 Communications.

[Top of File]

Except where otherwise specified in this part, all communications and reports concerning the regulations in this part should be sent by mail addressed: ATTN: Document Control Desk, Director, Office of Federal and State Materials and Environmental Management Programs, and sent either by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD–ROM. Electronic
submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic
submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/eie.html*, by calling (301) 415–6030, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[53 FR 6140, Mar. 1, 1988, as amended at 53 FR 43422, Oct. 27, 1988; 68 FR 58824, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007; 73 FR 5727, Jan. 31, 2008]

§ 150.5 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

Continued Commission Regulatory Authority in Offshore Waters

[Top of File]

§ 150.7 Persons in offshore waters not exempt.

Persons in offshore waters are not exempt from the Commission's licensing and regulatory requirements with respect to byproduct, source, and special nuclear materials.

[46 FR 44152, Sept. 3, 1981]

§ 150.8 Information collection requirements: OMB approval.

[Top of File]

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 et seq.). The NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. OMB has approved the information collection requirements contained in this part under control number 3150-0032.

(b) The approved information collection requirements contained in this part appear in §§ 150.16, 150.17, 150.17a, 150.19, 150.20, and 150.31.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 150.16, DOE/NRC FORM 741 and its computer-readable format are approved under control number 3150–0003.

(2) In § 150.17, DOE/NRC Form 742 and its computer-readable format are approved under control number 3150–0004, and DOE/NRC Form 742C and its computer-readable format are approved under control number 3150–0058.

(3) In § 150.17a, Form N–71 and associated forms are approved under OMB control number 3150–0056 and DOC/NRC Forms AP–1 or AP–A and associated forms are approved under OMB control number 0694–0135.

(4) In § 150.20, NRC Form 241 is approved under control number 3150-0013.

[49 FR 19629, May 9, 1984, as amended at 62 FR 52190, Oct. 6, 1997; 73 FR 32464, Jun. 9, 2008; 74 FR 1872, Jan. 14, 2009]

Exemptions in Agreement States

[Top of File]

§ 150.10 Persons exempt.

Except as provided in §§ 150.15, 150.16, 150.17, 150.17a, 150.18, and 150.19, any person in an Agreement State who manufactures, produces, receives, possesses, uses, or transfers byproduct material, source material, or special nuclear material in quantities not sufficient to form a critical mass is exempt from the requirements for a license contained in Chapters 6, 7, and 8 of the Act, regulations of the Commission imposing licensing requirements upon persons who manufacture, produce, receive, possess, use, or transfer such materials, and from regulations of the Commission applicable to licensees. The exemptions in this section do not apply to agencies of the Federal government as defined in § 150.3.

[37 FR 9208, May 6, 1972, as amended at 45 FR 50718, July 31, 1980]

§ 150.11 Critical mass.

[Top of File]

(a) For the purposes of this part, special nuclear material in quantities not sufficient to form a critical mass means uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; uranium-233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams; or any combination of them in accordance with the following formula: For each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all kinds of special nuclear materials in combination shall not exceed unity. For example, the following quantities in combination would not exceed the limitation and are within the formula, as follows:

(175 (grams contained U-235/350)+(50 grams U-233)/200)+(50 grams Pu/200)=1

(b) To determine whether the exemption granted in § 150.10 applies to the receipt, possession or use of special nuclear material at any particular plant or other authorized location of use, a person shall include in the quantity computed according to paragraph (a) of this section the total quantity of special nuclear material which he is authorized to receive, possess or use at the plant or other location of use at any one time.

[27 FR 1352, Feb. 14, 1962, as amended at 30 FR 12069, Sept. 22, 1965]

Continued Commission Regulatory Authority in Agreement States

[Top of File]

§ 150.14 Commission regulatory authority for physical protection.

Persons in Agreement States possessing, using or transporting special nuclear material of low strategic significance in quantities greater than 15 grams of plutonium or uranium-233 or uranium-235 (enriched to 20 percent or more in the U - 235 isotope) or any combination greater than 15 grams when computed by the equation grams=grams uranium-235+grams plutonium+grams uranium-233 shall meet the physical protection requirements of § 73.67 of 10 CFR part 73.

[44 FR 43285, July 24, 1979, as amended at 44 FR 68199, Nov. 28, 1979]

§ 150.15 Persons not exempt.

[Top of File]

(a) Persons in agreement States are not exempt from the Commission's licensing and regulatory requirements with respect to the following activities:

(1) The construction and operation of any production or utilization facility. As used in this subparagraph, operation of a facility includes, but is not limited to (i) the storage and handling of radioactive wastes at the facility site by the person licensed to operate the facility, and (ii) the discharge of radioactive effluents from the facility site.

(2) The export from or import into the United States of byproduct, source, or special nuclear material, or of any production or utilization facility.

(3) The disposal into the ocean or sea of byproduct, source, or special nuclear waste materials, as defined in regulations or orders of the Commission. For purposes of this part, ocean or sea means any part of the territorial waters of the United States and any part of the international waters.

(4) The transfer, storage or disposal of radioactive waste material resulting from the separation in a production facility of special nuclear material from irradiated nuclear reactor fuel. This subparagraph does not apply to the transfer, storage or disposal of contaminated

equipment.

(5) The disposal of such other byproduct, source, or special nuclear material as the Commission determines by regulation or order should, because of the hazards or potential hazards thereof, not be so disposed of without a license from the Commission.

(6) The transfer of possession or control by the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source material or byproduct material whose subsequent possession, use, transfer, and disposal by all other persons are exempted from licensing and regulatory requirements of the Commission under Parts 30 and 40 of this chapter.

(7) The storage of:

(i) Spent fuel in an independent spent fuel storage installation (ISFSI) licensed under part 72 of this chapter,

(ii) Spent fuel and high-level radioactive waste in a monitored retrievable storage installation (MRS) licensed under part 72 of this chapter, or

(iii) Greater than Class C waste, as defined in part 72 of this chapter, in an ISFSI or an MRS licensed under part 72 of this chapter; the GTCC waste must originate in, or be used by, a facility licensed under part 50 of this chapter.

(8) Greater than Class C waste, as defined in part 72 of this chapter, that originates in, or is used by, a facility licensed under part 50 of this chapter and is licensed under part 30 and/or part 70 of this chapter.

(9) The requirements for the protection of Safeguards Information in § 73.21 and the requirements in § 73.22 or § 73.23 of this chapter, as applicable.

(b) Notwithstanding any exemptions provided in this part, the Commission may from time to time by rule, regulation, or order, require that the manufacturer, processor, or producer of any equipment, device, commodity, or other product containing source, byproduct, or special nuclear material shall not transfer possession or control of such product except pursuant to a license or an exemption from licensing issued by the Commission.

[27 FR 1352, Feb. 14, 1962, as amended at 34 FR 7369, May 7, 1969; 53 FR 31683, Aug. 19, 1988; 66 FR 51843, Oct. 11, 2001; 73 FR 63582, Oct. 24, 2008]

§ 150.15a Continued Commission authority pertaining to byproduct material.

[Top of File]

(a) Prior to the termination of any Agreement State license for byproduct material as defined in § 150.3(c)(2) of this part, or for any activity that results in the production of such material, the Commission shall have made a determination that all applicable standards and requirements pertaining to such material have been met.

(b) After November 8, 1981, the Commission reserves the authority to establish minimum standards regarding reclamation, long term surveillance (i.e., continued site observation, monitoring and, where necessary, maintenance), and ownership of byproduct material as defined in § 150.3(c)(2) of this part and of land used as a disposal site for such material. Such reserved authority includes:

(1) Authority to establish such terms and conditions as the Commission determines necessary to assure that, prior to termination of any license for byproduct material as defined in § 150.3(c)(2) of this part, or for any activity that results in the production of such material, the licensee shall comply with decontamination, decommissioning, and reclamation standards prescribed by the Commission; and with ownership requirements for such materials and its disposal site;

(2) The authority to require that prior to termination of any license for byproduct material as defined in § 150.3(c)(2) of this part, or for any activity that results in the production of such material, that title to such byproduct material and its disposal site be transferred to the United States or the State in which such material and land is located, at the option of the State (provided such option is exercised prior to termination of the license);

(3) The authority to permit use of the surface or subsurface estates, or both, of the land transferred to the United States or a State pursuant to paragraph (b)(2) of this section in a manner consistent with the provisions of the Uranium Mill Tailings Radiation Control Act of 1978, provided that the Commission determines that such use would not endanger the public health, safety, welfare, or the environment;

(4) The authority to require, in the case of a license for any activity that produces such byproduct material (which license was in effect on November 8, 1981) transfer of land and material pursuant to paragraph (b)(2), of this section, taking into consideration the status of such material and land and interests therein, and the ability of the licensee to transfer title and custody thereof to the United States or a State.

(5) The authority to require the Secretary of the Department of Energy, other Federal agency, or State, whichever has custody of such property and materials, to undertake such monitoring, maintenance and emergency measures as are necessary to protect the public health and safety and other actions at the Commission deems necessary to comply with the standards promulgated pursuant to the Uranium Mill Tailings Radiation Control Act of 1978; and

(6) The authority to enter into arrangements as may be appropriate to assure Federal long term surveillance (i.e., continued site

observation, monitoring, and where necessary, maintenance) of such disposal sites on land held in trust by the United States for any Indian tribe or land owned by an Indian tribe and subject to a restriction against alienation imposed by the United States.

[45 FR 65536, Oct. 3, 1980]

Continued Commission Authority in Agreement States

[Top of File]

§ 150.16 Submission to Commission of nuclear material transaction reports.

(a)(1) Each person who transfers or receives special nuclear material in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium under an Agreement State license shall complete and submit in computer-readable format Nuclear Material Transaction Reports as specified in the instructions in NUREG/BR–0006 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees.'' In addition, each person who adjusts the inventory in any manner, other than for transfers and receipts, shall submit in computer-readable format Nuclear Material Transaction Reports as specified in the instructions in NUREG/BR–0006 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees.'' Each licensee who receives special nuclear material in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium from a foreign source, or who ships special nuclear material in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium to a foreign source, shall submit the licensee portion of this information as specified in the instructions in this part. The applicable foreign facility portion of the form must be completed and submitted for imports. The foreign facility portion of the form must be completed for exports only if a significant shipper-receiver difference as described in §§ 74.31, 74.43, or 74.59 of this part, as applicable, is identified. Each person who transfers the material shall submit a Nuclear Material Transaction Report in computer-readable format as specified in the instructions no later than the close of business the next working day. Each person who receives special nuclear material shall submit a Nuclear Material Transaction Report in the computer-readable format as specified in the instructions within ten (10) days after the special nuclear material is received. Copies of these instructions may be obtained either by writing to the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. These prescribed computer-readable formats replace the DOE/NRC Form 741 which have been previously submitted in paper form.

(2) Except as specified in §§ 150.17(d) and 150.17a, each person who, under an Agreement State specific license transfers, receives, or adjusts the inventory in any manner, of uranium or thorium source material with foreign obligations by one kilogram or more; imports or exports one kilogram or more of uranium or thorium source material; or uses one kilogram or more of any uranium or thorium source material in enrichment services, downblending uranium that has an initial enrichment of the U^{235} isotope of 10 percent or more, or in the fabrication of mixed-oxide fuels, shall complete and submit in computer-readable format Nuclear Material Transaction Reports as specified in the instructions in NUREG/BR–0006 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees.'' Each person who, under an Agreement State specific license exports one kilogram or more of uranium or thorium source material shall complete in the format listed above the licensee's portion of the Nuclear Material Transaction Report unless there is indication of loss, theft, or diversion as discussed in § 40.64(c)(1) of this chapter is identified, in which case both the licensee's and the foreign facility's information shall be reported. For imports, the shipper's portion of the form must also be completed. Copies of the instructions may be obtained either by writing to the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. Each licensee who transfers the material shall submit a Nuclear Material Transaction Report in computer-readable format as specified in the instructions no later than the close of business the next working day. Each licensee who receives the material shall submit a Nuclear Material Transaction Report in computer-readable format in accordance with instructions within ten (10) days after the material is received. The Commission's copy of the report must be submitted to the address specified in the instructions. These prescribed computer-readable forms replace the DOE/NRC Form 741 which have been previously submitted in paper form.

(b)(1) Each person who, pursuant to an Agreement State License, possesses 1 gram or more of contained uranium-235, uranium-233, or plutonium shall report immediately to the Regional Administrator of the appropriate NRC Regional Office listed in appendix A of part 73 of this chapter, by telephone, any theft or other unlawful diversion of special nuclear material which the licensee is licensed to possess or any incident in which an attempt has been made, or is believed to have been made, to commit a theft or unlawful diversion of special nuclear material.

(2) Within 15 days, the licensee shall follow the initial report with a written report that sets forth the details of the incident. The report must be sent by an appropriate method listed in § 150.4 to the Director, Office of Federal and State Materials and Environmental Management Programs, with a copy to the appropriate NRC Regional Office, shown in appendix A to part 73 of this chapter.

(3) Subsequent to the submission of the written report required by this paragraph, each licensee shall promptly inform the Regional Administrator of the appropriate NRC Regional Office by means of a written report of any substantive additional information which becomes available to the licensee concerning an attempted or apparent theft or unlawful diversion of special nuclear material.

[39 FR 39559, Nov. 8, 1974, as amended at 41 FR 16447, Apr. 19, 1976; 52 FR 31613, Aug. 21, 1987; 59 FR 35622, July 13, 1994; 68 FR 58825, Oct. 10, 2003; 73 FR 5727, Jan. 31, 2008; 73 FR 32464, Jun. 9, 2008]

§ 150.17 Submission to Commission of nuclear material status reports.

[Top of File]

(a) Except as specified in paragraph (d) of this section and § 150.17a, each person possessing, or who had possessed in the previous reporting period, at any one time and location, under an Agreement State license, special nuclear material in a quantity totaling one gram or more of contained uranium-235, uranium-233, or plutonium, shall complete and submit, in computer-readable format Material Balance Reports concerning special nuclear material that the licensee has received, produced, possessed, transferred, consumed, disposed of, or

lost. This prescribed computer-readable report replaces the DOE/NRC Form 742 which has been previously submitted in paper form. The Physical Inventory Listing Report must be submitted with each Material Balance Report. This prescribed computer-readable report replaces the DOE/NRC Form 742C which has been previously submitted in paper form. Each licensee shall prepare and submit the reports described in this paragraph as specified in the instructions in NUREG/BR–0007 and NMMSS Report D–24 ''Personal Computer Data Input for NRC Licensees.'' Copies of these instructions may be obtained from the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. Each person subject to this requirement shall submit a report no later than March 31 of each year. The Commission may, when good cause is shown, permit a licensee to submit Material Balance Reports and Physical Inventory Listing Reports at other times. Each licensee required to report material balance, and inventory information, as described in this part, shall resolve any discrepancies identified during the report review and reconciliation process within 30 calendar days of notification of a discrepancy identified by NRC.

(b) Except as specified in paragraph (d) of this section and § 150.17a, each person possessing, or who had possessed in the previous reporting period, at any one time and location, under an Agreement State license:

(1) One kilogram or more of uranium or thorium source material with foreign obligations, shall document holdings as of September 30 of each year and submit to the Commission within 30 days. Alternatively, these reports may be submitted with the licensee's material status reports on special nuclear material filed under part 72 or 74 of this chapter. This statement must be submitted to the address specified in the reporting instructions in NUREG/BR–007, and include the Reporting Identification Symbol (RIS) assigned by the Commission.

(2) One kilogram or more of uranium or thorium source material in the operation of enrichment services, downblending uranium that has an initial enrichment of the U^{235} isotope of 10 percent or more, or in the fabrication of mixed-oxide fuels shall complete and submit, in computer-readable format, Material Balance and Physical Inventory Listing Reports concerning source material that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost. Reports must be submitted for each Reporting Identification Symbol (RIS) account including all holding accounts. Each licensee shall prepare and submit these reports as specified in the instructions in NUREG/BR–0007 and NMMSS Report D–24, ''Personal Computer Data Input for NRC Licensees.'' These reports must document holdings as of September 30 of each year and submitted to the Commission within 30 days. Alternatively, these reports may be submitted with the licensee's material status reports on special nuclear material filed under part 72 or 74 of this chapter. Copies of the reporting instructions may be obtained by writing to the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. Each licensee required to report material balance, and inventory information, as described in this part, shall resolve any discrepancies identified during the report review and reconciliation process within 30 calendar days of the notification of a discrepancy identified by the NRC.

(c)(1) Except as specified in paragraph (d) of this section, each licensee who is authorized to possess uranium or thorium pursuant to a specific license shall notify the NRC Headquarters Operations Center by telephone, at the numbers listed in appendix A to part 73 of this chapter, of any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of more than 6.8 kilograms (kg) [15 pounds] of such material at any one time or more than 68 kg [150 pounds] of such material in any one calendar year.

(2) The licensee shall notify the NRC as soon as possible, but within 4 hours, of discovery of any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of such material.

(3) The initial notification shall be followed within a period of sixty (60) days by a written followup notification submitted in accordance with § 150.4. A copy of the written followup notification shall also be sent to the appropriate NRC Regional Office as shown in appendix A to part 73 of this chapter and to Director, Division of Nuclear Security, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission.

(4) Subsequent to the submission of the written followup notification required by this paragraph, the licensee shall promptly update the written followup notification, in accordance with this paragraph, with any substantive additional information, which becomes available to the licensee, concerning an attempted or apparent theft or unlawful diversion of source material.

(d) The reports described in paragraphs (a), (b), and (c) of this section are not required for:

(1) Processed ores containing less than five (5) percent of uranium or thorium, or any combination of uranium and thorium, by dry weight;

(2) Thorium contained in magnesium-thorium and tungsten-thorium alloys, if the thorium content in the alloys does not exceed 4 percent by weight;

(3) Chemical catalysts containing uranium depleted in the U-235 isotope to 0.4 percent or less, if the uranium content of the catalyst does not exceed 15 percent by weight; or

(4) Any source material contained in non-nuclear end use devices or components, including but not limited to permanently installed shielding, teletherapy, radiography, X-ray, accelerator devices, or munitions.

[35 FR 12196, July 30, 1970, as amended at 36 FR 10938, June 5, 1971; 41 FR 16448, Apr. 19, 1976; 49 FR 24708, June 15, 1984; 51 FR 9767, Mar. 21, 1986; 52 FR 31613, Aug. 21, 1987; 59 FR 35622, July 13, 1994; 60 FR 24553, May 9, 1995; 68 FR 10365, Mar. 5, 2003; 68 FR 58825, Oct. 10, 2003; 73 FR 32465, Jun. 9, 2008]

§ 150.17a Compliance with requirements of US/IAEA Safeguards Agreement.

[Top of File]

(a) For purposes of this section, the terms *facility, location,* and *Eligible Facilities List* have the meanings set forth in § 75.4 of this chapter.

(b) Each person who, under an Agreement State license, is authorized to possess byproduct, source, or special nuclear material is subject to the provisions of Part 75 of this chapter and shall comply with its applicable provisions. However, regarding these persons, the Commission will issue orders under section 274m of the Act instead of making license amendments; and, to the extent Part 75 of this chapter refers to license amendments and license conditions, these references shall be deemed, for purposes of this paragraph, to refer to orders under section 274m of the Act.

(c)(1) In response to a written request by the Commission, each applicant for an Agreement State license or certificate, and each recipient of an Agreement State license or certificate shall submit facility information, as described in § 75.10 of this chapter, on Form N–71 and associated forms, and site information on DOC/NRC Form AP–A and associated forms;

(2) As required by the Additional Protocol, shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 and associated forms; and

(3) Shall permit verification thereof by the International Atomic Energy Agency (IAEA); and shall take other action as may be necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

(d) In response to a written request by the Commission, each applicant for an Agreement State license or certificate, and each recipient of an Agreement State license or certificate shall submit facility information, as described in § 75.10 of this chapter, on Form N–71 and associated forms, and site information on DOC/NRC Form AP–A and associated forms; shall submit location information described in § 75.11 of this chapter on DOC/NRC Form AP–1 or AP–A and associated forms; shall permit verification thereof by the International Atomic Energy Agency (IAEA); and shall take other action as may be necessary to implement the US/IAEA Safeguards Agreement, as described in Part 75 of this chapter.

[45 FR 50718, July 31, 1980, as amended at 47 FR 9, Jan. 4, 1982; 73 FR 78615, Dec. 23, 2008]

§ 150.19 Submission to Commission of tritium reports.

[Top of File]

(a)-(b) [Reserved]

(c) Except as specified in paragraph (d) of this section, each person who, pursuant to an Agreement State license, is authorized to possess tritium shall report promptly to the appropriate NRC Regional Office as shown in appendix D of part 20 of this chapter by telephone and telegraph, mailgram, or facsimile any incident in which an attempt has been made or is believed to have been made to commit a theft or unlawful diversion of more than 10 curies of such material at any one time or 100 curies of such material in any one calendar year. The initial report must be followed within a period of fifteen days by a written report that sets forth the details of the incident and its consequences. The report must be submitted to the Director, Office of Federal and State Materials and Environmental Management Programs, using an appropriate method listed in § 150.4, with a copy to the appropriate NRC Regional Office as shown in appendix A to part 73 of this chapter. Subsequent to the submission of the written report required by this paragraph, each person subject to the provisions of this paragraph shall promptly inform the appropriate NRC Regional Office by
means of a written report of any substantive additional information, which becomes available to such person, concerning an attempted or apparent theft or unlawful diversion of tritium.

(d) The reports described in this section are not required for tritium possessed pursuant to a general license issued pursuant to regulations of an Agreement State equivalent to part 31 of this chapter or for tritium in spent fuel.

[37 FR 9208, May 6, 1972, as amended at 41 FR 16448, Apr. 19, 1976; 46 FR 55085, Nov. 6, 1981; 49 FR 24708, June 15, 1984; 52 FR 31613, Aug. 21, 1987; 68 FR 58825, Oct. 10, 2003; 73 FR 5727, Jan. 31, 2008]

Reciprocity

[Top of File]

§ 150.20 Recognition of Agreement State licenses.

(a)(1) Provided that the provisions of paragraph (b) of this section have been met, any person who holds a specific license from an Agreement State, where the licensee maintains an office for directing the licensed activity and retaining radiation safety records, is granted a general license to conduct the same activity in--

(i) Non-Agreement States;

(ii) Areas of exclusive Federal jurisdiction within Agreement States; and

(iii) Offshore waters.

(2) The provisions of paragraph (a)(1) of this section do not apply if the specific Agreement State license limits the authorized activity to a

specific installation or location.

(b) Notwithstanding any provision to the contrary in any specific license issued by an Agreement State to a person engaging in activities in a non-Agreement State, in an area of exclusive Federal jurisdiction within an Agreement State, or in offshore waters under the general licenses provided in this section, the general licenses provided in this section are subject to all the provisions of the Act, now or hereafter in effect, and to all applicable rules, regulations, and orders of the Commission including the provisions of §§ 30.7(a) through (f), 30.9, 30.10, 30.34, 30.41, and 30.51 through 30.63 of this chapter; §§ 40.7(a) through (f), 40.9, 40.10, 40.41, 40.51, 40.61 through 40.63, 40.71, and 40.81 of this chapter; §§ 70.7(a) through (f), 70.9, 70.10, 70.32, 70.42, 70.52, 70.55, 70.56, 70.60 through 70.62 of this chapter; §§ 74.11, 74.15, and 74.19 of this chapter; and to the provisions of 10 CFR parts 19, 20 and 71 and subparts C through H of part 34, §§ 39.15 and 39.31 through 39.77 of this chapter. In addition, any person engaging in activities in non-Agreement States, in areas of exclusive Federal jurisdiction within Agreement States, or in offshore waters under the general licenses provided in this section:

1) Shall, at least 3 days before engaging in each activity for the first time in a calendar year, file a submittal containing an NRC Form 241, "Report of Proposed Activities in Non-Agreement States"' a copy of its Agreement State specific license, and the appropriate fee as prescribed in § 170.31 of this chapter with the Regional Administrator of the U.S. Nuclear Regulatory Commission Regional Office listed on the NRC Form 241 and in appendix D to part 20 of this chapter for the Region in which the Agreement State that issued the license is located. If a submittal cannot be filed 3 days before engaging in activities under reciprocity, because of an emergency or other reason, the Regional Administrator may waive the 3-day time requirement provided the licensee:

(i) Informs the Region by telephone, facsimile, an NRC Form 241, or a letter of initial activities or revisions to the information submitted on the initial NRC Form 241;

(ii) Receives oral or written authorization for the activity from the Region; and

(iii) Within 3 days after the notification, files an NRC Form 241, a copy of the Agreement State license, and the fee payment.

(2) Shall file an amended NRC Form 241 or letter with the Regional Administrator to request approval for changes in work locations, radioactive material, or work activities different from the information contained on the initial NRC Form 241.

(3) Shall not, in any non-Agreement State, in an area of exclusive Federal jurisdiction within an Agreement State, or in offshore waters, transfer or dispose of radioactive material possessed or used under the general licenses provided in this section, except by transfer to a person who is specifically licensed by the Commission to receive this material.

(4) Shall not, under the general license concerning activities in non-Agreement States or in areas of exclusive Federal jurisdiction within Agreement States, possess or use radioactive materials, or engage in the activities authorized in paragraph (a) of this section, for more than 180 days in any calendar year, except that the general license in paragraph (a) of this section concerning activities in offshore waters authorizes that person to possess or use radioactive materials, or engage in the activities authorized, for an unlimited period of time.

(5) Shall comply with all terms and conditions of the specific license issued by an Agreement State except such terms or conditions as are contrary to the requirements of this section.

[35 FR 7725, May 20, 1970, as amended at 38 FR 1273, Jan. 11, 1973; 46 FR 44152, Sept. 3, 1981; 46 FR 50781, Oct. 15, 1981; 52 FR 41700, Oct. 30, 1987; 55 FR 10406, Mar. 21, 1990; 56 FR 54779, Oct. 23, 1991; 58 FR 52414, Oct. 8, 1993; 62 FR 1665, Jan. 13, 1997; 62 FR 28973, May 28, 1997; 66 FR 5443, Jan. 19, 2001; 66 FR 32469, June 14, 2001; 67 FR 78149, Dec. 23, 2002; 68 FR 58825, Oct. 10, 2003; 72 FR 58489, Oct. 16, 2007]

§ 150.21 Transportation of special nuclear material by aircraft.

[Top of File]

Except as specifically approved by the Commission no shipment of special nuclear material in excess of 20 grams or 20 curies whichever is less of plutonium or uranium-233 shall be made by a licensee of an Agreement State in passenger aircraft.

[38 FR 3039, Feb. 1, 1973]

Enforcement

[Top of File]

§ 150.30 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of--

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974, as amended; or

(3) A regulation or order issued pursuant to those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act:

(1) For violations of--

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55081, Nov. 24, 1992]

§ 150.31 Requirements for Agreement State regulation of byproduct material.

[Top of File]

(a) Prior to November 8, 1981, in the licensing and regulation of byproduct material, as defined in § 150.3(c)(2) of this part, or of any activity which results in the production of such byproduct material, an Agreement State shall require compliance with the requirements in appendix A of 10 CFR part 40 of this chapter to the maximum extent practicable.

(b) After November 8, 1981, in the licensing and regulation of byproduct material, as defined in § 150.3(c)(2) of this part, or of any activity which results in the production of such byproduct material, an Agreement State shall require:

(1) Compliance with requirements in appendix A of 10 CFR part 40 of this chapter established by the Commission pertaining to ownership of such byproduct material and disposal sites for such material; and

(2) Compliance with standards which shall be adopted by the Agreement State for the protection of the public health, safety, and the environment from hazards associated with such material which are equivalent, to the extent practicable, or more stringent than, standards in appendix A of 10 CFR part 40 of this chapter adopted and enforced by the Commission for the same purposes, including requirements and standards subsequently promulgated by the Commission and the Administrator of the Environmental Protection Agency pursuant to the Uranium Mill Tailing Radiation Control Act of 1978; and

(3) Compliance with procedures which:

(i) In the case of licenses, under State law include:

(A) An opportunity, after public notice, for written comments and a public hearing, with a transcript;

(B) An opportunity for cross examination; and

(C) A written determination by the appropriate State official which is based upon findings included in such determination and upon the evidence presented during the public comment period and which is subject to judicial review;

(ii) In the case of rulemaking, provide an opportunity for public participation through written comments or a public hearing and provide for judicial review of the rule;

(iii) Require for each licensing action which has a significant impact on the human environment a written analysis by the appropriate State agency (which shall be available to the public before the commencement of any such proceedings) of the impact of such licensing action, including any activities conducted pursuant thereto, on the environment. Such analysis shall include:

(A) An assessment of the radiological and nonradiological impacts to the public health of the activities to be conducted pursuant to such licenses;

(B) An assessment of any impact on any waterway and groundwater resulting from such activities;

(C) Consideration of alternatives, including alternative sites and engineering methods, to the activities to be conducted pursuant to such license; and

(D) Consideration of the long term impacts, including decommissioning, decontamination, and reclamation impacts associated with activities to be conducted pursuant to such license, including the management of any byproduct material, as defined in § 150.3(c)(2) of this part; and

(iv) Prohibit any major construction activity with respect to such material prior to complying with the provisions of paragraph (c)(3) of this

section. As used in this paragraph the term *major construction activity* means any clearing of land, excavation, or other substantial action that would adversely affect the environment of a site. The term does not mean site exploration, necessary roads for site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the site or the protection of environmental values.

(c) No Agreement State shall be required under paragraph (b) to conduct proceedings concerning any license or regulation which would duplicate proceedings conducted by the Commission.

(d) In adopting requirements pursuant to paragraph (b)(2) of this section, the State may adopt alternatives (including, where appropriate, site-specific alternatives) to the requirements adopted and enforced by the Commission for the same purpose if, after notice and opportunity for public hearing, the Commission determines that the alternatives will achieve a level of stabilization and containment of the sites concerned, and a level of protection for public health, safety and the environment from radiological and nonradiological hazards associated with the sites, which is equivalent to, to the extent practicable, or more stringent than the level which would be achieved by standards and requirements adopted and enforced by the Commission for the same purpose and any final standards promulgated by the Administrator of the Environmental Protection Agency in accordance with section 275. Alternative State requirements may take into account local or regional conditions, including geology, topography, hydrology and meteorology.

[45 FR 65537, Oct. 3, 1980, and 50 FR 41866, Oct. 16, 1985]

§ 150.32 Funds for reclamation or maintenance of byproduct material.

[Top of File]

(a) The total amount of funds an Agreement State collects, pursuant to a license for byproduct material as defined in § 150.3(c)(2) of this part or for any activity that results in the production of such material, for reclamation or long term maintenance and monitoring of such material, shall after November 8, 1981, be transferred to the United States if title and custody of such material and its disposal site is transferred to the United States upon termination of such license. Such funds include, but are not limited to, sums collected for long term surveillance (i.e., continued site observation, monitoring and, where necessary, maintenance). Such funds do not however, include monies held as surety where no default has occurred and the reclamation or other bonded activity has been performed.

(b) If an Agreement State requires such payments for reclamation or long term surveillance (i.e., continued site observation, monitoring and, where necessary, maintenance), the payments must, after November 8, 1981, be sufficient to ensure compliance with those standards established by the Commission pertaining to bonds, sureties, and financial arrangements to ensure adequate reclamation and long term management of such byproduct material and its disposal site.

[45 FR 65537, Oct. 3, 1980; 48 FR 40882, Sept. 12, 1983]

§ 150.33 Criminal penalties.

[Top of File]

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 150 are issued under one or more of sections 161b, 161i, or 161o, except for sections listed in paragraph (b) of this section.

(b) The regulations in part 150 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§ 150.1, 150.2, 150.3, 150.4, 150.5, 150.7, 150.8, 150.10, 150.11, 150.15, 150.15a, 150.30, 150.31, 150.32, and 150.33.

[57 FR 55081, Nov. 24, 1992]

PART 160--TRESPASSING ON COMMISSION PROPERTY

[Top of File]

§ 160.1 Purpose.

[Top of File]

The regulations in this part are issued for the protection and security of facilities, installations and real property subject to the proprietory jurisdiction or administration, or in the custody of, the Nuclear Regulatory Commission.

[28 FR 8400, Aug. 16, 1963, as amended at 40 FR 8794, Mar. 3, 1975]

§ 160.2 Scope.

[Top of File]

The regulations in this part apply to all facilities, installations, and real property subject to the jurisdiction or administration of the Nuclear Regulatory Commission or in its custody which have been posted with a notice of the prohibitions and penalties set forth in this part.

[40 FR 8794, Mar. 3, 1975]

§ 160.3 Trespass.

[Top of File]

Unauthorized entry upon any facility, installation or real property subject to this part is prohibited.

§ 160.4 Unauthorized introduction of weapons or dangerous materials.

[Top of File]

Unauthorized carrying, transporting, or otherwise introducing or causing to be introduced any dangerous weapon, explosive, or other dangerous instrument or material likely to produce substantial injury or damage to persons or property, into or upon any facility, installation or real property subject to this part, is prohibited.

§ 160.5 Violations and penalties.

[Top of File]

(a) Whoever willfully violates either §§ 160.3 or 160.4 shall, upon conviction, be punishable by a fine of not more than $1,000.

(b) Whoever willfully violates either §§ 160.3 or 160.4 with respect to any facility, installation or real property enclosed by a fence, wall, floor, roof, or other structural barrier shall be guilty of a misdemeanor and, upon conviction, shall be punished by a fine of not to exceed $5,000 or imprisonment for not more than one year, or both.

§ 160.6 Posting.

[Top of File]

Notices stating the pertinent prohibitions of §§ 160.3 and 160.4 and penalties of § 160.5 will be conspicuously posted at all entrances of each designated facility, installation or parcel of real property and at such intervals along the perimeter as will provide reasonable assurance of notice to persons about to enter.

§ 160.7 Effective date of prohibition on designated locations.

[Top of File]

The prohibitions in §§ 160.3 and 160.4 shall take effect as to any facility, installation or real property on publication in the Federal Register of the notice designating the facility, installation or real property and posting in accordance with § 160.6.

§ 160.8 Applicability of other laws.

[Top of File]

Nothing in this part shall be construed to affect the applicability of the provisions of State or other Federal laws.

PART 170--FEES FOR FACILITIES, MATERIALS, IMPORT AND EXPORT LICENSES, AND OTHER REGULATORY SERVICES UNDER THE ATOMIC ENERGY ACT OF 1954, AS AMENDED

[Top of File]

General Provisions

[Top of File]

§ 170.1 Purpose.

The regulations in this part set out fees charged for licensing services rendered by the Nuclear Regulatory Commission as authorized under title V of the Independent Offices Appropriation Act of 1952 (65 Stat. 290; 31 U.S.C. 483a) and provisions regarding their payment.

[33 FR 10924, Aug. 1, 1968; 33 FR 11587, Aug. 15, 1968, as amended at 40 FR 8794, Mar. 3, 1975]

§ 170.2 Scope.

[Top of File]

Except for persons who apply for or hold the permits, licenses, or approvals exempted in § 170.11, the regulations in this part apply to a person who is:

(a) An applicant for or holder of a specific byproduct material license issued pursuant to parts 30 and 32 through 36 and 39 of this chapter;

(b) An applicant for or holder of a specific source material license issued pursuant to part 40 of this chapter;

(c) An applicant for or holder of a specific special nuclear material license issued pursuant to part 70 of this chapter;

(d) An applicant for or holder of specific approval of spent fuel casks and shipping containers issued pursuant to part 71 of this chapter;

(e) An applicant for or holder of a specific license to possess power reactor spent fuel and other radioactive materials associated with spent fuel storage in an independent spent fuel storage installation issued pursuant to part 72 of this chapter;

(f) An applicant for or holder of a specific approval of sealed sources and devices containing byproduct material, source material, or special nuclear material;

(g) An applicant for or holder of a production or utilization facility construction permit or operating license issued under 10 CFR part 50, or an early site permit, standard design certification, standard design approval, manufacturing license, or combined license issued under 10 CFR part 52;

(h) Required to have examinations and tests performed to qualify or requalify individuals as part 55 reactor operators;

(i) Required to have routine and non-routine safety and safeguards inspections of activities licensed pursuant to the requirements of this chapter;

(j) [Reserved]

(k) Applying for or already has applied for review, under appendix Q to 10 CFR part 50 of a facility site before the submission of an application for a construction permit;

(l) Applying for or already has applied for review of a standardized spent fuel facility design; or

(m) Applying for or has applied for since March 23, 1978, review of an item under the category of special projects in this chapter that the Commission completes or makes whether or not in conjunction with a license application on file or that may be filed.

(n) An applicant for or holder of a license, approval, determination, or other authorization issued by the Commission pursuant to 10 CFR part 61.

(o) Requesting preapplication/licensing review assistance by consulting with the NRC and/or by filing preliminary analyses, documents, or reports.

(p) An applicant for or a holder of a specific import or export license issued pursuant to 10 CFR part 110.

(q) An Agreement State licensee who files for or is holder of a general license under the reciprocity provisions of 10 CFR 150.20.

(r) An applicant for or a holder of a certificate of compliance issued under 10 CFR Part 76.

(s) A holder of a general license granted by 10 CFR Part 31 who is required to register a device(s).

(t) An owner or operator of an unlicensed site in decommissioning being conducted under NRC oversight.

[49 FR 21301, May 21, 1984, as amended at 52 FR 8242, Mar. 17, 1987; 54 FR 15399, Apr. 18, 1989; 56 FR 31499, July 10, 1991; 58 FR 7737, Feb. 9, 1993; 64 FR 31469, June 10, 1999; 66 FR 32469, June 14, 2001; 70 FR 30543, May 26, 2005; 72 FR 49565, Aug. 28, 2007]

§ 170.3 Definitions.

[Top of File]

As used in this part:

Act means the Atomic Energy Act of 1954 (68 Stat. 919) including any amendments thereto;

Agreement State means any State with which the Commission or the Atomic Energy Commission has entered into an effective agreement under subsection 274b of the Act. "Nonagreement State" means any other State.

Application means any request filed with the Commission for a permit, license, approval, exemption, certificate, other permission, or for any other service.

Balance of plant consists of the remaining systems, components, and structures that comprise a complete nuclear power plant and are not included in the nuclear steam supply system.

Byproduct material means—

(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(2)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that—

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(3) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or research activity.

Government agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

Greater than Class C Waste or GTCC Waste means low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in 10 CFR 61.55.

High Enriched Uranium means uranium enriched to 20 percent or greater in the isotope uranium-235.

Human use means the internal or external administration of byproduct, source, or special nuclear material, or the radiation therefrom, to human beings.

Inspections means:

(1) Routine inspections designed to evaluate the licensee's activities within the context of the licensee having primary responsibility for

protection of the public and environment;

(2) Non-routine inspections in response or reaction to an incident, allegation, follow up to inspection deficiencies or inspections to determine implementation of safety issues. A non-routine or reactive inspection has the same purpose as the routine inspection;

(3) Reviews and assessments of licensee performance;

(4) Evaluations, such as those performed by Diagnostic Evaluation Teams; or

(5) Incident investigations.

Low Enriched Uranium means uranium enriched below 20 percent in the isotope uranium-235.

Manufacturing license means a license pursuant to Appendix M of part 52 of this chapter to manufacture a nuclear power reactor(s) to be operated at sites not identified in the license application.

Materials license means a license, certificate, approval, registration, or other form of permission issued or granted by the NRC under the regulations in 10 CFR Parts 30, 31 through 36, 39, 40, 61, 70, 72, and 76.

Nonprofit educational institution means a public or nonprofit educational institution whose primary function is education, whose programs are accredited by a nationally recognized accrediting agency or association, who is legally authorized to provide a program of organized instruction or study, who provides an educational program for which it awards academic degrees, and whose educational programs are available to the public.

Nuclear reactor means an apparatus, other than an atomic weapon, designed or used to sustain nuclear fission in a self-supporting chain reaction.

Nuclear Steam Supply System consists of the reactor core, reactor coolant system, and related auxiliary systems including the emergency core cooling system; decay heat removal system; and chemical volume and control system.

Other production or utilization facility means a facility other than a nuclear reactor licensed by the Commission under the authority of section 103 or 104 of the Atomic Energy Act of 1954, as amended (the Act), and pursuant to the provisions of part 50 of this chapter.

Part 55 Reviews as used in this part means those services provided by the Commission to administer requalification and replacement examinations and tests for reactor operators licensed pursuant to 10 CFR part 55 of the Commission's regulations and employed by part 50 licensees. These services also include related items such as the preparation, review, and grading of the examinations and tests.

Person as used in this part has the same meaning as found in parts 30, 40, 50, and 70 of title 10 of the Code of Federal Regulations.

Power reactor means a nuclear reactor designed to produce electrical or heat energy licensed by the Commission under the authority of section 103 or subsection 104b of the Act and pursuant to the provisions of § 50.21(b) or § 50.22 of this chapter.

Production facility means:

(1) Any nuclear reactor designed or used primarily for the formation of plutonium or uranium-233; or

(2) Any facility designed or used for the separation of the isotopes of plutonium, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(3) Any facility designed or used for the processing of irradiated materials containing special nuclear material except:

(i) Laboratory scale facilities designed or used for experimental or analytical purposes;

(ii) Facilities in which the only special nuclear materials contained in the irradiated material to be processed are uranium enriched in the isotope U^{235} and plutonium produced by the irradiation, if the material processed contains not more than 10^{-6} grams of plutonium per gram of U^{235} and has fission product activity not in excess of 0.25 millicurie of fission products per gram of U^{235}; and

(iii) Facilities in which processing is conducted pursuant to a license issued under parts 30 and 70 of this chapter, or equivalent regulations of an Agreement State, for the receipt, possession, use, and transfer of irradiated special nuclear material, which authorizes the processing of the irradiated material on a batch basis for the separation of selected fission products and limits the process batch to not more than 100 grams of uranium enriched in the isotope 235 and not more than 15 grams of any other special nuclear material.

Reference systems concept means a concept that involves the review of an entire facility design or major fraction of a facility design outside of the context of a license application. The standard design would be referenced in subsequent license applications.

Research reactor means a nuclear reactor licensed by the Commission under the authority of subsection 104c of the Act and pursuant to the provisions of § 50.21(c) of this chapter for operation at a thermal power level of 10 megawatts or less, and which is not a testing facility as defined by paragraph (m) of this section.

The phrase *review is completed* as used in this part means that the review has been brought to an end, whether by reason of issuance of a permit, license, approval, certificate, exemption, or other form of permission, or whether the application is denied, withdrawn, suspended, or action on the application is postponed by the applicant.

Sealed source means any byproduct material that is encased in a capsule designed to prevent leakage or escape of the byproduct material.

Source material means:

(1) Uranium or thorium, or any combination thereof, in any physical or chemical form; or

(2) Ores which contain by weight one-twentieth of one percent (0.05%) or more of

(i) uranium,

(ii) thorium, or

(iii) any combination thereof. Source material does not include special nuclear material.

Special nuclear material means:

(1) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Act, determines to be special nuclear material but does not include source material; or

(2) Any material artificially enriched by any of the foregoing, but does not include source material.

Special projects means specific services provided by the Commission for which fees are not otherwise specified in this chapter. This includes, but is not limited to, contested hearings on licensing actions directly related to U.S. Government national security initiatives (as determined by the NRC), topical report reviews, early site reviews, waste solidification activities, activities related to the tracking and monitoring of shipment of classified matter, services provided to certify licensee, vendor, or other private industry personnel as instructors for 10 CFR part 55 reactor operators, reviews of financial assurance submittals that do not require a license amendment, reviews of responses to Confirmatory Action Letters, reviews of uranium recovery licensees' land-use survey reports, and reviews of 10 CFR 50.71 final safety analysis reports. Special projects does not include activities otherwise exempt from fees under this part. It also does not include those contested hearings for which a fee exemption is granted in § 170.11(a)(2), including those related to individual plant security modifications.

Testing facility means a nuclear reactor licensed by the Commission under the authority of subsection 104c of the Act and pursuant to the provisions of § 50.21(c) of this chapter for operation at:

(1) A thermal power level in excess of 10 megawatts; or

(2) A thermal power level in excess of 1 megawatt, if the reactor is to contain:

(i) A circulating loop through the core in which the applicant proposes to conduct fuel experiments; or

(ii) A liquid fuel loading; or

(iii) An experimental facility in the core in excess of 16 square inches in cross-section.

Uranium enrichment facility means:

(1) Any facility used for separating the isotopes of uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for this equipment or device, capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

Utilization facility means any nuclear reactor other than one designed or used primarily for the formation of plutonium or U^{235} and any other equipment or device determined by rule of the Commission to be a utilization facility within the purview of subsection 11cc of the Act.

[33 FR 10924, Aug. 1, 1968, as amended at 36 FR 146, Jan. 6, 1971; 38 FR 30254, Nov. 2, 1973; 40 FR 8794, Mar. 3, 1975; 43 FR 7218, Feb. 21, 1978; 46 FR 58284, Dec. 1, 1981; 49 FR 21302, May 21, 1984; 54 FR 15399, Apr. 18, 1989; 55 FR 21179, May 23, 1990; 56 FR 31499, July 10, 199; 57 FR 18394, Apr. 30, 1992; 57 FR 32707, July 23, 1992; 58 FR 38690, July 20, 1993; 59 FR 36917, July 20, 1994; 64 FR 31469, June 10, 1999; 66 FR 32469, June 14, 2001; 71 FR 30746, May 30, 2006; 72 FR 31420, June 6, 2007; 72 FR 55934 Oct. 1, 2007]

§ 170.4 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission other than a written interpretation by the General Counsel will be recognized to be binding upon the Commission.

§ 170.5 Communications.

[Top of File]

All communications concerning the regulations in this part should be addressed to the NRC's Chief Financial Officer, either by mail to the U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[64 FR 31469, June 10, 1999 as amended at 68 FR 58825, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 170.8 Information collection requirements: OMB approval

[Top of File]

This part contains no information collection requirements and therefore is not subject to the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.).

[62 FR 52191, Oct. 6, 1997]

§ 170.11 Exemptions.

[Top of File]

(a) No application fees, license fees, renewal fees, inspection fees, or special project fees shall be required for:

(1) A special project that is a request/report submitted to the NRC--

(i) In response to a Generic Letter or NRC Bulletin that does not result in an amendment to the license, does not result in the review of an alternate method or reanalysis to meet the requirements of the Generic Letter, or does not involve an unreviewed safety issue;

(ii) In response to an NRC request (at the Associate Office Director level or above) to resolve an identified safety, safeguards, or environmental issue, or to assist NRC in developing a rule, regulatory guide, policy statement, generic letter, or bulletin; or

(iii) As a means of exchanging information between industry organizations and the NRC for the specific purpose of supporting the NRC's generic regulatory improvements or efforts.

(A) This fee exemption applies only when:

(1) It has been demonstrated that the report/request has been submitted to the NRC specifically for the purpose of supporting NRC's development of generic guidance and regulations (e.g., rules, regulations, guides and policy statements);

(2) The NRC, at the time the document is submitted, plans to use it for one of the purposes given in paragraph (a)(1)(iii)(A)*(1)* of this section. In this case, the exemption applies even if ultimately the NRC does not use the document as planned; and

(3) The fee exemption is requested in writing to the Chief Financial Officer in accordance with 10 CFR 170.5, and the Chief Financial Officer grants this request in writing.

(B) An example of the type of document that meets the fee exemption criteria is a topical report that is submitted to the NRC for the specific purpose of supporting the NRC's development of a Regulatory Guide, and which the NRC plans to use in the development of that Regulatory Guide.

(C) Fees will not be waived for reports/requests that are not submitted specifically for the purpose of supporting the NRC's generic regulatory improvements or efforts, because the primary beneficiary of the NRC's review and approval of such documents is the requesting organization. In this case, the waiver provision does not apply even though the NRC may realize some benefits from its review and approval of the document.

(D) An example of the type of document that does not meet the fee waiver criteria is a topical report submitted for the purpose of obtaining NRC approval so that the report can be used by the industry in the future to address licensing or safety issues.

(2) A contested hearing conducted by the NRC on a specific application or the authorizations and conditions of a specific NRC license, certificate, or other authorization, including those involving individual plant security modifications. This exemption does not apply to a contested hearing on a licensing action that the NRC determines directly involves a U.S. Government national security-related initiative, including those specifically associated with Presidentially-directed national security programs.

(3) [Reserved]

(4) A construction permit or license applied for by, or issued to, a non-profit educational institution for a production or utilization facility, other than a power reactor, or for the possession and use of byproduct material, source material, or special nuclear material. This exemption does not apply to those byproduct, source or special nuclear material licenses which authorize:

(i) Human use;

(ii) Remunerated services to other persons;

(iii) Distribution of byproduct material, source material, or special nuclear material or products containing byproduct material, source material or special nuclear material; or

(iv) Activities performed under a Government agency contract.

(5) - (8) [Reserved]

(9) Federally-owned and State-owned research reactors used primarily for educational training and academic research purposes. For purposes of this exemption, the term research reactor means a nuclear reactor that—

(i) Is licensed by the Nuclear Regulatory Commission under section 104c. of the Atomic Energy Act of 1954 (42 U.S.C. 2134(c)) at a thermal power level of 10 megawatts or less; and

(ii) If so licensed at a thermal power level of more than 1 megawatt, does not contain—

(A) A circulating loop through the core in which the licensee conducts fuel experiments;

(B) A liquid fuel loading; or

(C) An experimental facility in the core in excess of 16 square inches in cross-section.

(10) Activities of the Commission undertaken, pursuant to part 75 of this chapter, solely for the purpose of implementation of the US/IAEA Safeguards Agreement.

(11) [Reserved]

(12) A performance assessment or evaluation for which the licensee volunteers at the NRC's request and which is selected by the NRC.

(b)(1) The Commission may, upon application by an interested person, or upon its own initiative, grant such exemptions from the requirements of this part as it determines are authorized by law and are otherwise in the public interest.

(2) Applications for exemption under this paragraph may include activities such as, but not limited to, the use of licensed materials for educational or noncommercial public displays or scientific collections.

[33 FR 10924, Aug. 1, 1968, as amended at 36 FR 146, Jan. 6, 1971; 36 FR 18173, Sept. 10, 1971; 37 FR 24029, Nov. 11, 1972; 38 FR 18443, July 11, 1973; 43 FR 7218, Feb. 21, 1978; 45 FR 50718, July 31, 1980; 49 FR 21302, May 21, 1984; 55 FR 21179, May 23, 1990; 56 FR 31499, July 10, 1991; 59 FR 36917, July 20, 1994; 60 FR 32238, June 20, 1995; 62 FR 29207, May 29, 1997; 64 FR 31469, June 10, 1999; 67 FR 42629, June 24, 2002; 67 FR 64037, Oct 17, 2002; 70 FR 30543, May 26, 2005; 71 FR 30746, May 30, 2006]

§ 170.12 Payment of fees.

[Top of File]

(a) *Application and registration fees.* Each application or registration for which a fee is prescribed must be accompanied by a remittance for the full amount of the fee. The NRC will not issue a new license or an amendment increasing the scope of an existing license to a higher fee category before receiving the prescribed application fee. The application or registration fee(s) is charged whether the Commission approves the application or not. The application or registration fee(s) is also charged if the applicant withdraws the application or registration.

(b) *Licensing fees.* (1) Licensing fees will be assessed to recover full costs for--

(i) The review of applications for new licenses and approvals;

(ii) The review of applications for amendments to and renewal of existing licenses or approvals;

(iii) Preapplication consultations and reviews; and

(iv) The full cost for project managers assigned to a specific plant or facility, excluding leave time and time spent on generic activities (such as rulemaking).

(2) Full cost fees will be determined based on the professional staff time and appropriate contractual support services expended. The full cost fees for professional staff time will be determined at the professional hourly rates in effect the time the service was provided. The full cost fees are payable upon notification by the Commission.

(3) The NRC intends to bill each applicant or licensee at quarterly intervals for all accumulated costs for each application the applicant or licensee has on file for NRC review, until the review is completed, except for costs that were deferred before August 9, 1991. The deferred costs will be billed as described in paragraphs (b)(5), (b)(6) and (b)(7) of this section. Each bill will identify the applications and documents submitted for review and the costs related to each.

(4) The NRC intends to bill each applicant or licensee for costs related to project manager time on a quarterly basis. Each bill will identify the costs related to project manager time.

(5) Costs for review of an application for renewal of a standard design certification which have been deferred prior to the effective date of this rule must be paid as follows: The full cost of review for a renewed standard design certification must be paid by the applicant for renewal or other entity supplying the design to an applicant for a construction permit, combined license issued under 10 CFR Part 52, or operating license, as appropriate, in five (5) equal installments. An installment is payable each of the first five times the renewed certification is referenced in an application for a construction permit, combined license, or operating license. The applicant for renewal shall pay the installment, unless another entity is supplying the design to the applicant for the construction permit, combined license, or operating license, in which case the entity shall pay the installment. If the design is not referenced, or if all of the costs are not recovered, within fifteen years after the date of renewal of the certification, the applicant for renewal shall pay the costs for the renewal, or remainder of those costs, at that time.

(6) Costs for the review of an application for renewal of an early site permit which have been deferred prior to the effective date of this rule will continue to be deferred as follows: The holder of the renewed permit shall pay the applicable fees for the renewed permit at the time an application for a construction permit or combined license referencing the permit is filed. If, at the end of the renewal period of the permit, no facility application referencing the early site permit has been docketed, the permit holder shall pay any outstanding fees for the permit.

(7)(i) The full cost of review for a standardized design approval or certification that has been deferred prior to the effective date of the rule must be paid by the holder of the design approval, the applicant for certification, or other entity supplying the design to an applicant for a construction permit, combined license issued under 10 CFR Part 52, or operating license, as appropriate, in five (5) equal installments. An installment is payable each of the first five times the approved/certified design is referenced in an application for a construction permit, combined license issued under 10 CFR Part 52, or operating license. In the case of a standard design certification, the applicant for certification shall pay the installment, unless another entity is supplying the design to the applicant for the construction permit, combined license, or operating license, in which case the other entity shall pay the installment.

(ii)(A) In the case of a design which has been approved but not certified and for which no application for certification is pending, if the design is not referenced, or if all costs are not recovered within five years after the date of the preliminary design approval (PDA), or the final design approval (FDA), the applicant shall pay the costs, or remainder of those costs, at that time.

(B) In the case of a design which has been approved and for which an application for certification is pending, no fees are due until after the certification is granted. If the design is not referenced, or if all costs are not recovered, within fifteen years after the date of certification, the applicant shall pay the costs, or remainder of those, at the time.

(C) In the case of a design for which a certification has been granted, if the design is not referenced, or if all costs are not recovered, within fifteen years after the date of the certification, the applicant shall pay the costs for the review of the application, or remainder of those costs, at that time.

(c) *Inspection fees.* (1) Inspection fees will be assessed to recover full cost for each resident inspector (including the senior resident inspector), assigned to a specific plant or facility. The fees assessed will be based on the number of hours that each inspector assigned to the plant or facility is in an official duty status (*i.e.,* all time in a non-leave status), excluding time spent by a resident inspector in support of activities at another site. The hours will be billed at the appropriate hourly rate established in 10 CFR 170.20. Resident inspectors' time related to a specific inspection will be included in the fee assessed for the specific inspection in accordance with paragraph (c)(2) of this section.

(2) Inspection fees will be assessed to recover the full cost for each specific inspection, including plant- or licensee-specific performance reviews and assessments, evaluations, and incident investigations. For inspections that result in the issuance of an inspection report, fees will be assessed for costs incurred up to approximately 30 days after the inspection report is issued. The costs for these inspections include preparation time, time on site, documentation time, and follow-up activities and any associated contractual service costs, but exclude the time involved in the processing and issuance of a notice of violation or civil penalty.

(3) The NRC intends to bill for resident inspectors' time and for specific inspections subject to full cost recovery on a quarterly basis. The fees are payable upon notification by the Commission.

(d) *Special Project Fees.* (1) All special projects performed by the Commission, unless otherwise exempt from fees or for which fees are otherwise specified in this part, will be assessed fees to recover the full cost of the service provided. Special projects means specific services provided by the Commission, including but not limited to—

(i) Topical reports;

(ii) Financial assurance submittals that do not require a license amendment;

(iii) Responses to Confirmatory Action Letters;

(iv) Uranium recovery licensees' land-use survey reports;

(v) 10 CFR 50.71 final safety analysis reports; and

(vi) Contested hearings on licensing actions directly involving U.S. Government national security initiatives, as determined by the NRC.

(2) The NRC intends to bill each applicant or licensee at quarterly intervals until the special project is completed. Each bill will identify the special project, including any documents submitted for review or the specific contested hearing, and the related costs. The fees are payable upon notification by the Commission.

(e) *Part 55 review fees.* Fees for Part 55 review services are based on NRC time spent in administering the examinations and tests and any related contractual costs. The fees assessed will also include related activities such as preparing, reviewing, and grading of the examinations and tests. The NRC intends to bill the costs at quarterly intervals to the licensee employing the operators.

(f) *Method of payment.* All license fee payments are to be made payable to the U.S. Nuclear Regulatory Commission. The payments are to be made in U.S. funds by electronic funds transfer such as ACH (Automated Clearing House) using E.D.I. (Electronic Data Interchange), check, draft, money order, or credit card. Payment of invoices of $5,000 or more should be paid via ACH through NRC's Lockbox Bank at the address indicated on the invoice. Credit card payments should be made up to the limit established by the credit card bank at the address indicated on the invoice. Specific written instructions for making electronic payments and credit card payments may be obtained by contacting the License Fee and Accounts Receivable Branch at 301-415-7554. In accordance with Department of the Treasury requirements, refunds will only be made upon receipt of information on the payee's financial institution and bank accounts.

[64 FR 31469, June 10, 1999, as amended at 65 FR 11204, Mar. 2, 2000; 65 FR 36959, June 12, 2000; 66 FR 32469, June 14, 2001; 67 FR 64037, Oct. 17, 2002; 72 FR 31420, June 6, 2007]

§ 170.20 Average cost per professional staff-hour.

[Top of File]

Fees for permits, licenses, amendments, renewals, special projects, 10 CFR part 55 re-qualification and replacement examinations and tests, other required reviews, approvals, and inspections under §§ 170.21 and 170.31 will be calculated using the professional staff-hour rate of $238 per hour.

[67 FR 42630, June 24, 2002; 68 FR 36729, June 18, 2003; 69 FR 22676, Apr. 26, 2004; 70 FR 30543, May 26, 2005; 71 FR 30746, May 30, 2006; 72 FR 31421, June 6, 2007; 73 FR 32402, June 6, 2008]

Schedule of Fees

[Top of File]

§ 170.21—Schedule of fees for production and utilization facilities, review of standard referenced design approvals, special projects, inspections, and import and export licenses.

Applicants for construction permits, manufacturing licenses, operating licenses, import and export licenses, approvals of facility standard reference designs, re-qualification and replacement examinations for reactor operators, and special projects and holders of construction permits, licenses, and other approvals shall pay fees for the following categories of services:

SCHEDULE OF FACILITY FEES
[See footnotes at end of table]

Facility categories and type of fees		Fees [1], [2]
A. Nuclear Power Reactors:		
	Application for Construction Permit	Full Cost.
	Early Site Permit, Construction Permit, Combined License, Operating License	Full Cost.

	Amendment, Renewal, Dismantling-Decommissioning and Termination, Other Approvals	Full Cost.
	Inspections [3]	Full Cost.
B. Standard Reference Design Review		
	Preliminary Design Approvals, Final Design Approvals, Certification	Full Cost.
	Amendment, Renewal, Other Approvals	Full Cost.
C. Test Facility/Research Reactor/Critical Facility:		
	Application for Construction Permit	Full Cost.
	Construction Permit, Operating License	Full Cost.
	Amendment, Renewal, Dismantling-Decommissioning and Termination, Other Approvals	Full Cost.
	Inspections [3]	Full Cost.
D. Manufacturing License:		
	Application for Construction Permit	Full Cost.
	Preliminary Design Approval, Final Design Approval	Full Cost.
	Amendment Renewal, Other Approvals	Full Cost.
	Inspections [3]	Full Cost.
E. [Reserved]		
F. [Reserved]		
G. Other Production and Utilization Facility:		
	Application for Construction Permit	Full Cost.
	Construction Permit, Operating License	Full Cost.
	Amendment, Renewal, Other Approvals	Full Cost.
	Inspections [3]	Full Cost.
H. Production or Utilization Facility Permanently Closed Down		
	Inspections [3]	Full Cost.
I. Part 55 Reviews		
	Requalification and Replacement Examinations for Reactor Operators	Full Cost.
J. Special Projects		
	Approvals and preapplication/licensing activities	Full Cost.
	Inspections [3]	Full Cost.
	Contested hearings on licensing actions directly related to U.S. Government national security initiatives	Full Cost.
K. Import and export licenses:		
	Licenses for the import and export only of production and utilization facilities or the export only of components for production and utilization facilities issued under 10 CFR part 110.	
	1. Application for import or export of production and utilization facilities [4] (including reactors and other facilities) and exports of components requiring Commission and Executive Branch review, for example, actions under 10 CFR 110.40(b).	
	Application—new license, or amendment; or license exemption request	$15,500
	2. Application for export of reactor and other components requiring Executive Branch review only, for example, those actions under 10 CFR 110.41(a)(1)–(8).	
	Application—new license, or amendment; or license exemption request	$9,100
	3. Application for export of components requiring the assistance of the Executive Branch to obtain foreign government assurances.	
	Application—new license, or amendment; or license exemption request	$3,800
	4. Application for export of facility components and equipment (examples provided in 10 CFR part 110, Appendix A, Items (5) through (9)) not requiring Commission or Executive Branch review, or obtaining foreign government assurances.	
	Application—new license, or amendment; or license exemption request	$2,400

5. Minor amendment of any active export or import license, for example, to extend the expiration date, change domestic information, or make other revisions which do not involve any substantive changes to license terms or conditions or to the type of facility or component authorized for export and therefore, do not require in-depth analysis or review or consultation with the Executive Branch, U.S. host state, or foreign government authorities.	
Minor amendment to license	$720

[1] Fees will not be charged for orders related to civil penalties or other civil sanctions issued by the Commission under § 2.202 of this chapter or for amendments resulting specifically from the requirements of these orders. For orders unrelated to civil penalties or other civil sanctions, fees will be charged for any resulting licensee-specific activities not otherwise exempted from fees under this chapter. Fees will be charged for approvals issued under a specific exemption provision of the Commission's regulations under Title 10 of the Code of Federal Regulations (e.g., 10 CFR 50.12, 73.5) and any other sections in effect now or in the future, regardless of whether the approval is in the form of a license amendment, letter of approval, safety evaluation report, or other form.

[2] Full cost fees will be determined based on the professional staff time and appropriate contractual support services expended. For applications currently on file and for which fees are determined based on the full cost expended for the review, the professional staff hours expended for the review of the application up to the effective date of the final rule will be determined at the professional rates in effect at the time the service was provided. For those applications currently on file for which review costs have reached an applicable fee ceiling established by the June 20, 1984, and July 2, 1990, rules, but are still pending completion of the review, the cost incurred after any applicable ceiling was reached through January 29, 1989, will not be billed to the applicant. Any professional staff-hours expended above those ceilings on or after January 30, 1989, will be assessed at the applicable rates established by § 170.20, as appropriate, except for topical reports whose costs exceed $50,000. Costs which exceed $50,000 for any topical report, amendment, revision or supplement to a topical report completed or under review from January 30, 1989, through August 8, 1991, will not be billed to the applicant. Any professional hours expended on or after August 9, 1991, will be assessed at the applicable rate established in § 170.20.

[3] Inspections covered by this schedule are both routine and non-routine safety and safeguards inspections performed by NRC for the purpose of review or follow-up of a licensed program. Inspections are performed through the full term of the license to ensure that the authorized activities are being conducted in accordance with the Atomic Energy Act of 1954, as amended, other legislation, Commission regulations or orders, and the terms and conditions of the license. Non-routine inspections that result from third-party allegations will not be subject to fees.

[4] Imports only of major components for end-use at NRC-licensed reactors are now authorized under NRC general import license.

[53 FR 52648, Dec. 29, 1988, as amended at 54 FR 15400, Apr. 18, 1989; 54 FR 25658, June 16, 1989; 55 FR 21180, May 23, 1990; 56 FR 31500, July 10, 1991; 57 FR 18395, Apr. 30, 1992; 57 FR 32707, July 23, 1992; 58 FR 38690, July 20, 1993; 59 FR 36917, July 20, 1994; 60 FR 32239, June 20, 1995; 61 FR 16214, Apr. 12, 1996; 62 FR 29207, May 29, 1997; 63 FR 31851, June 10, 1998; 64 FR 31470, June 10, 1999; 65 FR 36960, June 12, 2000; 66 FR 32469, June 14, 2001; 67 FR 42630, June 24, 2002; 67 FR 64037, Oct. 17, 2002; 68 FR 36729, June 18, 2003; 69 FR 22676, Apr. 26, 2004; 70 FR 30543, May 26, 2005; 71 FR 30746, May 30, 2006; 72 FR 31421, June 6, 2007; 73 FR 32402, June 6, 2008]

§ 170.31 Schedule of fees for materials licenses and other regulatory services, including inspections, and import and export licenses.

[Top of File]

Applicants for materials licenses, import and export licenses, and other regulatory services, and holders of materials licenses or import and export licenses shall pay fees for the following categories of services. For those fee categories identified to be subject to full cost fees, full cost fees will be assessed for all licensing and inspection activities, unless otherwise indicated.

SCHEDULE OF MATERIALS FEES
[See footnotes at end of table]

Category of materials licenses and type of fees [1]	Fee [2, 3]
1. Special nuclear material:	
A.(1) Licenses for possession and use of U–235 or plutonium for fuel fabrication activities.	
(a) Strategic Special Nuclear Material (High Enriched Uranium) [Program Code(s): 21130]	Full Cost.
(b) Low Enriched Uranium in Dispersible Form Used for Fabrication of Power Reactor Fuel [Program Code(s): 21210]	Full Cost.
(2) All other special nuclear materials licenses not included in Category 1.A.(1) which are licensed for fuel cycle activities.	
(a) Facilities with limited operations [Program Code(s): 21310, 21320]	Full Cost.
(b) Gas centrifuge enrichment demonstration facilities	Full Cost.
(c) Others, including hot cell facilities	Full Cost.
B. Licenses for receipt and storage of spent fuel and reactor-related Greater than Class C (GTCC) waste at an independent spent fuel storage installation (ISFSI) [Program Code(s): 23200].	Full Cost.

C. Licenses for possession and use of special nuclear material in sealed sources contained in devices used in industrial measuring systems, including x-ray fluorescence analyzers. [4]	
Application [Program Code(s): 22140]	$1,100.
D. All other special nuclear material licenses, except licenses authorizing special nuclear material in unsealed form in a combination that would constitute a critical quantity, as defined in § 150.11 of this chapter, for which the licensee shall pay the same fees as those under Category 1.A. [4]	
Application [Program Code(s): 22110, 22111, 22120, 22131, 22136, 22150, 22151, 22161, 22163, 22170, 23100, 23300, 23310].	$2,200.
E. Licenses or certificates for construction and operation of a uranium enrichment facility [Program Code(s): 21200]	Full Cost.
2. Source material:	
A. (1) Licenses for possession and use of source material for refining uranium mill concentrates to uranium hexafluoride [Program Code(s): 11400].	Full Cost.
(2) Licenses for possession and use of source material in recovery operations such as milling, in-situ leaching, heap-leaching, ore buying stations, ion exchange facilities and in processing of ores containing source material for extraction of metals other than uranium or thorium, including licenses authorizing the possession of byproduct waste material (tailings) from source material recovery operations, as well as licenses authorizing the possession and maintenance of a facility in a standby mode.	
(a) Class I facilities [Program Code(s): 11100]	Full Cost.
(b) Class II facilities [Program Code(s): 11500]	Full Cost.
(c) Other facilities [Program Code(s): 11700]	Full Cost.
(3) Licenses that authorize the receipt of byproduct material, as defined in § 11e.(2) of the Atomic Energy Act, from other persons for possession and disposal, except those licenses subject to the fees in Category 2.A.(2) or Category 2.A.(4) [Program Code(s): 11600].	Full Cost.
(4) Licenses that authorize the receipt of byproduct material, as defined in § 11e.(2) of the Atomic Energy Act, from other persons for possession and disposal incidental to the disposal of the uranium waste tailings generated by the licensee's milling operations, except those licenses subject to the fees in Category 2.A.(2).	Full Cost.
(5) Licenses that authorize the possession of source material related to removal of contaminants (source material) from drinking water.	Full Cost.
B. Licenses which authorize the possession, use, and/or installation of source material for shielding.	
Application [Program Code(s): 11210]	$260.
C. All other source material licenses.	
Application [Program Code(s): 11200, 11220, 11221, 11230, 11300, 11800, 11810]	$9,400.
3. Byproduct material:	
A. Licenses of broad scope for the possession and use of byproduct material issued under parts 30 and 33 of this chapter for processing or manufacturing of items containing byproduct material for commercial distribution.	
Application [Program Code(s): 03211, 03212, 03213]	$11,200.
B. Other licenses for possession and use of byproduct material issued under part 30 of this chapter for processing or manufacturing of items containing byproduct material for commercial distribution.	
Application [Program Code(s): 03214, 03215, 22135, 22162]	$4,200.
C. Licenses issued under §§ 32.72 and/or 32.74 of this chapter that authorize the processing or manufacturing and distribution or redistribution of radiopharmaceuticals, generators, reagent kits, and/or sources and devices containing byproduct material. This category does not apply to licenses issued to nonprofit educational institutions whose processing or manufacturing is exempt under § 170.11(a)(4). These licenses are covered by fee Category 3.D.	
Application [Program Code(s): 02500, 02511, 02513]	$7,400.
D. Licenses and approvals issued under §§ 32.72 and/or 32.74 of this chapter authorizing distribution or redistribution of radiopharmaceuticals, generators, reagent kits, and/or sources or devices not involving processing of byproduct material. This category includes licenses issued under §§ 32.72 and/or 32.74 of this chapter to nonprofit educational institutions whose processing or manufacturing is exempt under § 170.11(a)(4).	
Application [Program Code(s): 02512, 02514]	$4,100.
E. Licenses for possession and use of byproduct material in sealed sources for irradiation of materials in which the source is not removed from its shield (self-shielded units).	
Application [Program Code(s): 03510, 03520]	$2,700.
F. Licenses for possession and use of less than 10,000 curies of byproduct material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes. This category also includes underwater irradiators for irradiation of materials where the source is not exposed for irradiation purposes.	
Application [Program Code(s): 03511]	$5,600.

G. Licenses for possession and use of 10,000 curies or more of byproduct material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes. This category also includes underwater irradiators for irradiation of materials where the source is not exposed for irradiation purposes.	
Application [Program Code(s): 03521]	$13,300.
H. Licenses issued under Subpart A of part 32 of this chapter to distribute items containing byproduct material that require device review to persons exempt from the licensing requirements of part 30 of this chapter. The category does not include specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of part 30 of this chapter.	
Application [Program Code(s): 03255]	$9,700.
I. Licenses issued under Subpart A of part 32 of this chapter to distribute items containing byproduct material or quantities of byproduct material that do not require device evaluation to persons exempt from the licensing requirements of part 30 of this chapter. This category does not include specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of part 30 of this chapter.	
Application [Program Code(s): 03250, 03251, 03252, 03253, 03254, 03256]	$9,700.
J. Licenses issued under Subpart B of part 32 of this chapter to distribute items containing byproduct material that require sealed source and/or device review to persons generally licensed under part 31 of this chapter. This category does not include specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under part 31 of this chapter.	
Application [Program Code(s): 03240, 03241, 03243]	$1,700.
K. Licenses issued under Subpart B of part 32 of this chapter to distribute items containing byproduct material or quantities of byproduct material that do not require sealed source and/or device review to persons generally licensed under part 31 of this chapter. This category does not include specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under part 31 of this chapter.	
Application [Program Code(s): 03242, 03244]	$1,000.
L. Licenses of broad scope for possession and use of byproduct material issued under parts 30 and 33 of this chapter for research and development that do not authorize commercial distribution.	
Application [Program Code(s): 01100, 01110, 01120, 03610, 03611, 03612, 03613]	$9,400.
M. Other licenses for possession and use of byproduct material issued under part 30 of this chapter for research and development that do not authorize commercial distribution.	
Application [Program Code(s): 03620]	$3,300.
N. Licenses that authorize services for other licensees, except:	
(1) Licenses that authorize only calibration and/or leak testing services are subject to the fees specified in fee Category 3P; and (2) Licenses that authorize waste disposal services are subject to the fees specified in fee Categories 4.A., 4.B., and 4.C.	
Application [Program Code(s): 03219, 03225, 03226]	$6,100.
O. Licenses for possession and use of byproduct material issued under part 34 of this chapter for industrial radiography operations.	
Application [Program Code(s): 03310, 03320]	$4,500.
P. All other specific byproduct material licenses, except those in Categories 4.A. through 9.D.	
Application [Program Code(s): 02400, 02410, 03120, 03121, 03122, 03123, 03124, 03220, 03221, 03222, 03800, 03810, 22130].	$1,300.
Q. Registration of a device(s) generally licensed under part 31 of this chapter.	
Registration	$270.
R. Possession of items or products containing radium-226 identified in 10 CFR 31.12 which exceed the number of items or limits specified in that section.[6]	
1. Possession of quantities exceeding the number of items or limits in 10 CFR 31.12(a)(4), or (5) but less than or equal to 10 times the number of items or limits specified.	
Application [Program Code(s): 02700]	$550.
2. Possession of quantities exceeding 10 times the number of items or limits specified in 10 CFR 31.12(a)(4) or (5).C.	
Application [Program Code(s): 02710]	$1,300.
S. Licenses for production of accelerator-produced radionuclides.	
Application [Program Code(s): 03210]	$7,400.
4. Waste disposal and processing:	

	A. Licenses specifically authorizing the receipt of waste byproduct material, source material, or special nuclear material from other persons for the purpose of contingency storage or commercial land disposal by the licensee; or licenses authorizing contingency storage of low-level radioactive waste at the site of nuclear power reactors; or licenses for receipt of waste from other persons for incineration or other treatment, packaging of resulting waste and residues, and transfer of packages to another person authorized to receive or dispose of waste material [Program Code(s): 03231, 03233, 03235, 03236, 06100, 06101].	Full Cost.
	B. Licenses specifically authorizing the receipt of waste byproduct material, source material, or special nuclear material from other persons for the purpose of packaging or repackaging the material. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.	
	Application [Program Code(s): 03234]	$2,900.
	C. Licenses specifically authorizing the receipt of prepackaged waste byproduct material, source material, or special nuclear material from other persons. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.	
	Application [Program Code(s): 03232]	$4,300.
5. Well logging:		
	A. Licenses for possession and use of byproduct material, source material, and/or special nuclear material for well logging, well surveys, and tracer studies other than field flooding tracer studies.	
	Application [Program Code(s): 03110, 03111, 03112]	$1,600.
	B. Licenses for possession and use of byproduct material for field flooding tracer studies.	
	Licensing [Program Code(s): 03113]	Full Cost.
6. Nuclear laundries:		
	A. Licenses for commercial collection and laundry of items contaminated with byproduct material, source material, or special nuclear material.	
	Application [Program Code(s): 03218]	$19,000.
7. Medical licenses:		
	A. Licenses issued under parts 30, 35, 40, and 70 of this chapter for human use of byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices.	
	Application [Program Code(s): 02300, 02310]	$10,400.
	B. Licenses of broad scope issued to medical institutions or two or more physicians under parts 30, 33, 35, 40, and 70 of this chapter authorizing research and development, including human use of byproduct material, except licenses for byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices. This category also includes the possession and use of source material for shielding when authorized on the same license.	
	Application [Program Code(s): 02110]	$7,400.
	C. Other licenses issued under parts 30, 35, 40, and 70 of this chapter for human use of byproduct material, source material, and/or special nuclear material, except licenses for byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices.	
	Application [Program Code(s): 02120, 02121, 02200, 02201, 02210, 02220, 02230, 02231, 02240, 22160]	$2,300.
8. Civil defense:		
	A. Licenses for possession and use of byproduct material, source material, or special nuclear material for civil defense activities.	
	Application [Program Code(s): 03710]	$550.
9. Device, product, or sealed source safety evaluation.		
	A. Safety evaluation of devices or products containing byproduct material, source material, or special nuclear material, except reactor fuel devices, for commercial distribution.	
	Application—each device	$19,500.
	B. Safety evaluation of devices or products containing byproduct material, source material, or special nuclear material manufactured in accordance with the unique specifications of, and for use by, a single applicant, except reactor fuel devices.	
	Application—each device	$19,500.
	C. Safety evaluation of sealed sources containing byproduct material, source material, or special nuclear material, except reactor fuel, for commercial distribution.	
	Application—each source	$2,700.
	D. Safety evaluation of sealed sources containing byproduct material, source material, or special nuclear material, manufactured in accordance with the unique specifications of, and for use by, a single applicant, except reactor fuel.	
	Application—each source	$910.
10. Transportation of radioactive material:		
	A. Evaluation of casks, packages, and shipping containers.	

	1. Spent Fuel, High-Level Waste, and plutonium air packages	Full Cost.
	2. Other Casks	Full Cost.
	B. Quality assurance program approvals issued under part 71 of this chapter.	
	1. Users and Fabricators.	
	Application	$4,400.
	Inspections	Full Cost.
	2. Users	
	Application	$4,400.
	Inspections	Full Cost.
	C. Evaluation of security plans, route approvals, route surveys, and transportation security devices (including immobilization devices).	Full Cost.
11. Review of standardized spent fuel facilities		Full Cost.
12. Special projects:		
	Including approvals, preapplication/licensing activities, and inspections	Full Cost.
13.	A. Spent fuel storage cask Certificate of Compliance	Full Cost.
	B. Inspections related to storage of spent fuel under § 72.210 of this chapter	Full Cost.
14.	A. Byproduct, source, or special nuclear material licenses and other approvals authorizing decommissioning, decontamination, reclamation, or site restoration activities under parts 30, 40, 70, 72, and 76 of this chapter.	Full Cost.
	B. Site-specific decommissioning activities associated with unlicensed sites, regardless of whether or not the sites have been previously licensed.	Full Cost.
15. Import and Export licenses: Licenses issued under part 110 of this chapter for the import and export only of special nuclear material, source material, tritium and other byproduct material, and the export only of heavy water, or nuclear grade graphite (fee categories 15.A. through 15.E.).		
	A. Application for export or import of nuclear materials, including radioactive waste requiring Commission and Executive Branch review, for example, those actions under 10 CFR 110.40(b).	
	Application—new license, or amendment; or license exemption request	$15,500.
	B. Application for export or import of nuclear material, including radioactive waste, requiring Executive Branch review, but not Commission review. This category includes applications for the export and import of radioactive waste and requires NRC to consult with domestic host state authorities, Low-Level Radioactive Waste Compact Commission, the U.S. Environmental Protection Agency, etc.	
	Application—new license, or amendment; or license exemption request	$9,100.
	C. Application for export of nuclear material, for example, routine reloads of low enriched uranium reactor fuel and/or natural uranium source material requiring the assistance of the Executive Branch to obtain foreign government assurances.	
	Application—new license, or amendment; or license exemption request	$3,800.
	D. Application for export or import of nuclear material, including radioactive waste, not requiring Commission or Executive Branch review, or obtaining foreign government assurances. This category includes applications for export or import of radioactive waste where the NRC has previously authorized the export or import of the same form of waste to or from the same or similar parties located in the same country, requiring only confirmation from the receiving facility and licensing authorities that the shipments may proceed according to previously agreed understandings and procedures.	
	Application—new license, or amendment; or license exemption request	$2,400.
	E. Minor amendment of any active export or import license, for example, to extend the expiration date, change domestic information, or make other revisions which do not involve any substantive changes to license terms and conditions or to the type/quantity/chemical composition of the material authorized for export and therefore, do not require in-depth analysis, review, or consultations with other Executive Branch, U.S. host state, or foreign government authorities.	
	Minor amendment	$720.
	Licenses issued under part 110 of this chapter for the import and export only of Category 1 and Category 2 quantities of radioactive material listed in Appendix P to part 110 of this chapter (fee categories 15.F. through 15.R.).[5]	
Category 1 Exports:		
	F. Application for export of Category 1 materials involving an exceptional circumstances review under 10 CFR 110.42(e)(4).	
	Application—new license, or amendment; or license exemption request	$15,500.
	G. Application for export of Category 1 materials requiring Executive Branch review, Commission review, and/or government-to-government consent.	
	Application—new license, or amendment; or license exemption request	$9,100.
	H. Application for export of Category 1 materials requiring Commission review and government-to-government consent.	

	Application—new license, or amendment; or license exemption request	$5,700.
	I. Application for export of Category 1 material requiring government-to-government consent.	
	Application—new license, or amendment; or license exemption request	$4,800.
Category 2 Exports:		
	J. Application for export of Category 2 materials involving an exceptional circumstances review under 10 CFR 110.42(e)(4).	
	Application—new license, or amendment; or license exemption request	$15,500.
	K. Applications for export of Category 2 materials requiring Executive Branch review and/or Commission review.	
	Application—new license, or amendment; or license exemption request	$9,100.
	L. Application for the export of Category 2 materials.	
	Application—new license, or amendment; or license exemption request	$4,300.
Category 1 Imports:		
	M. Application for the import of Category 1 material requiring Commission review.	
	Application—new license, or amendment; or license exemption request	$4,500.
	N. Application for the import of Category 1 material.	
	Application—new license, or amendment; or license exemption request	$3,800.
Category 2 Imports:		
	O. Application for the import of Category 2 material.	
	Application—new license, or amendment; or license exemption request	$3,300.
Category 1 Imports with Agent and Multiple Licensees:		
	P. Application for the import of Category 1 material with agent and multiple licensees requiring Commission review.	
	Application—new license, or amendment; or license exemption request.	$5,200.
	Q . Application for the import of Category 1 material with agent and multiple licensees.	
	Application—new license, or amendment; or license exemption request.	$4,300.
Minor Amendments (Category 1 and 2 Export and Imports):		
	R. Minor amendment of any active export or import license, for example, to extend the expiration date, change domestic information, or make other revisions which do not involve any substantive changes to license terms and conditions or to the type/quantity/chemical composition of the material authorized for export and therefore, do not require in-depth analysis, review, or consultations with other Executive Branch, U.S. host state, or foreign authorities.	
	Minor amendment	$720.
16. Reciprocity:		
	Agreement State licensees who conduct activities under the reciprocity provisions of 10 CFR 150.20.	
	Application	$1,400
17. Master materials licenses of broad scope issued to Government agencies:		
	Application	$22,000
18. Department of Energy:		
	A. Certificates of Compliance. Evaluation of casks, packages, and shipping containers (including spent fuel, high-level waste, and other casks, and plutonium air packages).	Full Cost.
	B. Uranium Mill Tailings Radiation Control Act (UMTRCA) activities	Full Cost.

[1]*Types of fees*—Separate charges, as shown in the schedule, will be assessed for pre-application consultations and reviews; applications for new licenses, approvals, or license terminations; possession only licenses; issuance of new licenses and approvals; certain amendments and renewals to existing licenses and approvals; safety evaluations of sealed sources and devices; generally licensed device registrations; and certain inspections. The following guidelines apply to these charges:

(a) *Application and registration fees*. Applications for new materials licenses and export and import licenses; applications to reinstate expired, terminated, or inactive licenses except those subject to fees assessed at full costs; applications filed by Agreement State licensees to register under the general license provisions of 10 CFR 150.20; and applications for amendments to materials licenses that would place the license in a higher fee category or add a new fee category must be accompanied by the prescribed application fee for each category.

(1) Applications for licenses covering more than one fee category of special nuclear material or source material must be accompanied by the prescribed application fee for the highest fee category.

(2) Applications for new licenses that cover both byproduct material and special nuclear material in sealed sources for use in gauging devices will pay the appropriate application fee for fee Category 1.C. only.

(b) *Licensing fees.* Fees for reviews of applications for new licenses and for renewals and amendments to existing licenses, pre-application consultations and reviews of other documents submitted to NRC for review, and project manager time for fee categories subject to full cost fees, are due upon notification by the Commission in accordance with § 170.12(b).

(c) *Amendment fees.* Applications for amendments to export and import licenses must be accompanied by the prescribed amendment fee for each license affected. An application for an amendment to an export or import license or approval classified in more than one fee category must be accompanied by the prescribed amendment fee for the category affected by the amendment unless the amendment is applicable to two or more fee categories, in which case the amendment fee for the highest fee category would apply.

(d) *Inspection fees.* Inspections resulting from investigations conducted by the Office of Investigations and non-routine inspections that result from third-party allegations are not subject to fees. Inspection fees are due upon notification by the Commission in accordance with § 170.12(c).

(e) *Generally licensed device registrations under 10 CFR 31.5.* Submittals of registration information must be accompanied by the prescribed fee.

[2] Fees will not be charged for orders related to civil penalties or other civil sanctions issued by the Commission under 10 CFR 2.202 or for amendments resulting specifically from the requirements of these orders. For orders unrelated to civil penalties or other civil sanctions, fees will be charged for any resulting licensee-specific activities not otherwise exempted from fees under this chapter. Fees will be charged for approvals issued under a specific exemption provision of the Commission's regulations under Title 10 of the Code of Federal Regulations (e. g., 10 CFR 30.11, 40.14, 70.14, 73.5, and any other sections in effect now or in the future), regardless of whether the approval is in the form of a license amendment, letter of approval, safety evaluation report, or other form. In addition to the fee shown, an applicant may be assessed an additional fee for sealed source and device evaluations as shown in Categories 9.A. through 9.D.

[3] Full cost fees will be determined based on the professional staff time multiplied by the appropriate professional hourly rate established in § 170.20 in effect at the time the service is provided, and the appropriate contractual support services expended. For applications currently on file for which review costs have reached an applicable fee ceiling established by the June 20, 1984, and July 2, 1990, rules, but are still pending completion of the review, the cost incurred after any applicable ceiling was reached through January 29, 1989, will not be billed to the applicant. Any professional staff-hours expended above those ceilings on or after January 30, 1989, will be assessed at the applicable rates established by § 170.20, as appropriate, except for topical reports whose costs exceed $50,000. Costs which exceed $50,000 for each topical report, amendment, revision, or supplement to a topical report completed or under review from January 30, 1989, through August 8, 1991, will not be billed to the applicant. Any professional hours expended on or after August 9, 1991, will be assessed at the applicable rate established in § 170.20.

[4] Licensees paying fees under Categories 1.A., 1.B., and 1.E. are not subject to fees under Categories 1.C. and 1.D. for sealed sources authorized in the same license except for an application that deals only with the sealed sources authorized by the license.

[5] For a combined import and export license application for material listed in Appendix P to part 110 of this chapter, only the higher of the two applicable fee amounts must be paid.

[6] Persons who possess radium sources that are used for operational purposes in another fee category are not also subject to the fees in this category. (This exception does not apply if the radium sources are possessed for storage only.)

[67 FR 42631, June 24, 2002, as amended at 67 FR 64038, Oct. 17, 2002; 68 FR 36730, June 18, 2003; 68 FR 46439, Aug. 6, 2003; 69 FR 22677, Apr. 26, 2004; 70 FR 50544, May 26, 2005; 70 FR 33819, June 10, 2005; 71 FR 30747, May 30, 2006; 72 FR 31422, June 6, 2007; 72 FR 55934 Oct. 1, 2007; 73 FR 32402, June 6, 2008]

§ 170.32 Schedule of fees for health and safety, and safeguards inspections for materials licenses.

[Top of File]

Materials licensees shall pay inspection fees as set forth in § 170.31.

[53 FR 52652, Dec. 29, 1988]

Enforcement

[Top of File]

§ 170.41 Failure by applicant or licensee to pay prescribed fees.

If the Commission determines that an applicant or a licensee has failed to pay a prescribed fee required in this part, the Commission will not process any application and may suspend or revoke any license or approval issued to the applicant or licensee. The Commission may issue an order with respect to licensed activities that the Commission determines to be appropriate or necessary to carry out the provisions of this part, parts 30, 31, 32 through 35, 40, 50, 61, 70, 71, 72, 73, and 76 of this chapter, and of the act.

[66 FR 32474, June 14, 2001]

§ 170.51 Right to review and appeal of prescribed fees.

[Top of File]

All debtors' requests for review of the fees assessed and appeal or disagreement with the prescribed fee (staff hours and contractual) must be submitted in accordance with the provisions of 10 CFR 15.31, "Disputed Debts," of this title.

[49 FR 21309, May 21, 1984; 49 FR 24113, June 12, 1984]

PART 171—ANNUAL FEES FOR REACTOR LICENSES AND FUEL CYCLE LICENSES AND MATERIALS LICENSES, INCLUDING HOLDERS OF CERTIFICATES OF COMPLIANCE, REGISTRATIONS, AND QUALITY ASSURANCE PROGRAM APPROVALS AND GOVERNMENT AGENCIES LICENSED BY THE NRC

[Top of File]

§ 171.1 Purpose.

[Top of File]

The regulations in this part set out the annual fees charged to persons who hold licenses, Certificates of Compliance, sealed source and device registrations, and quality assurance program approvals issued by the United States Nuclear Regulatory Commission, including licenses, registrations, approvals, and certificates issued to a Government agency.

[56 FR 31504, July 10, 1991]

§ 171.3 Scope.

[Top of File]

The regulations in this part apply to any person holding an operating license for a power reactor, test reactor or research reactor issued under part 50 of this chapter and to any person holding a combined license issued under part 52 of this chapter that authorizes operation of a power reactor. The regulations in this part also apply to any person holding a materials license as defined in this part, a Certificate of Compliance, a sealed source or device registration, a quality assurance program approval, and to a Government agency as defined in this part. Notwithstanding the other provisions in this section, the regulations in this part do not apply to uranium enrichment facilities until after the Commission verifies through inspection that the facility has been constructed in accordance with the requirements of the license, as required in 10 CFR parts 40 and 70.

[67 FR 42634, June 24, 2002; 72 FR 31426, June 6, 2007]

§ 171.5 Definitions.

[Top of File]

Budget means the funds appropriated by Congress for the NRC for each fiscal year, and if that appropriation is not passed on or before September 1 for that fiscal year, the funds most recently appropriated by Congress for the most recent fiscal year.

Budget Authority means the authority, in the form of appropriations, provided by law and becoming available during the year, to enter into obligations that will result in immediate or future outlays involving Federal government funds. The appropriation is an authorization by an Act of Congress that permits the NRC to incur obligations and to make payments out of the Treasury for specified purposes. Fees assessed pursuant to Public Law 101-508 are based on NRC budget authority.

Byproduct Material means–

(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or using special nuclear material;

(2)(i) Any discrete source of radium–226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that—

(A) Has been made radioactive by use of a particle accelerator; and

(B) Is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; and

(3) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium–226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical, or

research activity.

Certificate Holder means a person who holds a certificate of compliance, or other package approval issued by the Commission.

Commission means the U.S. Nuclear Regulatory Commission or its duly authorized representatives.

Federal fiscal year means a year that begins on October 1 of each calendar year and ends on September 30 of the following calendar year. Federal fiscal years are identified by the year in which they end (e.g., fiscal year 1987 begins in 1986 and ends in 1987).

Government Agency means any executive department, commission, independent establishment, corporation, wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the government.

Greater than Class C Waste or GTCC Waste means low-level radioactive waste that exceeds the concentration limits of radionuclides established for Class C waste in 10 CFR 61.55.

High Enriched Uranium Fuel means uranium enriched to 20 percent or greater in the isotope uranium-235.

Low Enriched Uranium Fuel means uranium enriched below 20 percent in the isotope uranium-235.

Materials License means a license, certificate, approval, registration or other form of permission issued or granted by the NRC under the regulations in 10 CFR parts 30, 31 through 36, 39, 40, 61, 70, 71, 72, and 76.

Nonprofit educational institution means a public or nonprofit educational institution whose primary function is education, whose programs are accredited by a nationally recognized accrediting agency or association, who is legally authorized to provide a program of organized instruction or study, who provides an educational program for which it awards academic degrees, and whose educational programs are available to the public.

Nuclear reactor means an apparatus, other than an atomic weapon, used to sustain fission in a self-supporting chain reaction.

Operating license means having a license issued pursuant to § 50.57 of this chapter. It does not include licenses that only authorize possession of special nuclear material after the Commission has received a request from the licensee to amend its licensee to permanently withdraw its authority to operate or the Commission has permanently revoked such authority.

Overhead and General and Administrative costs means:

(1) The Government benefits for each employee such as leave and holidays, retirement and disability benefits, health and life insurance costs, and social security costs;

(2) Travel costs;

(3) Direct overhead [e.g., supervision and support staff that directly support the NRC safety mission areas; administrative support costs (e. g., rental of space, equipment, telecommunications and supplies)]; and

(4) Indirect costs that would include, but not be limited to, NRC central policy direction, legal and executive management services for the Commission and special and independent reviews, investigations, and enforcement and appraisal of NRC programs and operations. Some of the organizations included, in whole or in part, are the Commissioners, Secretary, Executive Director for Operations, General Counsel, Congressional and Public Affairs (except for international safety and safeguards programs), Inspector General, Investigations, Enforcement, Small and Disadvantaged Business Utilization and Civil Rights, the Technical Training Center, Advisory Committees on Nuclear Waste and Reactor Safeguards, and the Atomic Safety and Licensing Board Panel. The Commission views these budgeted costs as support for all its regulatory services provided to applicants, licensees, and certificate holders, and these costs must be recovered under Public Law 101– 508.

Person means: (1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission; any state or any political subdivision of, or any political entity within, a state; any foreign Government or nation or any political subdivision of any such government or nation; or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

Power reactor means a nuclear reactor designed to produce electrical or heat energy and licensed by the Commission under the authority of section 103 or subsection 104b of the Atomic Energy Act of 1954, as amended, and pursuant to the provisions of § 50.21(b) or § 50.22 of this chapter.

Quality Assurance Program Approval is the document issued by the NRC to approve the quality assurance program submitted to the NRC as meeting the requirements of § 71.101 of this chapter. Activities covered by the quality assurance program may be divided into two major groups: those activities including design, fabrication and use of packaging and those activities for use only of packaging.

Registration Holder as used in this part means any manufacturer or initial distributor of a sealed source or device containing a sealed source that holds a certificate of registration issued by the NRC or a holder of a registration for a sealed source or device manufactured in accordance with the unique specifications of, and for use by, a single applicant.

Research Reactor means a nuclear reactor licensed by the Commission under the authority of subsection 104c of the Act and pursuant to the provisions of § 50.21(c) of this chapter for operation at a thermal power level of 10 megawatts or less, and which is not a testing facility as defined in this section.

Source Material means:

(1) Uranium or thorium, or any combination thereof, in any physical or chemical form; or

(2) Ores which contain by weight one-twentieth of one percent (0.05%) or more of

(i) Uranium,

(ii) Thorium, or

(iii) Any combination thereof.

Source material does not include special nuclear material.

Special Nuclear Material means:

(1) Plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the Atomic Energy Act of 1954, as amended, determines to be special nuclear material, but does not include source material; or

(2) Any material artificially enriched by any of the foregoing, but does not include source material.

Testing Facility means a nuclear reactor licensed by the Commission under the authority of subsection 104c of the Act and pursuant to the provisions of § 50.21(c) of this chapter for operation at:

(1) A thermal power level in excess of 10 megawatts; or

(2) A thermal power level in excess of 1 megawatt, if the reactor is to contain:

(i) A circulating loop through the core in which the applicant proposes to conduct fuel experiments; or

(ii) A liquid fuel loading; or

(iii) An experimental facility in the core in excess of 16 square inches in cross-section.

[51 FR 33230, Sept. 18, 1986, as amended at 53 FR 52652, Dec. 29, 1988; 56 FR 31505, July 10, 1991; 57 FR 32714, July 23, 1992; 58 FR 38695, July 20, 1993; 65 FR 36964, June 12, 2000; 66 FR 32474, June 14, 2001; 67 FR 42634, June 24, 2002; 71 FR 30752, May 30, 2006; 72 FR 55936 Oct. 1, 2007]

§ 171.7 Interpretations.

[Top of File]

Except as specifically authorized by the Commission in writing, no interpretation of the regulations in this part by an officer or employee of the Commission, other than a written interpretation by the General Counsel, will be recognized as binding on the Commission.

§ 171.8 Information collection requirements: OMB approval

[Top of File]

This part contains no information collection requirements and therefore is not subject to the requirements of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.).

[62 FR 52191, Oct. 6, 1997]

§ 171.9 Communications.

[Top of File]

All communications concerning the regulations in this part should be addressed to the NRC's Chief Financial Officer, either by mail to the U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic

submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at *http://www.nrc.gov/site-help/e-submittals.html*, by calling (301) 415-0439, by e-mail to *EIE@nrc.gov*, or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[64 FR 31475, June 10, 1999 as amended at 68 FR 58826, Oct. 10, 2003; 70 FR 69421, Nov. 16, 2005; 72 FR 33386, Jun. 18, 2007]

§ 171.11 Exemptions.

[Top of File]

(a) An annual fee is not required for:

(1) A construction permit or license applied for by, or issued to, a nonprofit educational institution for a production or utilization facility, other than a power reactor, or for the possession and use of byproduct material, source material, or special nuclear material. This exemption does not apply to those byproduct, source, or special nuclear material licenses which authorize:

(i) Human use;

(ii) Remunerated services to other persons;

(iii) Distribution of byproduct material, source material, or special nuclear material or products containing byproduct material, source material, or special nuclear material; or

(iv) Activities performed under a Government contract.

(2) Federally-owned and State-owned research reactors used primarily for educational training and academic research purposes. For purposes of this exemption, the term research reactor means a nuclear reactor that--

(i) Is licensed by the Nuclear Regulatory Commission under section 104c. of the Atomic Energy Act of 1954 (42 U.S.C. 2134(c)) for operation at a thermal power level of 10 megawatts or less; and

(ii) If so licensed for operation at a thermal power level of more than 1 megawatt, does not contain--

(A) A circulating loop through the core in which the licensee conducts fuel experiments;

(B) A liquid fuel loading; or

(C) An experimental facility in the core in excess of 16 square inches in cross-section.

(b) The Commission may, upon application by an interested person or on its own initiative, grant an exemption from the requirements of this part that it determines is authorized by law or otherwise in the public interest. Requests for exemption must be filed with the NRC within 90 days from the effective date of the final rule establishing the annual fees for which the exemption is sought in order to be considered. Absent extraordinary circumstances, any exemption requests filed beyond that date will not be considered. The filing of an exemption request does not extend the date on which the bill is payable. Only timely payment in full ensures avoidance of interest and penalty charges. If a partial or full exemption is granted, any overpayment will be refunded. Requests for clarification of or questions relating to an annual fee bill must also be filed within 90 days from the date of the initial invoice to be considered.

(c) An exemption for reactors licensed to operate may be granted by the Commission taking into consideration each of the following factors:

(1) Age of the reactor;

(2) Number of customers in rate base;

(3) Net increase in KWh cost for each customer directly related to the annual fee assessed under this part; and

(4) Any other relevant matter which the licensee believes justifies the reduction of the annual fee.

(d) The Commission may grant a materials licensee an exemption from the annual fee if it determines that the annual fee is not based on a fair and equitable allocation of the NRC costs. The following factors must be fulfilled as determined by the Commission for an exemption to be granted:

(1) There are data specifically indicating that the assessment of the annual fee will result in a significantly disproportionate allocation of costs to the licensee, or class of licensees; or

(2) There is clear and convincing evidence that the budgeted generic costs attributable to the class of licensees are neither directly or

indirectly related to the specific class of licensee nor explicitly allocated to the licensee by Commission policy decisions; or

(3) Any other relevant matter that the licensee believes shows that the annual fee was not based on a fair and equitable allocation of NRC costs.

[56 FR 31505, July 10, 1991, as amended at 57 FR 32714, July 23, 1992; 58 FR 38695, July 20, 1993; 59 FR 12543, Mar. 17, 1994; 59 FR 36924, July 20, 1994; 67 FR 42634, June 24, 2002; 70 FR 30548, May 26, 2005]

§ 171.13 Notice.

[Top of File]

The annual fees applicable to any NRC licensee subject to this part and calculated in accordance with §§ 171.15 and 171.16, will be published as a notice in the *Federal Register* as soon as possible but no later than the third quarter of the fiscal year. The annual fees will become due and payable to the NRC as indicated in § 171.19. Quarterly payments of the annual fee of $100,000 or more will continue during the fiscal year and be based on the applicable annual fees as shown in §§ 171.15 and 171.16 until a notice concerning the revised amount of the fees for the fiscal year is published by the NRC. If the NRC is unable to publish a final fee rule that becomes effective during the current fiscal year, fees would be assessed based on the rates in effect for the previous fiscal year.

[64 FR 31475, June 10, 1999]

§ 171.15 Annual Fees: Reactor licenses and independent spent fuel storage licenses.

[Top of File]

(a) Each person holding an operating license for a power, test, or research reactor; each person holding a combined license under part 52 of this chapter after the Commission has made the finding under § 52.103(g); each person holding a part 50 or part 52 power reactor license that is in decommissioning or possession only status, except those that have no spent fuel onsite; and each person holding a part 72 license who does not hold a part 50 or part 52 license shall pay the annual fee for each license held at any time during the Federal fiscal year in which the fee is due. This paragraph does not apply to test and research reactors exempted under § 171.11(a).

(b)(1) The FY 2008 annual fee for each operating power reactor which must be collected by September 30, 2008, is $4,032,000.

(2) The FY 2008 annual fee is comprised of a base annual fee for power reactors licensed to operate, a base spent fuel storage/reactor decommissioning annual fee, and associated additional charges (surcharges). The activities comprising the FY 2008 spent storage/reactor decommissioning base annual fee are shown in paragraphs (c)(2)(i) and (ii) of this section. The activities comprising the FY 2008 surcharge are shown in paragraph (d)(1) of this section. The activities comprising the FY 2008 base annual fee for operating power reactors are as follows:

(i) Power reactor safety and safeguards regulation except licensing and inspection activities recovered under part 170 of this chapter and generic reactor decommissioning activities.

(ii) Research activities directly related to the regulation of power reactors, except those activities specifically related to reactor decommissioning.

(iii) Generic activities required largely for NRC to regulate power reactors (e.g., updating part 50 or 52 of this chapter, operating the Incident Response Center, new reactor regulatory infrastructure). The base annual fee for operating power reactors does not include generic activities specifically related to reactor decommissioning.

(c)(1) The FY 2008 annual fee for each power reactor holding a 10 CFR part 50 license that is in a decommissioning or possession only status and has spent fuel onsite, and each independent spent fuel storage 10 CFR part 72 licensee who does not hold a 10 CFR part 50 license is $135,000.

(2) The FY 2008 annual fee is comprised of a base spent fuel storage/reactor decommissioning annual fee (which is also included in the operating power reactor annual fee shown in paragraph (b) of this section), and an additional charge (surcharge). The activities comprising the FY 2008 surcharge are shown in paragraph (d)(1) of this section. The activities comprising the FY 2008 spent fuel storage/reactor decommissioning rebaselined annual fee are:

(i) Generic and other research activities directly related to reactor decommissioning and spent fuel storage; and

(ii) Other safety, environmental, and safeguards activities related to reactor decommissioning and spent fuel storage, except costs for licensing and inspection activities that are recovered under part 170 of this chapter.

(d)(1) The surcharge allocated to annual fees includes the budgeted resources for the activities listed in paragraph (d)(1)(i) of this section, plus the total budgeted resources for the activities included in paragraphs (d)(1)(ii) and (d)(1)(iii) of this section as reduced by the appropriations NRC receives for these types of activities. If the NRC's appropriations for these types of activities are greater than the budgeted resources for the activities included in paragraphs (d)(1)(ii) and (d)(1)(iii) of this section for a given FY, a negative surcharge (or

annual fee reduction) will be allocated to annual fees. The activities comprising the FY 2008 surcharge are as follows:

(i) Low-level waste disposal generic activities;

(ii) Activities not attributable to an existing NRC licensee or class of licenses (e.g., international cooperative safety program and international safeguards activities, support for the Agreement State program); and

(iii) Activities not currently subject to 10 CFR part 170 licensing and inspection fees based on existing law or Commission policy (e.g., reviews and inspections conducted of nonprofit educational institutions, costs that would not be collected from small entities based on Commission policy in accordance with the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, regulatory support for Agreement States, generic decommissioning/reclamation activities for fee classes other than power reactors and spent fuel storage/reactor decommissioning, the in-situ leach rulemaking, activities for unregistered general licensees).

(2) The total FY 2008 surcharge allocated to the operating power reactor class of licenses is –$5.9 million, not including the amount allocated to the spent fuel storage/reactor decommissioning class. The FY 2008 operating power reactor surcharge to be assessed to each operating power reactor is approximately –$57,000. This amount is calculated by dividing the total operating power reactor surcharge (–$5.9 million) by the number of operating power reactors (104).

(3) The FY 2008 surcharge allocated to the spent fuel storage/reactor decommissioning class of licenses is –$258,000. The FY 2008 spent fuel storage/reactor decommissioning surcharge to be assessed to each operating power reactor, each power reactor in decommissioning or possession only status that has spent fuel onsite, and to each independent spent fuel storage 10 CFR part 72 licensee who does not hold a 10 CFR part 50 license is approximately –$2,097. This amount is calculated by dividing the total surcharge costs allocated to this class by the total number of power reactor licenses, except those that permanently ceased operations and have no fuel onsite, and 10 CFR part 72 licensees who do not hold a 10 CFR part 50 license.

(e) The FY 2008 annual fees for licensees authorized to operate a test and research (non-power) reactor licensed under part 50 of this chapter, unless the reactor is exempted from fees under § 171.11(a), are as follows:

Research reactor	$76,500.
Test reactor	$76,500.

[67 FR 42634, June 24, 2002; 68 FR 36734, June 18, 2003; 69 FR 22681, Apr. 26, 2004; 70 FR 30548, May 26, 2005; 71 FR 30752, May 30, 2006; 72 FR 31426, June 6, 2007; 72 FR 49566, Aug. 28, 2007; 73 FR 32407, June 6, 2008]

§ 171.16 Annual fees: Materials licensees, holders of certificates of compliance, holders of sealed source and device registrations, holders of quality assurance program approvals, and government agencies licensed by the NRC.

[Top of File]

(a)(1) The provisions of this section apply to person(s) who are authorized to conduct activities under--

(i) 10 CFR part 30 for byproduct material;

(ii) 10 CFR part 40 for source material;

(iii) 10 CFR part 70 for special nuclear material;

(iv) 10 CFR part 71 for packaging and transportation of radioactive material; and

(v) 10 CFR part 76 for uranium enrichment.

(2) Notwithstanding the other provisions in this section, the regulations in this part do not apply to uranium enrichment facilities until after the Commission verifies through inspection that the facility has been constructed in accordance with the requirements of the license, as required in 10 CFR parts 40 and 70.

(3) In accordance with § 171.17, each person identified in paragraph (a)(1) of this section shall pay the applicable annual fee for each license the person holds during the FY. Annual fees will be prorated for new licenses issued and for licenses for which termination is requested and activities permanently ceased during the FY as provided in § 171.17. If a single license authorizes more than one activity (e. g., human use and irradiator activities), annual fees will be assessed for each fee category applicable to the license. If a person holds more than one license, the total annual fee assessed will be the cumulative total of the annual fees applicable to each license held.

(b) The annual fee is comprised of a base annual fee and an additional charge (surcharge). The activities comprising the surcharge are shown in paragraph (e) of this section. The activities comprising the base annual fee is the sum of the NRC budgeted costs for:

(1) Generic and other research activities directly related to the regulation of materials licenses as defined in this part; and

(2) Other safety, environmental, and safeguards activities for materials licenses, except costs for licensing and inspection activities that are recovered under Part 170 of this chapter.

(c) A licensee who is required to pay an annual fee under this section may qualify as a small entity. If a licensee qualifies as a small entity and provides the Commission with the proper certification along with its annual fee payment, the licensee may pay reduced annual fees as shown in the following table. Failure to file a small entity certification in a timely manner could result in the denial of any refund that might otherwise be due. The small entity fees are as follows:

		Maximum annual fee per licensed category
Small Businesses Not Engaged in Manufacturing (Average gross receipts over last 3 completed fiscal years):		
	$350,000 to $6.5 million	$2,300
	Less than $350,000	500
Small Not-For-Profit Organizations (Annual Gross Receipts):		
	$350,000 to $6.5 million	$2,300
	Less than $350,000	500
Manufacturing entities that have an average of 500 employees or fewer:		
	35 to 500 employees	2,300
	Fewer than 35 employees	500
Small Governmental Jurisdictions (Including publicly supported educational institutions) Population):		
	20,000 to 50,000	2,300
	Fewer than 20,000	500
Educational Institutions that are not State or Publicly Supported, and have 500 Employees or Fewer:		
	35 to 500 employees	2,300
	Fewer than 35 employees	500

(d) The FY 2008 annual fees are comprised of a base annual fee and an additional charge (surcharge). The activities comprising the FY 2008 surcharge are shown for convenience in paragraph (e) of this section. The FY 2008 annual fees for materials licensees and holders of certificates, registrations or approvals subject to fees under this section are shown in the following table:

SCHEDULE OF MATERIALS ANNUAL FEES AND FEES FOR GOVERNMENT AGENCIES LICENSED BY NRC
[See footnotes at end of table]

Category of materials licenses			**Annual fees**[1], [2], [3]
1. Special nuclear material:			
	A. (1) Licenses for possession and use of U-235 or plutonium for fuel fabrication activities.		
		(a) Strategic Special Nuclear Material (High Enriched Uranium) [Program Code(s): 21130]	$3,007,000
		(b) Low Enriched Uranium in Dispersible Form Used for Fabrication of Power Reactor Fuel [Program Code(s): 21210]	899,000
	(2) All other special nuclear materials licenses not included in Category 1.A.(1) which are licensed for fuel cycle activities.		
		(a) Facilities with limited operations [Program Code(s): 21310, 21320]	341,000
		(b) Gas centrifuge enrichment demonstration facilities	558,000
		(c) Others, including hot cell facilities	248,000
	B. Licenses for receipt and storage of spent fuel and reactor-related Greater than Class C (GTCC) waste at an independent spent fuel storage installation (ISFSI) [Program Code(s): 23200].		N/A[11]
	C. Licenses for possession and use of special nuclear material in sealed sources contained in devices used in industrial measuring systems, including x-ray fluorescence analyzers [Program Code(s): 22140].		1,600
	D. All other special nuclear material licenses, except licenses authorizing special nuclear material in unsealed form in combination that would constitute a critical quantity, as defined in § 150.11 of this chapter, for which the licensee shall pay the same fees as those for Category 1.A.(2) [Program Code(s): 22110, 22111, 22120, 22131, 22136, 22150, 22151, 22161, 22163, 22170, 23100, 23300, 23310].		4,500
	E. Licenses or certificates for the operation of a uranium enrichment facility [Program Code(s): 21200]		1,705,000
2. Source material:			

	A	(1) Licenses for possession and use of source material for refining uranium mill concentrates to uranium hexafluoride [Program Code(s): 11400].	589,000
		(2) Licenses for possession and use of source material in recovery operations such as milling, in-situ leaching, heap-leaching, ore buying stations, ion exchange facilities and in-processing of ores containing source material for extraction of metals other than uranium or thorium, including licenses authorizing the possession of byproduct waste material (tailings) from source material recovery operations, as well as licenses authorizing the possession and maintenance of a facility in a standby mode.	
		(a) Class I facilities [4] [Program Code(s): 11100]	10,300
		(b) Class II facilities [4] [Program Code(s): 11500]	10,300
		(c) Other facilities [4] [Program Code(s): 11700]	N/A[5]
		(3) Licenses that authorize the receipt of byproduct material, as defined in Section 11e.(2) of the Atomic Energy Act, from other persons for possession and disposal, except those licenses subject to the fees in Category 2.A.(2) or Category 2.A.(4) [Program Code(s): 11600].	N/A[5]
		(4) Licenses that authorize the receipt of byproduct material, as defined in Section 11e.(2) of the Atomic Energy Act, from other persons for possession and disposal incidental to the disposal of the uranium waste tailings generated by the licensee's milling operations, except those licenses subject to the fees in Category 2.A.(2)	10,300
		(5) Licenses that authorize the possession of source material related to removal of contaminants (source material) from drinking water	6,200
	B. Licenses that authorize only the possession, use and/or installation of source material for shielding [Program Code(s): 11210].		590
	C. All other source material licenses [Program Code(s): 11200, 11220, 11221, 11230, 11300, 11800, 11810]		10,200
3. Byproduct material:			
	A. Licenses of broad scope for possession and use of byproduct material issued under parts 30 and 33 of this chapter for processing or manufacturing of items containing byproduct material for commercial distribution [Program Code(s): 03211, 03212, 03213].		22,900
	B. Other licenses for possession and use of byproduct material issued under part 30 of this chapter for processing or manufacturing of items containing byproduct material for commercial distribution. [Program Code(s): 03214, 03215, 22135, 22162].		6,500
	C. Licenses issued under §§ 32.72 and/or 32.74 of this chapter authorizing the processing or manufacturing and distribution or redistribution of radiopharmaceuticals, generators, reagent kits and/or sources and devices containing byproduct material. This category also includes the possession and use of source material for shielding authorized under part 40 of this chapter when included on the same license. This category does not apply to licenses issued to nonprofit educational institutions whose processing or manufacturing is exempt under § 171.11(a)(1). These licenses are covered by fee under Category 3.D. [Program Code(s): 02500, 02511, 02513].		9,200
	D. Licenses and approvals issued under §§ 32.72 and/or 32.74 of this chapter authorizing distribution or redistribution of radiopharmaceuticals, generators, reagent kits and/or sources or devices not involving processing of byproduct material. This category includes licenses issued under §§ 32.72 and 32.74 of this chapter to nonprofit educational institutions whose processing or manufacturing is exempt under § 171.11 (a)(1). This category also includes the possession and use of source material for shielding authorized under part 40 of this chapter when included on the same license [Program Code(s): 02512, 02514].		5,200
	E. Licenses for possession and use of byproduct material in sealed sources for irradiation of materials in which the source is not removed from its shield (self-shielded units) [Program Code(s): 03510, 03520].		3,100
	F. Licenses for possession and use of less than 10,000 curies of byproduct material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes. This category also includes underwater irradiators for irradiation of materials in which the source is not exposed for irradiation purposes [Program Code(s): 03511].		6,100
	G. Licenses for possession and use of 10,000 curies or more of byproduct material in sealed sources for irradiation of materials in which the source is exposed for irradiation purposes. This category also includes underwater irradiators for irradiation of materials in which the source is not exposed for irradiation purposes [Program Code(s): 03521].		24,400
	H. Licenses issued under Subpart A of part 32 of this chapter to distribute items containing byproduct material that require device review to persons exempt from the licensing requirements of part 30 of this chapter, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of part 30 of this chapter [Program Code (s): 03255].		8,700
	I. Licenses issued under Subpart A of part 32 of this chapter to distribute items containing byproduct material or quantities of byproduct material that do not require device evaluation to persons exempt from the licensing requirements of part 30 of this chapter, except for specific licenses authorizing redistribution of items that have been authorized for distribution to persons exempt from the licensing requirements of part 30 of this chapter [Program Code(s): 03250, 03251, 03252, 03253, 03254, 03256].		8,100

	J. Licenses issued under Subpart B of part 32 of this chapter to distribute items containing byproduct material that require sealed source and/or device review to persons generally licensed under part 31 of this chapter, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under part 31 of this chapter [Program Code(s): 03240, 03241, 03243].	1,900
	K. Licenses issued under Subpart B of part 32 of this chapter to distribute items containing byproduct material or quantities of byproduct material that do not require sealed source and/or device review to persons generally licensed under part 31 of this chapter, except specific licenses authorizing redistribution of items that have been authorized for distribution to persons generally licensed under part 31 of this chapter [Program Code(s): 03242, 03244].	1,500
	L. Licenses of broad scope for possession and use of byproduct material issued under parts 30 and 33 of this chapter for research and development that do not authorize commercial distribution [Program Code(s): 01100, 01110, 01120, 03610, 03611, 03612, 03613].	11,600
	M. Other licenses for possession and use of byproduct material issued under part 30 of this chapter for research and development that do not authorize commercial distribution [Program Code(s): 03620].	4,200
	N. Licenses that authorize services for other licensees, except: (1) Licenses that authorize only calibration and/or leak testing services are subject to the fees specified in fee Category 3.P.; and (2) Licenses that authorize waste disposal services are subject to the fees specified in fee categories 4.A., 4.B., and 4.C. [Program Code(s): 03219, 03225, 03226].	6,500
	O. Licenses for possession and use of byproduct material issued under part 34 of this chapter for industrial radiography operations. This category also includes the possession and use of source material for shielding authorized under part 40 of this chapter when authorized on the same license [Program Code(s): 03310, 03320].	11,100
	P. All other specific byproduct material licenses, except those in Categories 4.A through 9.D. [Program Code (s): 02400, 02410, 03120, 03121, 03122, 03123, 03124, 03220, 03221, 03222, 03800, 03810, 22130].	2,100
	Q. Registration of devices generally licensed under part 31 of this chapter	N/A[13]
	R. Possession of items or products containing radium–226 identified in 10 CFR 31.12 which exceed the number of items or limits specified in that section:[14]	
	1. Possession of quantities exceeding the number of items or limits in 10 CFR 31.12(a)(4), or (5) but less than or equal to 10 times the number of items or limits specified [Program Code(s): 02700].	1,700
	2. Possession of quantities exceeding 10 times the number of items or limits specified in 10 CFR 31.12(a)(4), or (5) [Program Code(s): 02710].	2,100
	S. Licenses for production of accelerator-produced radionuclides [Program Code(s): 03210]	8,400
4. Waste disposal and processing:		
	A. Licenses specifically authorizing the receipt of waste byproduct material, source material, or special nuclear material from other persons for the purpose of contingency storage or commercial land disposal by the licensee; or licenses authorizing contingency storage of low-level radioactive waste at the site of nuclear power reactors; or licenses for receipt of waste from other persons for incineration or other treatment, packaging of resulting waste and residues, and transfer of packages to another person authorized to receive or dispose of waste material [Program Code(s): 03231, 03233, 03235, 03236, 06100, 06101].	N/A[5]
	B. Licenses specifically authorizing the receipt of waste byproduct material, source material, or special nuclear material from other persons for the purpose of packaging or repackaging the material. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material [Program Code(s): 03234].	9,300
	C. Licenses specifically authorizing the receipt of prepackaged waste byproduct material, source material, or special nuclear material from other persons. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material [Program Code(s): 03232].	7,200
5. Well logging:		
	A. Licenses for possession and use of byproduct material, source material, and/or special nuclear material for well logging, well surveys, and tracer studies other than field flooding tracer studies [Program Code(s): 03110, 03111, 03112].	3,400
	B. Licenses for possession and use of byproduct material for field flooding tracer studies [Program Code(s): 03113]	N/A[5]
6. Nuclear laundries:		
	A. Licenses for commercial collection and laundry of items contaminated with byproduct material, source material, or special nuclear material [Program Code(s): 03218].	20,600
7. Medical licenses:		
	A. Licenses issued under parts 30, 35, 40, and 70 of this chapter for human use of byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices. This category also includes the possession and use of source material for shielding when authorized on the same license [Program Code(s): 02300, 02310.	10,500

	B. Licenses of broad scope issued to medical institutions or two or more physicians under parts 30, 33, 35, 40, and 70 of this chapter authorizing research and development, including human use of byproduct material except licenses for byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices. This category also includes the possession and use of source material for shielding when authorized on the same license. [9] [Program Code(s): 02110].	22,900
	C. Other licenses issued under parts 30, 35, 40, and 70 of this chapter for human use of byproduct material, source material, and/or special nuclear material except licenses for byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices. This category also includes the possession and use of source material for shielding when authorized on the same license. [9] [Program Code(s): 02120, 02121, 02200, 02201, 02210, 02220, 02230, 02231, 02240, 22160].	3,900
8. Civil defense:		
	A. Licenses for possession and use of byproduct material, source material, or special nuclear material for civil defense activities [Program Code(s): 03710].	1,700
9. Device, product, or sealed source safety evaluation:		
	A. Registrations issued for the safety evaluation of devices or products containing byproduct material, source material, or special nuclear material, except reactor fuel devices, for commercial distribution.	14,700
	B. Registrations issued for the safety evaluation of devices or products containing byproduct material, source material, or special nuclear material manufactured in accordance with the unique specifications of, and for use by, a single applicant, except reactor fuel devices.	14,700
	C. Registrations issued for the safety evaluation of sealed sources containing byproduct material, source material, or special nuclear material, except reactor fuel, for commercial distribution.	2,000
	D. Registrations issued for the safety evaluation of sealed sources containing byproduct material, source material, or special nuclear material, manufactured in accordance with the unique specifications of, and for use by, a single applicant, except reactor fuel	700
10. Transportation of radioactive material:		
	A. Certificates of Compliance or other package approvals issued for design of casks, packages, and shipping containers.	
	1. Spent Fuel, High-Level Waste, and plutonium air packages	N/A[6]
	2. Other casks	N/A[6]
	B. Quality assurance program approvals issued under part 71 of this chapter.	
	1. Users and Fabricators	N/A[6]
	2. Users	N/A[6]
	C. Evaluation of security plans, route approvals, route surveys, and transportation security devices (including immobilization devices)	N/A[6]
11. Standardized spent fuel facilities		N/A[6]
12. Special Projects		N/A[6]
13.	A. Spent fuel storage cask Certificate of Compliance	N/A[6]
	B. General licenses for storage of spent fuel under 10 CFR 72.210	N/A[12]
14. Decommissioning/Reclamation:		
	A. Byproduct, source, or special nuclear material licenses and other approvals authorizing decommissioning, decontamination, reclamation, or site restoration activities under parts 30, 40, 70, 72, and 76 of this chapter.	N/A[7]
	B. Site-specific decommissioning activities associated with unlicensed sites, whether or not the sites have been previously licensed.	N/A[7]
15. Import and Export licenses		N/A[8]
16. Reciprocity		N/A[8]
17. Master materials licenses of broad scope issued to Government agencies		225,000
18. Department of Energy:		
	A. Certificates of Compliance	719,000[10]
	B. Uranium Mill Tailings Radiation Control Act (UMTRCA) activities	398,000

(e) The surcharge allocated to annual fees includes the budgeted resources for the activities listed in paragraph (e)(1) of this section, plus the total budgeted resources for the activities included in paragraphs (e)(2) and (e)(3) of this

section as reduced by the appropriations NRC receives for these types of activities. If the NRC's appropriations for these types of activities are greater than the budgeted resources for the activities included in paragraphs (e)(2) and (e)(3) of this section for a given FY, a negative surcharge (or annual fee reduction) will be allocated to annual fees. The activities comprising the FY 2008 surcharge are as follows:

(1) Low-level waste disposal generic activities;

(2) Activities not attributable to an existing NRC licensee or class of licenses (e.g., international cooperative safety program and international safeguards activities, support for the Agreement State program); and

(3) Activities not currently subject to 10 CFR part 170 licensing and inspection fees based on existing law or Commission policy (e.g., reviews and inspections conducted of nonprofit educational institutions, costs that would not be collected from small entities based on Commission policy in accordance with the Regulatory Flexibility Act, 5 U.S.C. 601 et seq., regulatory support for Agreement States, generic decommissioning/reclamation activities for fee classes other than power reactors and spent fuel storage/ reactor decommissioning, the *in-situ* leach rulemaking, and activities for unregistered general licensees).

[1] Annual fees will be assessed based on whether a licensee held a valid license with the NRC authorizing possession and use of radioactive material during the current FY. The annual fee is waived for those materials licenses and holders of certificates, registrations, and approvals who either filed for termination of their licenses or approvals or filed for possession only/storage licenses before October 1, 2007, and permanently ceased licensed activities entirely before this date. Annual fees for licensees who filed for termination of a license, downgrade of a license, or for a possession only license during the FY and for new licenses issued during the FY will be prorated in accordance with the provisions of § 171.17. If a person holds more than one license, certificate, registration, or approval, the annual fee(s) will be assessed for each license, certificate, registration, or approval held by that person. For licenses that authorize more than one activity on a single license (e.g., human use and irradiator activities), annual fees will be assessed for each category applicable to the license. Licensees paying annual fees under Category 1.A.(1) are not subject to the annual fees for Categories 1.C. and 1.D. for sealed sources authorized in the license.

[2] Payment of the prescribed annual fee does not automatically renew the license, certificate, registration, or approval for which the fee is paid. Renewal applications must be filed in accordance with the requirements of parts 30, 40, 70, 71, 72, or 76 of this chapter.

[3] Each FY, fees for these materials licenses will be calculated and assessed in accordance with § 171.13 and will be published in the **Federal Register** for notice and comment.

[4] A Class I license includes mill licenses issued for the extraction of uranium from uranium ore. A Class II license includes solution mining licenses (in-situ and heap leach) issued for the extraction of uranium from uranium ores including research and development licenses. An "other" license includes licenses for extraction of metals, heavy metals, and rare earths.

[5] There are no existing NRC licenses in these fee categories. If NRC issues a license for these categories, the Commission will consider establishing an annual fee for this type of license.

[6] Standardized spent fuel facilities, 10 CFR parts 71 and 72 Certificates of Compliance and related Quality Assurance program approvals, and special reviews, such as topical reports, are not assessed an annual fee because the generic costs of regulating these activities are primarily attributable to users of the designs, certificates, and topical reports.

[7] Licensees in this category are not assessed an annual fee because they are charged an annual fee in other categories while they are licensed to operate.

[8] No annual fee is charged because it is not practical to administer due to the relatively short life or temporary nature of the license.

[9] Separate annual fees will not be assessed for pacemaker licenses issued to medical institutions that also hold nuclear medicine licenses under Categories 7.B. or 7.C.

[10] This includes Certificates of Compliance issued to DOE that are not under the Nuclear Waste Fund.

[11] See § 171.15(c).

[12] See § 171.15(c).

[13] No annual fee is charged for this category because the cost of the general license registration program applicable to licenses in this category will be recovered through 10 CFR part 170 fees.

[14] Persons who possess radium sources that are used for operational purposes in another fee category are not also subject to the fees in this category. (This exception does not apply if the radium sources are possessed for storage only.)

[64 FR 31476, June 10, 1999; 64 FR 38816, July 20, 1999; 65 FR 36965, June 12, 2000; 65 FR 44573, July 18, 2000; 66 FR 32474, June 14, 2001; 67 FR 42635, June 24, 2002; 68 FR 36734, June 18, 2003; 68 FR 46439, August 6, 2003; 69 FR 22682, Apr. 26, 2004; ; 70 FR 30548, May 26, 2005; 70 FR 33820, June 10, 2005; 71 FR 30753, May 30, 2006; 71 FR 33190, June 8, 2006, 72 FR 39733, July 20, 2007; 72 FR 31427, June 6, 2007; 72 FR 44954, Aug. 10, 2007; 72 FR 55936 Oct. 1, 2007; 73 FR 32408, June 6, 2008]

§ 171.17 Proration.

[Top of File]

Annual fees will be prorated for NRC licensees as follows:

(a) Reactors, 10 CFR part 72 licensees who do not hold 10 CFR part 50 licenses, and materials licenses with annual fees of $100,000 or greater for a single fee category.

(1) *New licenses.* The annual fees for new licenses for power reactors, nonpower reactors, 10 CFR part 72 licensees who do not hold a 10 CFR part 50 license, and materials licenses with annual fees of $100,000 or greater for a single fee category for the current FY, that are subject to fees under this part and are granted a license to operate on or after October 1 of a FY, are prorated on the basis of the number

of days remaining in the FY. Thereafter, the full annual fee is due and payable each subsequent FY.

(2) *Terminations.* The base operating power reactor annual fee for operating reactor licensees who have requested amendment to withdraw operating authority permanently during the FY will be prorated based on the number of days during the FY the license was in effect before docketing of the certifications for permanent cessation of operations and permanent removal of fuel from the reactor vessel or when a final legally effective order to permanently cease operations has come into effect. The spent fuel storage/ reactor decommissioning annual fee for reactor licensees who permanently cease operations and have permanently removed fuel from the site during the FY will be prorated on the basis of the number of days remaining in the FY after docketing of both the certifications of permanent cessation of operations and permanent removal of fuel from the site. The spent fuel storage/reactor decommissioning annual fee will be prorated for those 10 CFR part 72 licensees who do not hold a 10 CFR part 50 license who request termination of the 10 CFR part 72 license and permanently cease activities authorized by the license during the FY based on the number of days the license was in effect before receipt of the termination request. The annual fee for materials licenses with annual fees of $100,000 or greater for a single fee category for the current FY will be prorated based on the number of days remaining in the FY when a termination request or a request for a POL is received by the NRC, provided the licensee permanently ceased licensed activities during the specified period.

(3) *Downgraded licenses.* The annual fee for a materials license with an annual fee of $100,000 or greater for a single fee category for the current FY, that is subject to fees under this part and downgraded on or after October 1 of a FY, is prorated upon request by the licensee on the basis of the number of days remaining in the FY when the application for downgrade is received by the NRC provided the licensee permanently ceased the stated activities during the specified period. Requests for proration must be filed with the NRC within 90 days from the effective date of the final rule establishing the annual fees for which a proration is sought. Absent extraordinary circumstances, any request for proration of the annual fee for a downgraded license filed beyond that date will not be considered.

(b) Materials licenses (excluding 10 CFR part 72 licenses and materials license with annual fees of $100,000 or greater for a single fee category, included in § 171.17(a)).

(1) *New licenses.* The annual fee for a materials license that is subject to fees under this part and issued on or after October 1 of the FY is prorated on the basis of when the NRC issues the new license. New licenses issued during the period October 1 through March 31 of the FY will be assessed one-half the annual fee for that FY. New licenses issued on or after April 1 of the FY will not be assessed an annual fee for that FY. Thereafter, the full fee is due and payable each subsequent FY.

(2) *Terminations.* The annual fee will be prorated for licenses for which a termination request or a request for a POL has been received on or after October 1 of a FY on the basis of when the application for termination or POL is received by the NRC provided the licensee permanently ceased licensed activities during the specified period. Licenses for which applications for termination or POL are filed during the period October 1 through March 31 of the FY are assessed one-half the annual fee for the applicable category(ies) for that FY. Licenses for which applications for termination or POL are filed on or after April 1 of the FY are assessed the full annual fee for that FY. Materials licenses transferred to a new Agreement State during the FY are considered terminated by the NRC, for annual fee purposes, on the date that the Agreement with the State becomes effective; therefore, the same proration provisions will apply as if the licenses were terminated.

(3) *Downgraded licenses.* (i) The annual fee for a materials license that is subject to fees under this part and downgraded on or after October 1 of a FY is prorated upon request by the licensee on the basis of when the application for downgrade is received by the NRC provided the licensee permanently ceased the stated activities during the specified period. Requests for proration must be filed with the NRC within 90 days from the effective date of the final rule establishing the annual fees for which a proration is sought. Absent extraordinary circumstances, any request for proration of the annual fee for a downgraded license filed beyond that date will not be considered.

(ii) Annual fees for licenses for which applications to downgrade are filed during the period October 1 through March 31 of the FY will be prorated as follows:

(A) Licenses for which applications have been filed to reduce the scope of the license from a higher fee category(ies) to a lower fee category (ies) will be assessed one-half the annual fee for the higher fee category and one-half the annual fee for the lower fee category(ies), and, if applicable, the full annual fee for fee categories not affected by the downgrade; and

(B) Licenses with multiple fee categories for which applications have been filed to downgrade by deleting a fee category will be assessed one-half the annual fee for the fee category being deleted and the full annual fee for the remaining categories.

(iii) Licenses for which applications to downgrade are filed on or after April 1 of the FY are assessed the full fee for that FY.

[64 FR 31480, June 10, 1999; 72 FR 31431, June 6, 2007]

§ 171.19 Payment.

[Top of File]

(a) Method of payment. Annual fee payments, made payable to the U.S. Nuclear Regulatory Commission, are to be made in U.S. funds by electronic funds transfer such as ACH (Automated Clearing House) using EDI (Electronic Data Interchange), check, draft, money order, or credit card. Federal agencies may also make payment by the On-line Payment and Collection System (OPAC's). Where specific payment instructions are provided on the invoices to applicants and licensees, payment should be made accordingly, e.g. invoices of $5,000 or more should be paid via ACH through NRC's Lockbox Bank at the address indicated on the invoice. Credit card payments should be made up to the limit established by the credit card bank, in accordance with specific instructions provided with the invoices, to the Lockbox Bank designated for credit card payments. In accordance with Department of the Treasury requirements, refunds will only be made upon receipt of information on the payee's financial institution and bank accounts.

(b) Annual fees in the amount of $100,000 or more and described in the Federal Register document issued under § 171.13, must be paid in quarterly installments of 25 percent as billed by the NRC. The quarters begin on October 1, January 1, April 1, and July 1 of each fiscal year. The NRC will adjust the fourth quarterly invoice to recover the full amount of the revised annual fee. If the amounts collected in the first three quarters exceed the amount of the revised annual fee, the overpayment will be refunded. Licensees whose annual fee for the previous fiscal year was less than $100,000 (billed on the anniversary date of the license), and whose revised annual fee for the current fiscal year is $100,000 or greater (subject to quarterly billing), will be issued a bill upon publication of the final rule for the full amount of the revised annual fee for the current fiscal year, less any payments received for the current fiscal year based on the anniversary date billing process.

(c) Annual fees that are less than $100,000 are billed on the anniversary date of the license. For annual fee purposes, the anniversary date of the license is considered to be the first day of the month in which the original license was issued by the NRC. Licensees that are billed on the license anniversary date will be assessed the annual fee in effect on the anniversary date of the license. Materials licenses subject to the annual fee that are terminated during the fiscal year but before the anniversary month of the license will be billed upon termination for the fee in effect at the time of the billing. New materials licenses subject to the annual fee will be billed in the month the license is issued or in the next available monthly billing for the fee in effect on the anniversary date of the license. Thereafter, annual fees for new licenses will be assessed in the anniversary month of the license.

(d) Annual fees of less than $100,000 must be paid as billed by the NRC. Materials license annual fees that are less than $100,000 are billed on the anniversary date of the license. The materials licensees that are billed on the anniversary date of the license are those covered by fee categories 1.C., 1.D., 2.A.(2) through 2.A.(5), 2.B., 2.C., and 3.A. through 9.D.

(e) Payment is due on the invoice date and interest accrues from the date of the invoice. However, interest will be waived if payment is received within 30 days from the invoice date.

[65 FR 36968, June 12, 2000, as amended at 66 FR 32478, June 14, 2001; 71 FR 30755, May 30, 2006; 71 FR 33190, June 8, 2006; 72 FR 31432, June 6, 2007]

§ 171.21 [Reserved]

[Top of File]

§ 171.23 Enforcement.

[Top of File]

If any person required to pay the annual fee fails to pay when the fee is due, or files a false certification with respect to qualifying as a small entity under the Regulatory Flexibility Criteria, the Commission may refuse to process any application submitted by or on behalf of the person with respect to any license issued to the person and may suspend or revoke any licenses held by the person. The filing of a false certification to qualify as a small entity under § 171.16(c) of this part may also result in punitive action pursuant to 18 U.S.C. 1001.

[56 FR 31510, July 10, 1991]

§ 171.25 Collection, interest, penalties, and administrative costs.

[Top of File]

All annual fees in §§ 171.15 and 171.16 will be collected pursuant to the procedures of 10 CFR part 15. Interest, penalties and administrative costs for late payments will be assessed in accordance with 10 CFR part 15, of this chapter, 4 CFR part 102, and other relevant regulations of the United States Government, as appropriate. In the event a quarterly installment is not made by the appropriate due date specified in § 171.19, the full fee becomes due and payable, with interest, penalties, and administrative costs of collection calculated from the date that quarterly installment was due.

[56 FR 31511, July 10, 1991]

PARTS 172 - 199 [RESERVED]

[Top of File]